DEPARTMENT OF INFORMATION TECHNOLOGY

July 2019- June 2020

UNLOCKING MINDS

P.I.E.T.

INSTITUTE

VISION

To be globally known and recognized as an educational institute of engineering, technology, management and research having a transformative impact on society.

MISSION

M1: To impart knowledge, skills and creativity to all the students.
M2: To provide a conducive environment for quality teaching, learning, and research.
M3: To create awareness on sustainable technologies and innovative solutions to societal problems including entrepreneurship.
M4: To strengthen institutional and industrial collaborations nationally and internationally.

IT DEPARTMENT'S

VISION

To create globally competent professionals by imparting quality techical education, research aptitude and analytical skills to meet challenges in IT industry, thus contribute to the welfare of society.

MISSION

M1: To nurture students with knowledge and programming skills of different IT domains necessary for development and testing of quality software solutions.

M2: To provide an integrated, responsive and comprehensive academic ecosystem with enhanced teaching and learning to promote intellect and excellence in research.

M3: To mentor students with applied problem solving and critical thinking leading to innovative and sustainable solutions to societal problems.

M4: To collaborate and exchange expertise with industry, research organizations and academic institutions.

IT DEPARTMENT'S

PROGRAM EDUCATIONAL OBJECTIVES

- The graduates will have core competencies in IT fundamentals necessary to solve hardware, software and integrated engineering problems relevant to IT industries.
- The graduates will be proficiently engaged in development of IT products and services to cater to the industry needs or perform as innovators or entrepreneurs.
- The graduates will successfully pursue higher education or career paths in research.
- The graduates will professionally function with social awareness, responsibility and ethical norms.

PROGRAM SPECIFIC OBJECTIVES

PSO1
Design, develop and test software applications and project management solutions of real world problems.

PSO2
Be competent in emerging areas of Information Technology

MESSAGE FROM THE DIRECTOR

Prof.(Dr.)Shakti Kumar (Director)

On behalf of thefaculty members,staff, and students of the Department of Information Technology of PIET, I welcome you all to the creative world of IT.

I believe the IT disciplinehas been widely recognized asan essential source and techniquefor the advancements in all spheresof human Endeavour now and in future. In PIET all the students gets the opportunity to excel in their academic activities.This is the department where students publish papers in international journals, atthe same time a student wishing to achievesome recognition in extra-curricular or co- curricular activities will also find the atmosphere helpful. Among the reasons why our graduates are such favorites of industry is the consistent hands-on experience-based approach of our curriculum, our excellent laboratories, the long-time connections between Departmentand the industry. Whether you are a student, parent, prospective faculty member or a curious member of the public, I invite you to readour web pages and find a way to become part of thePIET family. We hope you will also have the opportunity to visit us in our state-of-the-art facilities.

Prof.(Dr.)Shakti Kumar
(Director)

Message from Head of the Department

It is a matter of pride that the department of Information Technology is releasing its E-magazine "UNLOCKING MINDS" for the session Jan-June, 2020. I congratulate the Chief Editor and the team of Editors for their success in bringing out the first issue of E-magazine, covering the details of various departmental events, technical, non-technical, literary articles and achievements of Students/Alumni/Faculty. A commendable job is done by faculty advisors to make it possible. Last but not the least, I convey my wishes to all the students and faculty members who contributed directly or indirectly for converting this idea into reality.

Rattan Deep Aneja
HOD (IT)

Faculty Advisory Board

It is a matter of great pride and privilege for me being a part of department e-magazine "Unlocking Minds". This magazine is a platform that exhibits the literary skills and innovative ideas of teachers and students. I express my considerable appreciation to all the authors of the articles. My thanks are also to our Student Editorial members for their co-operation & support and putting in their best in bringing out this issue.

Mr. Sorabh Gupta
(Assistant Professor)
B.tech,M.tech,

Student Editorial Board

Sharon Alwin
Chief Editor

Vaibhav Sangwan
Designer

Shreya Gupta
Designer

B.Tech.
Information Technology

The Department of Information Technology caters to the emerging requirements of the students who wish to script softwares that render a great assistance to simplify administrative and technical nature of human efforts and can accomplish the astonishing feats in the tech-savvy world. The real strength of the department is the team of active and devoted faculty members who are dedicated to educate and guide students with rapidly changing technological advances. Department imbibe industry wide modern and well operational laboratories with latest hardware and softwares, high speed internet connectivity.

The department has cultivated a vibrant environment conducive to rigorous training, which is exemplary for students to imbibe. Encouragement and guidance is offered to the students for participating in sports and various extra curricular activities to hone and strengthen their non-technical skills. Students are counseled by the faculty on one-to-one basis.

The Department is running two Programs i.e.

- Bachelor of Technology in Information Technology
- Bachelor of Technology (Honors)
  Major Degree: Information Technology
  Minor Specialization: Block Chain, IOT, AR/VR, AI & ML, AI & Data Science, Cyber Security

ARE YOU READY TO EXPLORE THE **CAREER OPPORTUNITIES** OF THE **FUTURE**?

The key features of the B.Tech (Honors) program are:

- The student can identify one area of minor specialization (mentioned above) along with the major specialization in Information Technology.
- In contrast to a traditional B.Tech program which is a 4 Year (8 Semester program) offering 160 course credits, the B.Tech (Honors) program is a 4 Year (8 Semester program) offering 180 course credits.
- The additional 20 Credits to be completed as part of the B.Tech (Honors) program is to be evenly spaced out between the 3rd and 8th semester.
- To successfully complete the B.Tech (Honors) program the student shall need to clear the examinations for the additional 20 Credits. The examinations shall be conducted as per the AICTE as well as University guidelines.

INDEX

- IT RANK HOLDERS
- TEAM IT
- COVID 19 APPLICATION
- TECHNICAL ARTICLES
- FUN FACTS
- POEMS
- CROSSWORD
- FROM NOTEBOOK TO CANVAS
- NON-TECHNICAL ARTICLES
- RIDDLES
- WORDS FROM ALUMNI

IT Rank Holders

Congratulations and All The Best!

7th Sem. (Dec. 2019)

Vidhi Tuteja (82.47%)

Rumani (81.65%)

Surbhi (81.53%)

5th Sem. (Dec. 2019)

Rishabh Jha(84.90%)

Hitesh Saini (82.00%)

Parvesh Kaushik (80.60%)

3rd Sem. (Dec. 2019)

Prince Kumar (80.00%)

Prince Raj (77.67%)

Shubham Pandey(77.00%)

RATTAN DEEP ANEJA
Ph.D.*,M.Tech, B.E.
(Assistant Professor)

Dr. NITISHA AGGARWAL
Ph.D., M.Tech., B.Tech.
(Assistant Professor)

SORABH GUPTA
M.Tech,B.Tech
(Assistant Professor)

YOGITA GULATI
M.Tech,B.Tech
(Assistant Professor)

GINNI CHAWLA
M.Tech,B.Tech
(Assistant Professor)

SANDEEP KUMAR
M.Tech,B.Tech
(Assistant Professor)

PRIYANKA KALRA
M.Tech,B.Tech
(Assistant Professor)

KARUNA RANI
M.Tech,B.Tech
(Assistant Professor)

SANGEETA YADAV
M.Tech,B.Tech
(Assistant Professor)

HARMINDER KAUR
M.Tech,B.Tech
(Assistant Professor)

SONAM
M.Tech,B.Tech
(Assistant Professor)

MATISH GARG
M.Tech,B.Tech
(Assistant Professor)

COVID 19 Application

Utkarsh Pandey from IT department developed an online application to combat the corona virus, by providing the user with the self assessment facility and worldwide news related to the pandemic.

छात्र ने बनाया कोविड-19 ऐप

समालखा। पानीपत इंस्टिट्यूट ऑफ इंजीनियरिंग एंड टेक्नोलॉजी के इनफार्मेशन टेक्नोलॉजी विभाग के द्वितीय वर्ष के छात्र उत्कर्ष ने कोविड 19 नाम का एक मोबाइल ऐप बनाया है। जिससे कोई भी व्यक्ति कुछ आसान से सवालों का जवाब देकर ये जान सकता है कि उसे कोरोना संक्रमित होने के कितने चांस है। इसके अलावा कोरोना वायरस से कैसे बचा जा सकता है। राकेश तायल ने बताया अगर कोई कोरोना संक्रमित मरीज मिलता है तो उसका फोन नंबर इस ऐप पर डालकर ये भी जानकारी मिल सकती है कि वो व्यक्ति किस किस जगह पर गया था और किन लोगों के संपर्क में रहा। यह एक इंटरेक्टिव ऐप है। जिसे एआईसीटीई न्यू दिल्ली ने अपनी वेबसाइट पर लांच किया है।

छात्र उत्कर्ष।

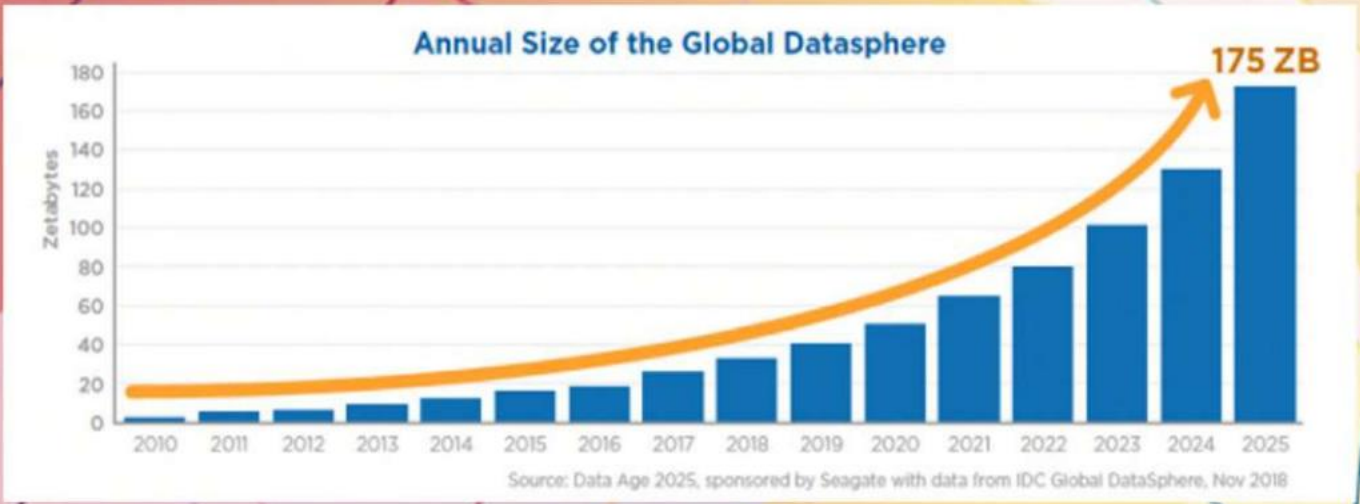
HOW BIG IS THE BIG DATA ?

So what is Big Data? Bernard Marr, an internationally recognized best-selling author, popular keynote speaker, futurist, strategic businessman and technology advisor to governments and companies, describes Big data as digital trace that is being generated in this digital era. This digital trace is made up of all the data that has been confiscated during the usage of the digital mechanization.

The basic idea trailing the phrase BIG DATA is that everything that we are doing is increasingly leaving a digital trace which we can use and analyze to become agile. The research firm Gartner defines, Big data as high volume, high velocity and high variety information assets that demands cost effective, innovation forms of information processing that enable enhanced insight, decision making and process automation.

So why is everyone talking about the Big Data?

More data has been created in these past two years than in the entire history of the human kind. By the end of this year, about 1.7 megabytes of new information will be created every second for every human being that exists in this world. By 2025, the data that we are generating, sharing or copying will reach around 175zettabytes.



This data is generated in the course of building driver assistance and autonomous vehicle technologies, IoT devices including sensors in our bodies, homes, factories and cities, creating high resolution content for 360 video and augmented reality and 5G communications. It is enabled by building the edge networks and centralized data centers that help to analyze, communicate and store the resulting data. The creation of all of this digital technology is often called "digital transformation."

How big is a zettabyte? One bit is binary, it is either 1 or 0. 8 bits makes up a one byte, and 1024 bytes makes up a kilobyte. Large DVDs and videos are in gigabytes.1024 kilobytes make up one gigabyte of storage space. These days we use memory sticks or USBs that can store a few dozen gigabytes of data. On the other hand, computers and hard disks can store terabytes of the data.

One terabyte is 1024 gigabyte. 1024 terabytes makes up one Petabyte and 1024 Petabytes makes a Exabyte. And 1024 exabyte make a zettabyte, i.e One zettabyte= 270 Bytes roughly 1021 bytes.

Now, think of a big urban city or a busyinternational airports like Heathrow, O'Hare, Shanghai Pudong or Beijing Capital international airport. And now we are talking petabytes and exabytes. All those airplanes are capturing, transmitting and using the data. All the people in those airports are having their mobile phones and other digital devices that have a large amount of data stored in them. Also consider all the security cameras and security staffs in and around the airport.

A digital universe study conducted by IDC claimed that digital information reached 0.8 zettabyte last year and predicted that this number would reach 35 zettabytes by the end of 2020. It is predicted that by 2020, one-tenth of the world's data will be produced by machines and most of the world's data will be produced in the emerging markets. It is also predicted that the amount of data produce will increasingly outspace all the existing storages.

Advances in cloud computing have contributed to the increasing potential of big data. According to McKinsey in 2013, the emergence of the cloud computing had led to the launch of Big Data era.Big data empowers businesses to predict when a machine will stop working, when machine components need to be replaced, and even when employees will resign. Let's look at an example. Airplane engines generate large amountsof data every second.By analyzing this massive amount of data from the turbine, and even other sensors on the plane such as GPS, temperature, and speed, organizations are able to gain real-time visibilityinto the operations of the plane. This data is used to run the aircraft safelyand efficiently, and in the unlikely event of a crash, this data can also tell air crash investigators exactly what caused the accident. Many present-day aviation regulations and protocols have come from the data collected in past incidents.

The emerging data landscape is massive and changing extraordinarily fast. IDC provides some good insight into how organizations can keep up with the changes. "Companies looking to be relevant between now and 2025 will need to understand the role data plays in their organization and how the Datasphere will evolve during that period," IDC concludes. "They will need to embrace their role as data guardians, leverage the cloud, and take a global approach to their data.

By Drishti Sharma
(2816325)
4th year

CHINA AND CYBERSPACE

The People's Republic of China maintains a robust capacity to conduct cyber operations through the combined use of network and psychological operations, media propagation, and electronic warfare capabilities. China's People's Liberation Army views these four forms of operations as occurring within one collective "information domain," control over which is critical for future great-power conflicts. The Chinese notion of "information domain" encompasses cyberspace, but also includes other areas where information is present. In this section, we focus primarily on Chinese information capability in cyberspace.

The Chinese Communist Party (CCP) has taken extensive steps to control internal and external information flow both at home and abroad. To this end, the PRC has undertaken an extensive reorganization of its military and increased its efforts to expand its influence abroad. Collectively, these policies have been implemented with the dual purposes of advancing the PRC's diplomatic and economic interests on the world stage and bolstering China's military position in the event of a large-scale conflict.

To fully understand how China conducts cyber operations, one must first understand the doctrinal basis for the PLA's approach to cyber warfare. Just as Russia draws much of its cyber conflict doctrine from the former Soviet Union, China also draws on the legacy of the CCP's Leninist organizational principles. Indeed, CCP strategic planners dating back to Mao heavily emphasized the importance of the control of information and its role in subduing technologically and materially superior opponents. Hence, China's use of cyber capabilities should be viewed as an outgrowth of older doctrines, updated to meet new strategic and technological realities.

China's strategy of "informationization" has its roots in a series of reforms made to the PLA in the wake of the Gulf War. Having witnessed the dismal performance of the Iraqi military during Operation Desert Storm, PLA military observers concluded that Coalition dominance of the C4ISR sphere was the key factor in their subsequent dismantlement of the Iraqi military. As a result, PLA observers concluded that control over the information space would be the decisive factor in future conflicts. Throughout the 1990s China's government embarked upon a project of extensive military modernization, with the goal of creating a fully "informationized" fighting force. The importance of informationization has also been heavily emphasized in Chinese strategic planning since the early 2000s, through internal PLA publications and strategic planning documents released by China's National Defense University. Most recently, China's 2015 Defense White Paper outlined the need to have the capability to fight and win wars under "informationized conditions." Taken collectively, it is clear that China's leadership regards control of the information domain—and thus cyberspace—as an operational lynchpin in future conflicts.

By Vaibhav Sangwan
2817315
(3th year)

5G INTERNET A BOON OR A BANE

In this time of pandemic while many industries are closed down, the smartphone industry is working on new technologies and launching new things regularly. Recently the launch of One Plus 8 series phones and Iphone SE (2020) took place. Not only these are making the headlines, but the latest 5G technology is also being widely talked about in the technical world.

5G is the next generation of network after 4G. This going to bring a revolution in the Wireless Internet Technology and its applications in everyday use. This technology is available in a few countries right now, but it will be available in our country in the coming years. There are many features of 5G that makes it superior than the current 4G network. The speed at which 5G works is very high and can reach upto 1Gbps, which is 10 times faster than 4G. This means everything becomes ultrafast on a 5G phone, Youtube videos will load quickly, we'll be able to download HD movies in a jiffy, which is quite miraculous. The networks using 5G technology will be able to connect up to 100 times more users within a specific area which leads to increased connectivity. The 5G technology also provides better network connections due to better speed. This factor is going to have a huge impact in the smartphone usage and media consumption. The 5G network has been set up in a few countries in the world, however, many are still left. There are not much 5G mobiles present in the market that customers can buy.

There are multiple benefits of 5G and so are the risks and dangers associated with it:

- The radiations emitted from 5G signals is non-ionizing, not strong enough to harm anyone easily but increased exposure to such radiations may cause Burns or Rash due to Heat.

- 5G network signals cause RF Radiation which is classified by the WHO in one of its reports. These radiations basically is potential of causing cancer but there isn't any proof of any health damage caused by 5G or any previous networks such as 1G,2G,3G or 4G till date. Due to excessive use of mobile phones there can always be chances of heating up of certain body parts. So, avoid using the phones when it's too hot.

WHO is currently conducting research on impact of 5G on the health of an individual. . The situation regarding its use will be clear in some time.
These facts will help one to understand the 5G Technology. Surely everyone is excited about the fast speed that will be provided with the launch of 5G. There are many other things associated that will improve once this is made available commercially.

By Ruchi Sharma
2817305
(3th year)

EXTENSIVELY USED AND CONFUSED DATA SCIENCE BUZZWORD

Data, the commonly used term nowadays whether in technical or general context we all are revolving around data nowadays like nothing else.
What is so important about data today and in this age is to maintain a healthy business that goes together. Alongside working with data whether you understand it or not, there is no denial that data is the foundation of any successful company or an organization. Also, the business entrepreneurs that are leading their businesses are very much aware about the fact, that diving deeper into data is what will make them tower above the competition.

Why there are so many Business and Data science buzzwords?

As, we go deeper into the world of data and unless you are not a data science whiz there is a very high possibility that you are going to end up things by creating a huge mess in your mind, fret not here this article will shed some light over those confused terms but before that, below are the reasons that you need to know due to which things become so complicated:

Confusion #1: The constant evolution of Data Science industry and in turn the meaning of these buzzwords.

For example: Someone who had the title of statistician 25 years ago would have been responsible for gathering and cleaning data sets and applying various statistical methods to the data but after some years, however with the growth of data and the radical improvement of technology, this statistician would be required to extract patterns from data and henceforth a new buzzword was coined – Data Mining. Similarly, forward wind a few more years in the same statistician due to new mathematical and statistical models could now perform more accurate forecasts and again another term has found its way into an already inflated business glossary - Predictive Analytics.

Now here comes the question, Has the statistician changed her job by this point?
Nope.
Are her goals different?
Not really.

However, she is more qualified now to be part of the statistics department, predictive analysis team or now have the title Data Scientist.
Hopefully, it is clear for you to understand how these buzzwords develop over time and how someone who would qualify as a statistician 25 years ago and kept up growing with modern technologies could fit into a multitude of professional categories.

Confusion #2: HR Managers, another confusion which stems from H.R. managers who understandably can become overwhelmed with the barrage of new terms and buzzwords flying around. This causes them to label job positions inaccurately often seeming like they are choosing them on a whim.

One H.R. representative may call a job position Data AnalyticsSpecialist when in fact they need a Data Analyst.
Of course, there are many companies that word their job offers brilliantly but unfortunately this is not the standard across the board which can cause even more of a mess now.

Explanation of the commonly used business and data buzzwords:

1. Analysis: We perform analyses on the things that have already happened in the past such as using an analysis to explain how a story ended and the way it ended. This means that we do analyses to explain how and or why something happened.
2. Analytics: Analytics generally refers to the future instead of explaining past events. It explores potential future ones. Analytics is essentially the application of logical and computational reasoning to the component parts obtained in an analysis and in doing this you are looking for patterns in exploring what you can do with them in the future.
   Here analytics branches off into two areas:
   - 2.1 Qualitative Analytics:This is using your intuition and experience in conjunction with the analysis to plan your next business move.
   - 2.2 Quantitative Analytics:This is applying formulas and algorithms to numbers you have gathered from your analysis.
3. Business Analysis:Business analysis is a research discipline of identifying business needs and determining solutions to business problems. Solutions often include a software-systems development component, but may also consist of process improvement, organizational change or strategic planning and policy development. Business Analysis is basically performed over the previously available business data and is used to analyse what happened in the past.
   - 3.1 Tools used for Business Analysis:Microsoft Office suite, Google Docs, Rational Requisite Pro, Balsamiq, SWOT, Pencil, Trello, SmartDraw, Wrike, Version One.
   - 3.2 Popular techniques for Business Analysis:SWOT Analysis, MOST Analysis, Business Process Modelling (BPM), Use Case Modelling, Brainstorming, Non-functional Requirement Analysis, PESTLE Analysis, Requirement Analysis, User Stories, CATWOE.
4. Business Analytics:Business analytics (BA) refers to the skills, technologies, practices for continuous iterative exploration and investigation of past business performance to gain insight and drive business planning.Business analytics focuses on developing new insights and understanding of business performance based on data and statistical methods.

Business analytics makes extensive use of analytical modeling and numerical analysis, including explanatory and predictive modeling, and fact-based management to drive decision making. It is therefore closely related to management science.

5. Data Analysis:Data analysis is defined as a process of cleaning, transforming, and modeling data to discover useful information for business decision-making. The purpose of Data Analysis is to extract useful information from data and taking the decision based upon the data analysis.

Whenever we take any decision in our day-to-day life is by thinking about what happened last time or what will happen by choosing that particular decision. This is nothing but analysing our past or future and making decisions based on it. For that, we gather memories of our past or dreams of our future. So that is nothing but data analysis. Now same thing analyst does for business purposes, is called Data Analysis.

5.1 Tools used for Data Analysis:R Programming, Tableau Public, Python, SAS, Apache Spark, Excel, RapidMiner, KNIME, QlikView, Splunk.

5.2 Popular techniques used for Data Analysis:Text Analysis, Statistical Analysis, Diagnostic Analysis, Predictive Analysis, Prescriptive Analysis.

6. Data Analytics:Data analytics (DA) is the process of examining data sets in order to draw conclusions about the information they contain, increasingly with the aid of specialized systems and software. Data analytics technologies and techniques are widely used in commercial industries to enable organizations to make more-informed business decisions and by scientists and researchers to verify or disprove scientific models, theories and hypotheses.

7. Data Science:Data science is an inter-disciplinary field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from many structural and unstructured data. Data science is related to data mining and big data.

Data science is a "concept to unify statistics, data analysis, machine learning and their related methods" in order to "understand and analyze actual phenomena" with data.[3] It uses techniques and theories drawn from many fields within the context of mathematics, statistics, computer science, and information science.

7.1 Tools used for Data Science: Data Science Tools For Data Storage - Apache Hadoop, Data Science Tools for Exploratory Data Analysis - Informatica PowerCenter, Data Science Tools for Data Modelling- H20.ai, DataRobot, Data Science Tools for Data Visualization

8. Business Intelligence:Business intelligence (BI) leverages software and services to transform data into actionable insights that inform an organization's business decisions.

BI tools access and analyze data sets and present analytical findings in reports, summaries, dashboards, graphs, charts and maps to provide users with detailed intelligence about the state of the business.

The term business intelligence often also refers to a range of tools that provide quick, easy-to-digest access to insights about an organization's current state, based on available data.

8.1 Business intelligence software and systems:

A variety of different types of tools fall under the business intelligence umbrella.

- ☒ Dashboards
- ☒ Visualizations
- ☒ Reporting
- ☒ Data mining
- ☒ ETL (extract-transfer-load –tools that import data from one data store into another)
- ☒ OLAP (online analytical processing)

8.2 Business Intelligence Tools:Tableau, QlikView, Splunk, Alteryx, Domo, Dundas BI, Google Data Studio, Birst.

By Aashima Sahni

By Shreya Chauhan
2817305 (4th year)

A BETTER APPROACH TO CYBERSECURITY

The objective of this is to outline realistic changes to the cybersecurity environment that would result in better cybersecurity for users. Achieving 'better" cybersecurity perfect security is not an option will require three fundamental conceptual and operational changes.

First, change will require greater use of effective coordinated partnerships, to provide critical expert capabilities to users. Cybersecurity is complex, and it requires expert engagement. As an analogy, in he financial arena, users rely on banks and other financial institutions to be responsible for key aspects of their monetary transactions, including payments, lending, and savings–though, of course, users have their own responsibilities as part of that system. Critical elements of effective coordinated partnerships include the development of advanced technology and the use of effective operational approaches, including cloud technologies, automation, and artificial intelligence.

Second, new partnerships and other changes will re- quire the federal government to be more significantly involved in the provision of cybersecurity. That will include the provision of budgetary resources, the enhancement of resilience through coordinated partner- ships, and the undertaking of significant responses to cyberattackers. To create effective partnerships, the nation's best resources will need to move to support the most critical assets and sectors.

Third, the technical architecture and underpinnings for defending against cyberattacks must change. The attack surface is too broad to address with conventional solution approaches, and is increasing by an order of magnitude with the convergence of information technology systems (data), and operational technology platforms (SCADA, sensors). Gaps in private and public cloud-based services are outpacing certification and accreditation. New IoT devices provide countless entry points into private networks, and sophisticated botnets are growing and becoming automated for advanced distributed-denial-of-service (DDoS) attacks. Trusted platforms have been found to have backdoor access, and mobility continually challenges the definition of securing to "the edge".

Despite these evident and growing risks, organizations susceptible to attack often fail to fix the problem in a timely manner. Perhaps the problem is seen as too overwhelming or unsolvable (which is partially true as there is no end-state in cyber readiness). But we must improve this situation soon and in a sustainable way. Recommended changes include: a rapid migration to a zero-trust architecture for enterprises and extended enterprises; rationalization and consolidation of disparate systems and networks; development of a secure hardware capability; machine-learning / artificial-intelligence-augmented cyber defenses; expanded use of the cloud to provide expert-level capabilities; and active defenses built upon an ever-increasing, intelligent zero-trust architecture.

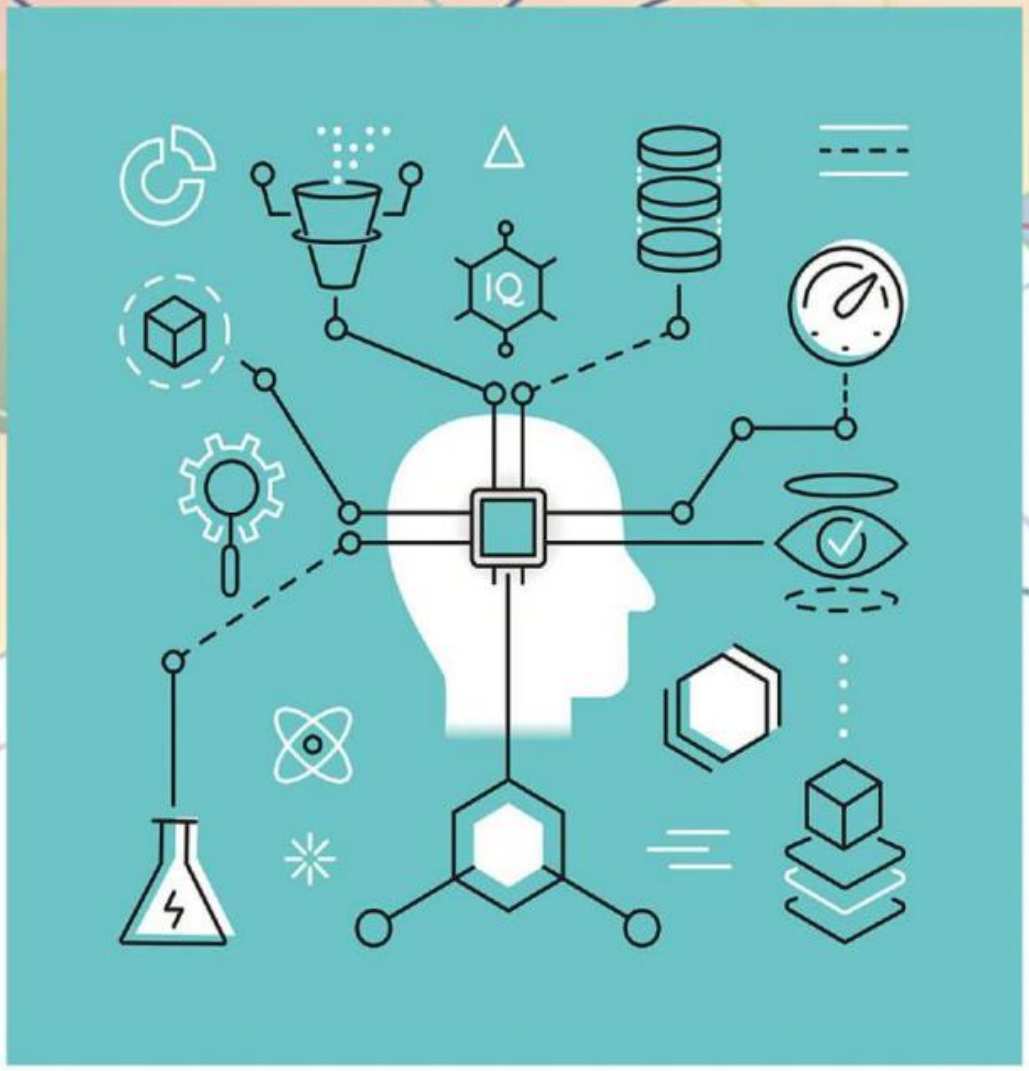
These general approaches, explained in detail above, are necessary for three reasons. First, effective cybersecurity resilience is beyond the capability of most entities; coordinated partnerships can provide the requisite additional resources. Second, current cybersecurity does not include effective responses against attackers, and the "bad guys" nation states and criminals have not been significantly deterred. As General Paul Nakasone, commander of US Cyber Command (USCYBERCOM), recently stated, "Thus far, our responses against adversaries who have penetrated our networks... have not worked." There are far too few resources devoted to cybersecurity. While it is something of an overstatement, current cybersecurity actions are all too often akin to the Pentagon aphorism of "providing all assistance short of actual help." Or, to use a sports analogy, it is as if one football team had eleven players on the field, while the other initially had six and sometimes increased that number to nine better, but not enough to win. The foregoing suggests the general approach; what follows are the specifics.

By Shivani Sharma
2817322
(3th year)

AUTOMATED MACHINE LEARNING

As we know Machine Learning is the most popular technology in current times! It is currently utilized in almost every field imaginable which has pushed its importance infinitely. But what about those who don't know Machine Learning as well? That's where Automated machine learning or Auto ML comes in!

Automated machine learning (Auto ML) basically involves automating the end-to-end process of applying machine learning to real-world problems that are actually relevant in the industry. In recent years, it has been noticed as well as proven time and time again that ML or machine learning is the key to the future. It is understandable that this is an up and coming technology that allows for various directions of research, analysis, and implementation. A data scientist has to apply the appropriate data pre-processing, parameter engineering, parameter extraction, and parameter selection methods that make the dataset ready for inference and hence for data analysis. As many of these steps can only be performed by ML experts, Auto ML was proposed as an artificial intelligence-based solution to the challenge of easily applying machine learning without much expertise. Google one of the leading tech-giants has released the Cloud Auto ML for making custom machine learning models based on business to business.



Currently, Auto ML systems can be fast at generating predictive models that achieve near-optimal performances. However, their coverage is still narrow and their true potential still untapped. The three main limitations of existing Auto ML systems: unsupervised & reinforcement learning, complex data types and domain knowledge. There has been rapid growth and advancements in Auto ML systems over the last few years. Auto ML automates the full development lifecycle for enterprise AI and ML applications, and makes it possible for a data scientist to automate the optimisation and selection of ML models, but it does encounter some limitations. Now, with the next version, AutoML 2.0, these systems plan to automate the most complicated, and time-consuming part of the enterprise AI development lifecycle – feature engineering, which typically takes months using traditional methods. Not only automation, but AutoML 2.0 will also offer BI analysts, data engineers and others in an organisation with deep domain knowledge to contribute towards the development of ML and AI models. With automation in feature engineering, BI teams have the opportunity to develop sophisticated algorithms in a matter of days.

By Prakash
2818397
(2nd year)

HOW TO START GRAPHIC DESIGNING AS A BEGINNER

Graphic designing is a very creative field if you have an eye for design and technology then this field might be great for you. Great thing about 21st century is that you can create anything you want without need of external help or platform, if you want to be a writer just write, if you want to be a designer then just start designing.

But how to get started? Here we'll look at some tips for starting a career in graphic designing.

1. START WITH THE BASICS.

A big part of graphic designing is being familiar with the basic concepts such as typography, color, images, shape, texture and spacing. But don't worry, more your will practice more you get hold of these concepts. Everyone has a taste and creative vision of their own you just have to practice to find yours

Until then there are some standards and rules you can start with. In typography, there are generally two types serif and sans serif. Some of popular serif fonts are Trajan, Garamond, Bodoni and for sans-serif most popular is Helvetica, Futura, Roboto. You should use the images in your design which convey the message you are trying to tell with your design.

You can read more about them later on but these are just for some help you can use any font you like. Learning how to balance these in a craft will take some time but you should continue practicing.

2. KNOW YOUR TOOLS

There are several tools to do the same job. Some are more popular than other but whatever you choose you should get yourself familiar with all the options. It helps to ease your workflow. There are no industry standards but here are some of popular software used by many graphic designers. Most Popular are Photoshop for image editing, Icon Finder for icons, Adobe Illustrator for making vector images.

3. FOCUS ON ONE AREA

Primary goal of graphic designing is to solve problems through typography, imagery, color etc and there is no fixed way to do it, that's why there are several types of graphic design and each type requires specific set of skills. In starting you can learn different areas but later you should focus in specialization in one area.

Some of different areas to consider are Marketing and Advertising graphic design, UI/UX design, Publication designer, Motion Graphic designer and Illustrator etc. As industry is changing fast, one should be fast learner so he can stay relevant in the game.

4.GET INSPIRATION

Getting inspiration from someone's work is one thing but stealing is another. Inspiration is when you look at someone's work, think about its good things, get ideas and make something on your own. You cannot just sit in a room all by yourself and hope that creativity flowing through you. You should get ideas from world around you

Now the question arises, where to get inspiration? Good question specially when there are endless resources it can be pretty overwhelming. But there are ways to keep creativity going, you can Follow other artists on Instagram, read magazine about design industry and listen to podcast to know what is happening around you.

5. CREATE A DESIGN PORTFOLIO

Make sure to build a portfolio and blog regularly on what you learn as you grow as a designer. It demonstrates your ability to practically apply your skills. But don't get overwhelmed with all these things as these things take time.

Always remember that everyone started from zero to begin with.

At some point, you'll sit down to get some work done and it will be like running headfirst into the wall. Creative blocks happen even to the best of best and it can be difficult when it happens, just think about it and do your best to move forward but Don't give up ever.

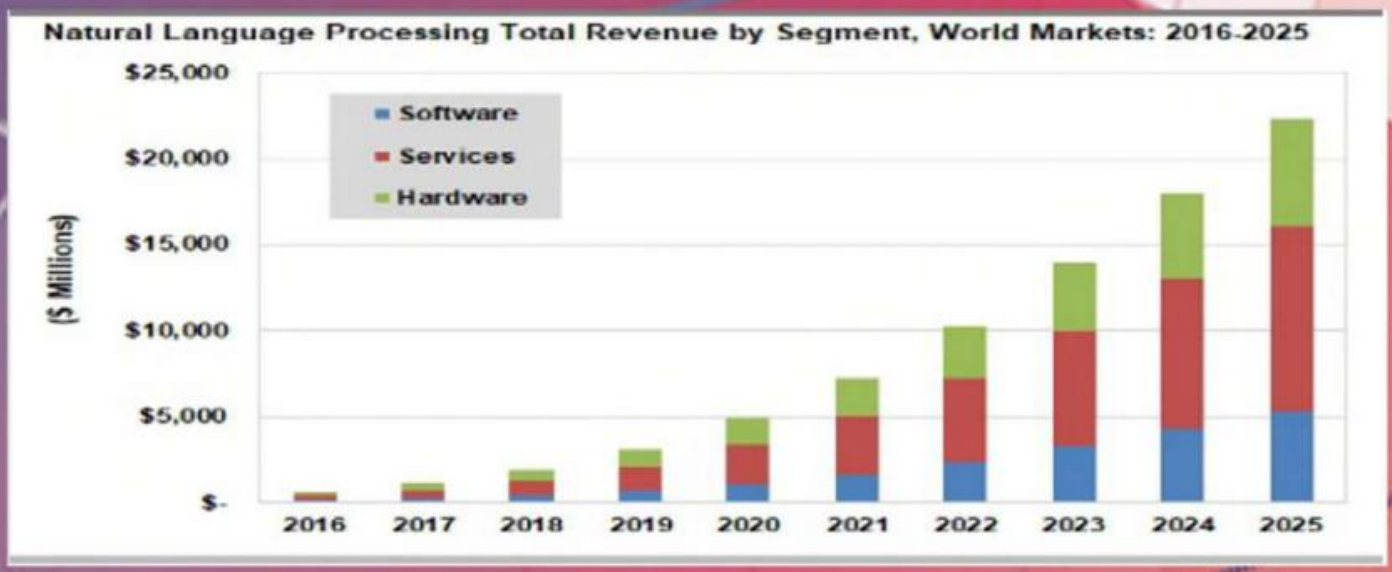
Find ways to reignite your creative side by looking for inspiration and something which give your mind a space. Don't forget to have fun in the process.

By Rohit
2816347
4th year

HOW FAST NATURAL LANGUAGE PROCESSING BEING USED?

Natural language processing (NLP) is a subfield of linguistics, computer science, information engineering, and artificial intelligence concerned with the interactions between computers and human languages, in particular how to program computers to process and analyze large amounts of natural language data. Challenges in natural language processing frequently involve speech recognition, natural language understanding, and natural language generation.

Natural language processing market to reach $22.3 billion by 2025: 42 key use cases in industry segment will drive high growth of natural language software, hardware, and services.



Tractica's report, "Natural Language Processing", examines 42 NLP use cases, identifying those applications best suited for commercial use. In addition, the report details the market trends and technology issues surrounding natural language processing and presents 10-year forecasts for NLP hardware, software, and services during the period from 2016 through 2025. The report also includes detailed profiles of 35 key industry players. Market forecasts, segmented by world region, include projections of software, hardware, and services revenue across multiple industry sectors. An Executive Summary of the report is available for free download on the firm's website.

Why learn the natural language processing? Natural language processing is a very interesting field in machine learning. Natural language processing allows to develop cool applications such as document classification, sentiment analysis, entity extraction. Several companies are hiring people with Natural language processing knowledge. Keep up with the deep learning papers on the subject and you'll find a good job without worries. In order to work on NLP problems, you will need to learn other essentials of machine learning that are likely to give you a wide understanding of machine learning in general.

Future plans with natural language processing: Apr 09, 2020 (The Express wire) -- the overall natural language processing market is expected to grow from USD 8.61 billion in 2018 to USD80.68 billion by 2026 at a CAGR of 32.4% during the forecast period. This information is published by fortune business insights, in the latest published report. The report further states that the market was USD 8.61 billion in 2018. It is set to gain momentum from the rising demand for big data, improved algorithms, and powerful computing.

What business problems are being solved with NLP?
NLP is heavily used in customer service. The interactions between customers and companies contain a lot of useful breadcrumbs that point towards the reasons for customer dissatisfaction, and the interaction itself can be cause of discontent.

Reducing customer complaints with NLP Royal bank of Scotland uses text analytics, an NLP technique, to extract important trends from customer feedback in many forms. The company analyzes data from emails, surveys and call center conversations to identify the root cause of customer dissatisfaction and implement improvements. Watch the video to learn more about analytics transforming customer relationships.

By Surbhi
2816508
(3rd year)

CRYPTOGRAPHY

Cryptography is an important aspect when we deal with network security. 'Crypto' is derived from the Greek word 'Krypto's' which means hidden or secret.

Cryptography is the process of converting Plain text to human non-readable form called cipher text. With the help of cryptography, we secure messages and other information from third parties.
Now-a-days cryptography is used for user authentication
(i.e. sender and receiver confirmation).

Cryptography is divided into three categories:

- ☒Symmetrical cryptography
- ☒Asymmetrical cryptography
- ☒Hash function

Well, firstly we will discuss about Symmetrical cryptography.

Symmetrical Cryptography: In this cryptography, sender and receiver use a secret key to Encrypt and Decrypt the messages. The sender uses this key to encrypt the data into cipher text and send the cipher text to the receiver. It is based on the number of key bits used. On the other hand, receiver applies the same key to change the cipher text back into plain text. It is faster than the Asymmetric cryptography.

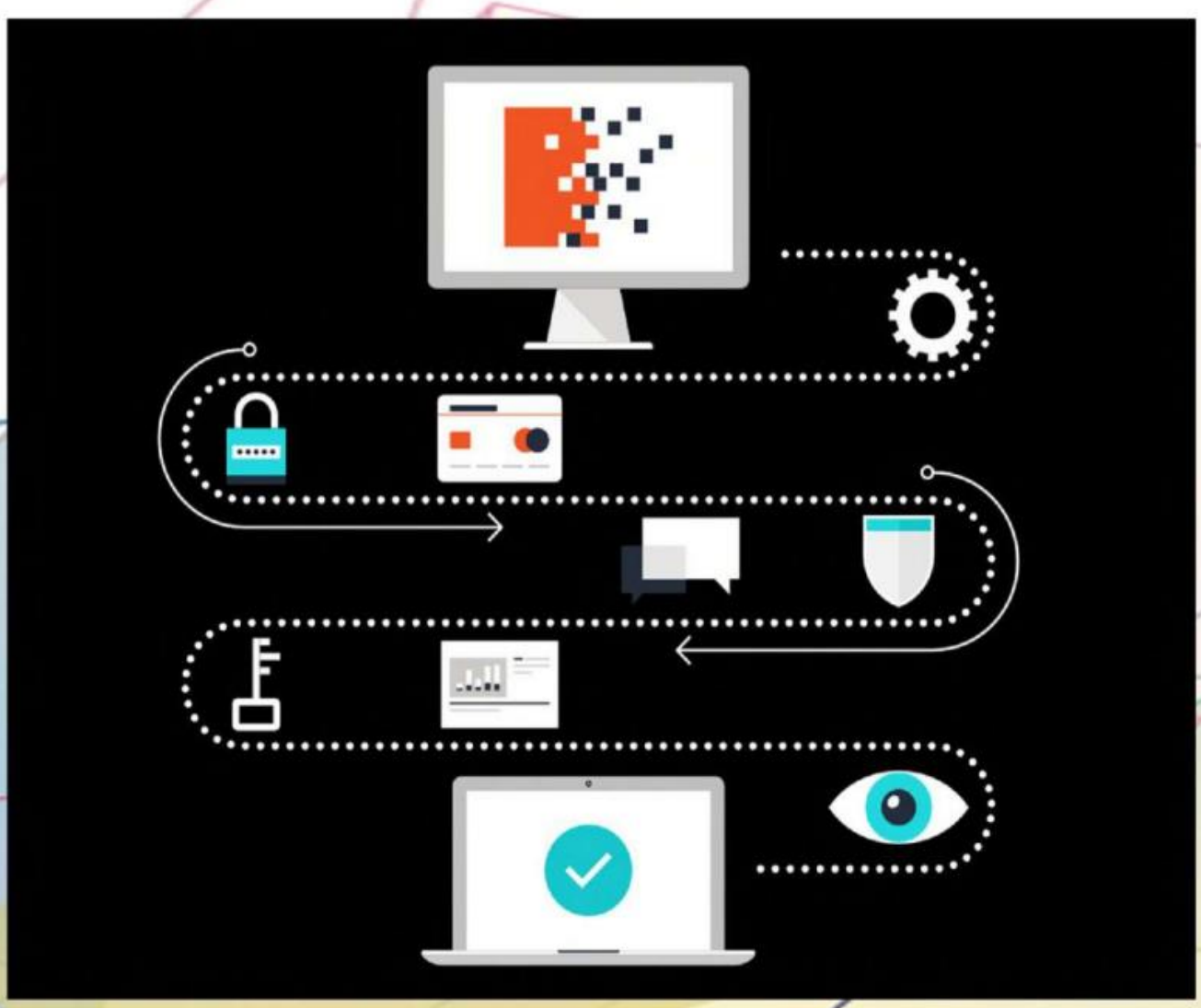
Asymmetrical cryptography: This is also known as public key cryptography. Basically, two keys are used in public key cryptography (i.e. public key and secret key). Public key is freely distributed. Any person can use it to decrypt the message. But it is not feasible to decrypt the message because it is slower than the Symmetric cryptography.

Hashing or Hash function: In Hashing, we encrypt the plain text into cipher text with the help of Hash value of fixed size by Hash function. No key is used in Hash function. Hash function is used by many operating systems for encryption.

Classical attacks: It can be divided into

a)Mathematical analysis
b)Brute force attack

Brute force attack runs encryption algorithm for all possible cases of the keys until a match is found. Encryption algorithm is treated as a black box.
Analytical attacks are those which focuses on breaking the crypto system by analysing the internal structure of the encryption algorithm.



Dictionary attack– this type of attack uses a wordlist in order to find a match of either the plaintext or key. It is mostly used when trying to crack encrypted passwords.

Rainbow table attack– this type of attack compares the cipher text against pre-computed hashes to find matches.

Some Encryption Algorithms:

1. MD5
2. SHA
3. RC4
4. Blowfish

By Shubham Pandey
2818367
(2nd year)

FUN FACTS

The Firefox logo isn't a fox.

There is a common misbelief that because the browser is named Firefox, the logo must be a fox.
Surprisingly, the cute furry creature in the logo is actually a red panda!

The first Apple logo isn't what you would think.

Originally, it featured Sir Isaac Newton sitting beneath a tree, with an apple about to fall on his head.
It was designed back in 1976 and featured a phrase around the border which read "Newton...A mind forever voyaging through strange seas of thought...alone".
Seems kind of dark!

Google rents out goats.

You read that right, instead of mowing their lawn, Google rents goats to eat the grass at their Mountain View headquarters.
A herder will bring 200 goats which are herded by a border collie named Jen.

The name for "robot" has dark origins.

If you look into the etymology of "robot," it comes from the Czech word "robota" which translates to forced labor or work.
The word was first used to refer to a fictional humanoid in a play in 1920.

The first ever VCR was the size of a piano.

When the first VCR (Video Camera Recorder) was made in 1956, it was the size of a piano.
Way bigger than I would have guessed!

FUN FACTS

The first camera needed an incredibly long exposure.

The first photograph ever taken in 1826 took 8 hours to expose!
The creator of that camera, Louis Daguerre, was able to lower that time drastically to just 15 minutes in 1839.

People read faster or slower depending what they read from.

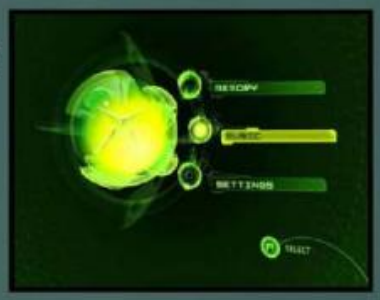
Not only do you blink less when you're on a computer, but reading from a screen also slows you down.
On average, people read 10% slower from a screen than from paper!
As for the blinking part, did you know that during everyday life, people normally blink at a rate of twenty times per minute?

The first computer mouse wasn't made from plastic.

Back in 1964, Doug Engelbart invented the first ever computer mouse! Back then, it was made out of wood.
It was rectangular and featured a little button on the top right. He called it a mouse because the cord coming out of the back reminded him of the tiny rodents.

The original Xbox had sound snippets of real space missions.

The original Xbox contained edited sound bites from actual transmissions from the Apollo missions. If you left the Xbox on the home screen, eventually you'll hear whispers of conversation – actual chatter from the Apollo mission.



Mac computers were named after the apple.

It's not a coincidence that "Macintosh" is similar to the apples called "mcintosh".
The name was misspelled on purpose to avoid conflict with a manufacturer called "McIntosh Laboratory".

By Bhumi Narang
28217364(3rd year)

Computers Are A Boon

Computers are merely our friends,

Just they have become today's trend

We can work on them day and night

Without relaxing anytime

It's just a box of knowledge

Which doesn't harm any person even of small age

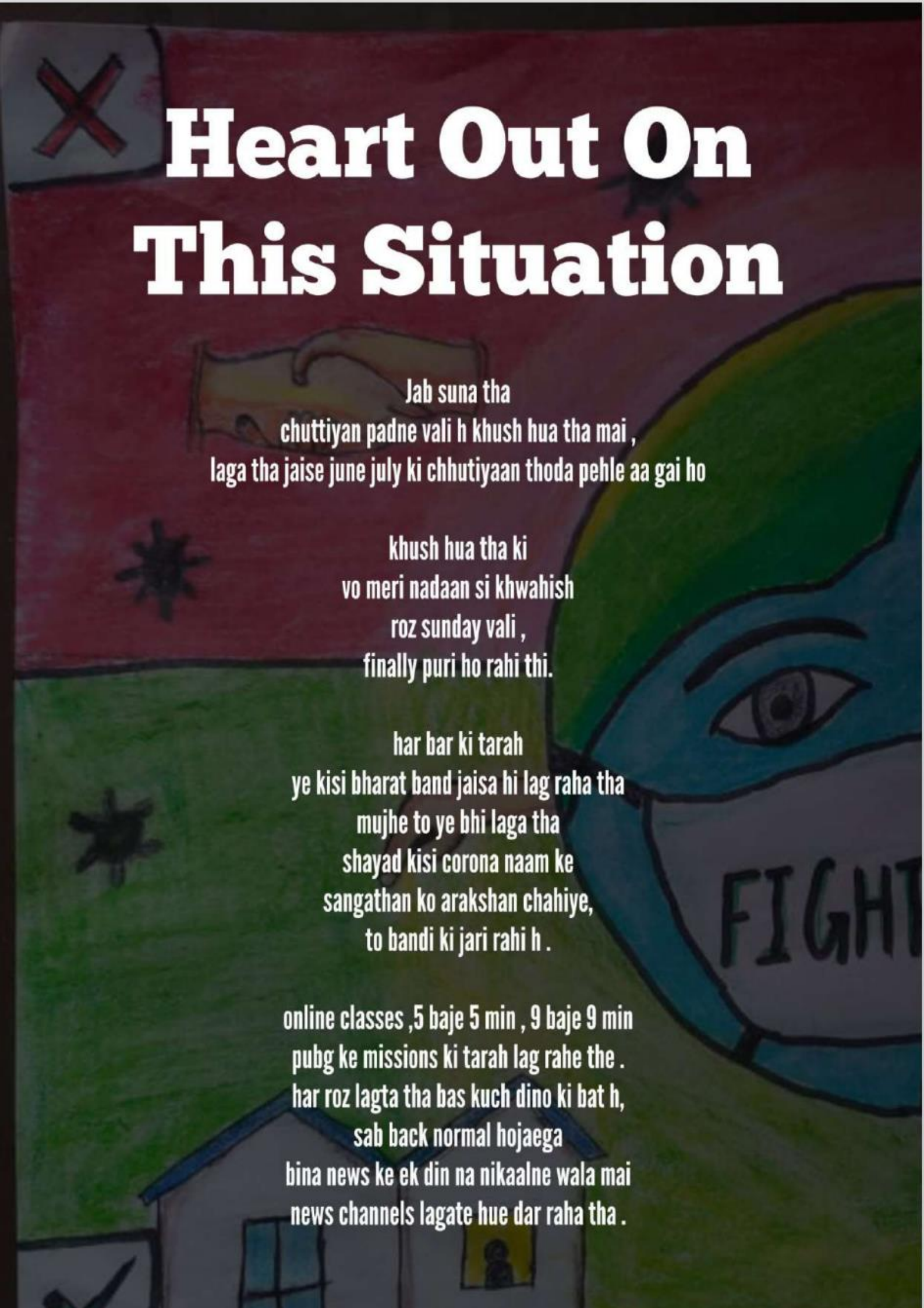
Always ready to help everyone

Just like today's boys, always ready to have some fun

It's a great invention for everyone

It's not a bane, It's boon for everyone .

By Arun Khanchi
2816604(4th year)



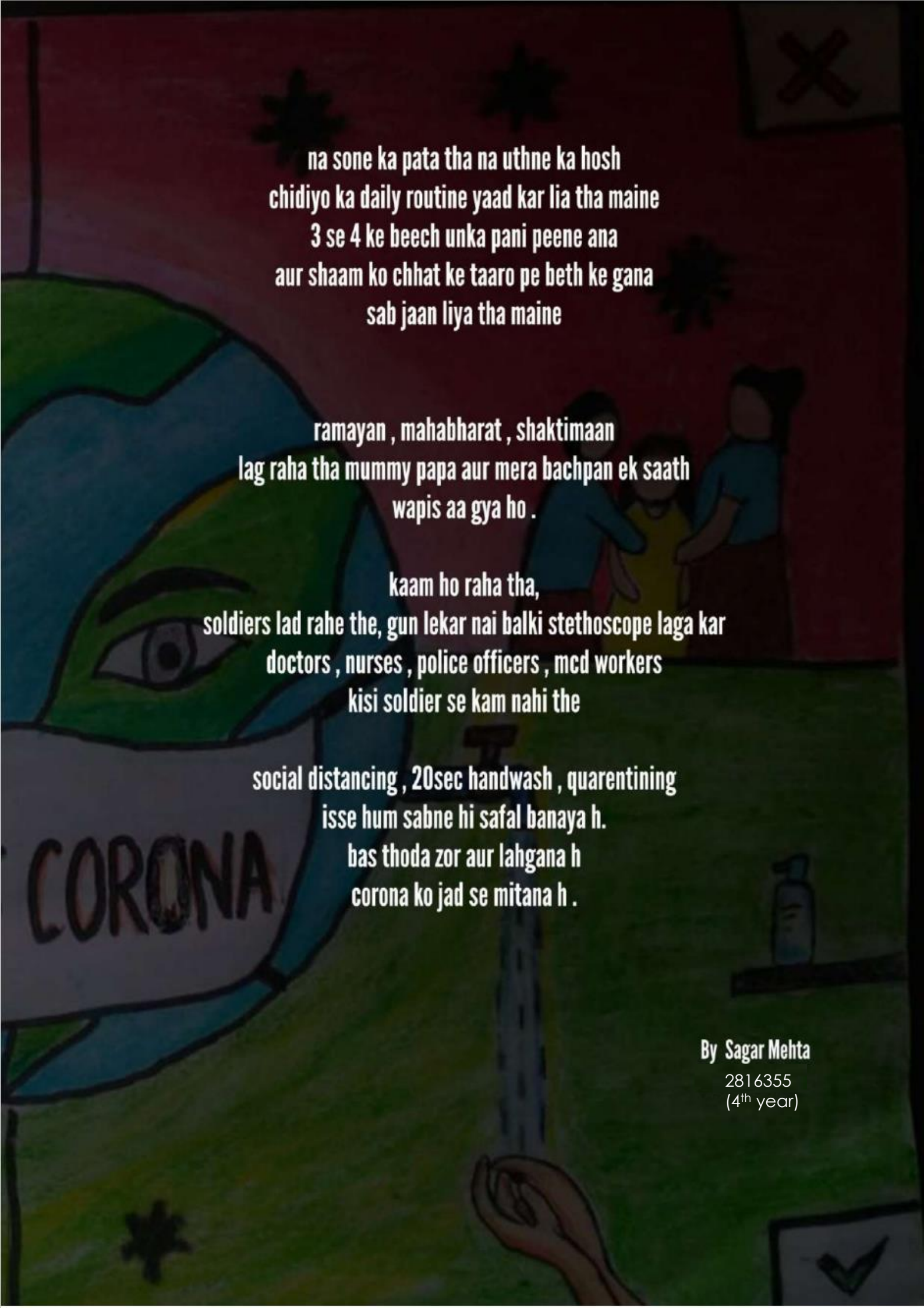
Heart Out On This Situation

Jab suna tha
chuttiyan padne vali h khush hua tha mai ,
laga tha jaise june july ki chhutiyaan thoda pehle aa gai ho

khush hua tha ki
vo meri nadaan si khwahish
roz sunday vali ,
finally puri ho rahi thi.

har bar ki tarah
ye kisi bharat band jaisa hi lag raha tha
mujhe to ye bhi laga tha
shayad kisi corona naam ke
sangathan ko arakshan chahiye,
to bandi ki jari rahi h .

online classes ,5 baje 5 min , 9 baje 9 min
pubg ke missions ki tarah lag rahe the .
har roz lagta tha bas kuch dino ki bat h,
sab back normal hojaega
bina news ke ek din na nikaalne wala mai
news channels lagate hue dar raha tha .



na sone ka pata tha na uthne ka hosh
chidiyo ka daily routine yaad kar lia tha maine
3 se 4 ke beech unka pani peene ana
aur shaam ko chhat ke taaro pe beth ke gana
sab jaan liya tha maine

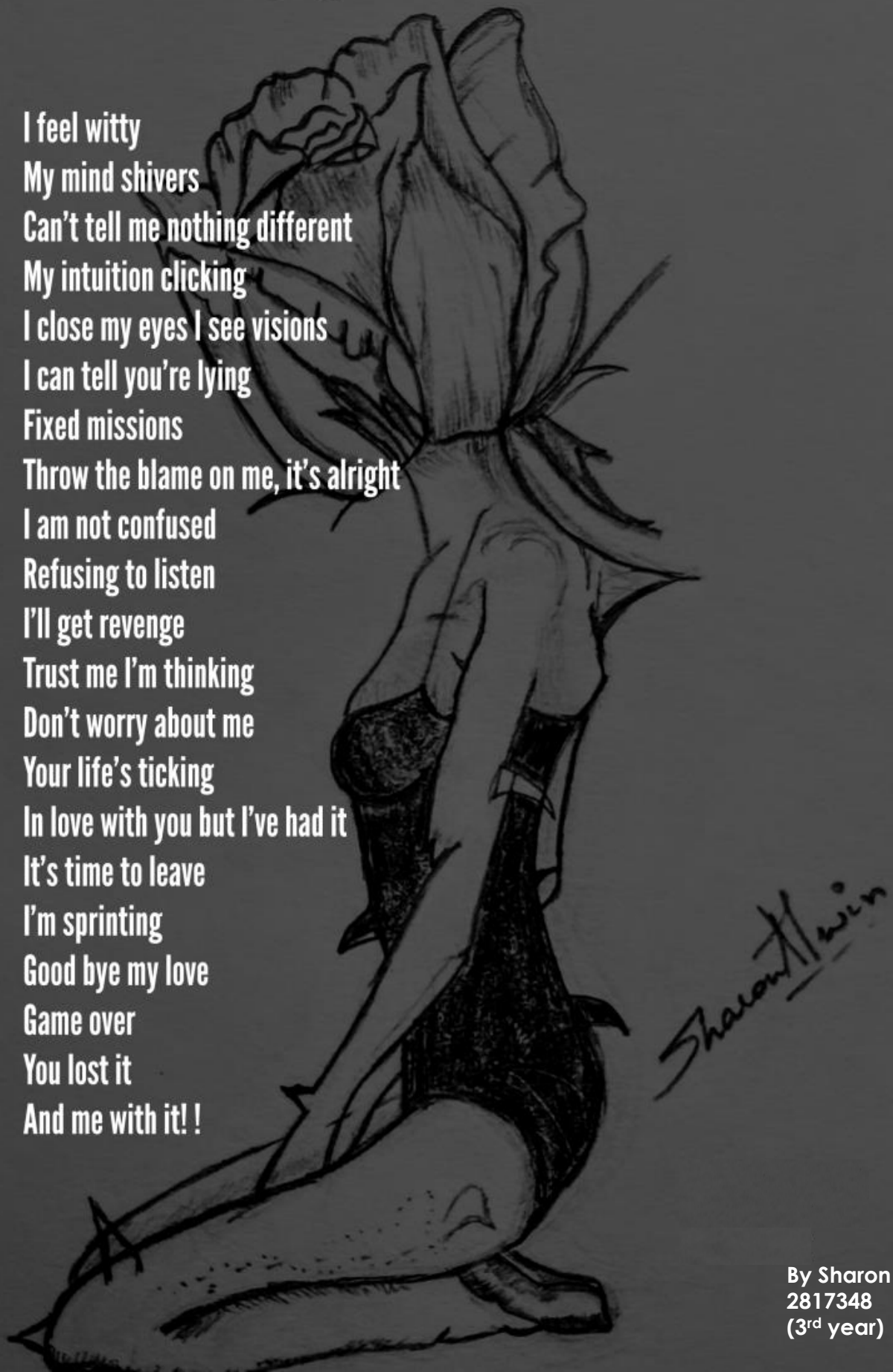
ramayan , mahabharat , shaktimaan
lag raha tha mummy papa aur mera bachpan ek saath
wapis aa gya ho .

kaam ho raha tha,
soldiers lad rahe the, gun lekar nai balki stethoscope laga kar
doctors , nurses , police officers , mcd workers
kisi soldier se kam nahi the

social distancing , 20sec handwash , quarentining
isse hum sabne hi safal banaya h.
bas thoda zor aur lahgana h
corona ko jad se mitana h .

By Sagar Mehta
2816355
(4th year)

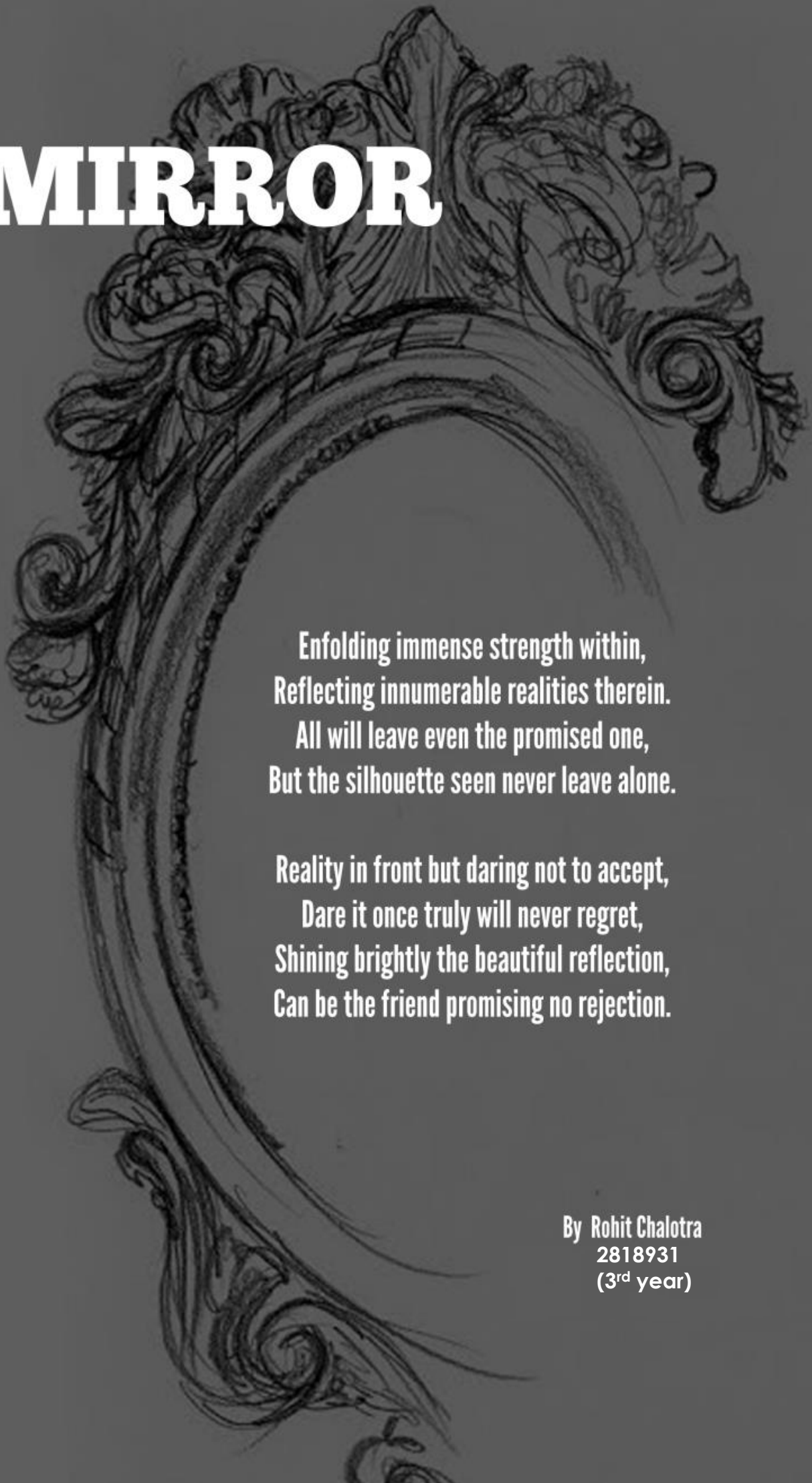
Trust the vibe you get, Energy doesn't lie



I feel witty
My mind shivers
Can't tell me nothing different
My intuition clicking
I close my eyes I see visions
I can tell you're lying
Fixed missions
Throw the blame on me, it's alright
I am not confused
Refusing to listen
I'll get revenge
Trust me I'm thinking
Don't worry about me
Your life's ticking
In love with you but I've had it
It's time to leave
I'm sprinting
Good bye my love
Game over
You lost it
And me with it! !

By Sharon
2817348
(3rd year)

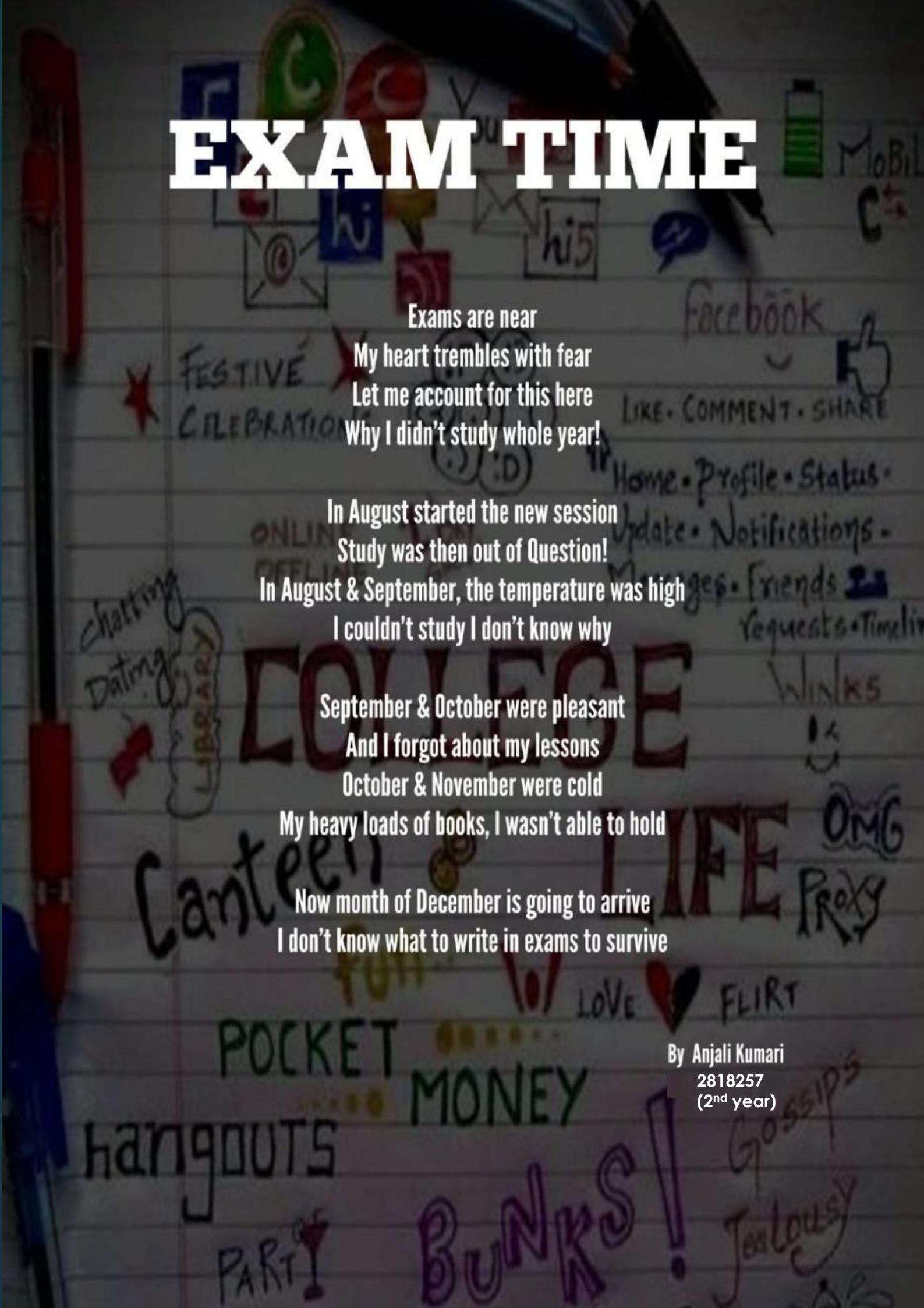
MIRROR



Enfolding immense strength within,
Reflecting innumerable realities therein.
All will leave even the promised one,
But the silhouette seen never leave alone.

Reality in front but daring not to accept,
Dare it once truly will never regret,
Shining brightly the beautiful reflection,
Can be the friend promising no rejection.

By Rohit Chalotra
2818931
(3rd year)



EXAM TIME

Exams are near
My heart trembles with fear
Let me account for this here
Why I didn't study whole year!

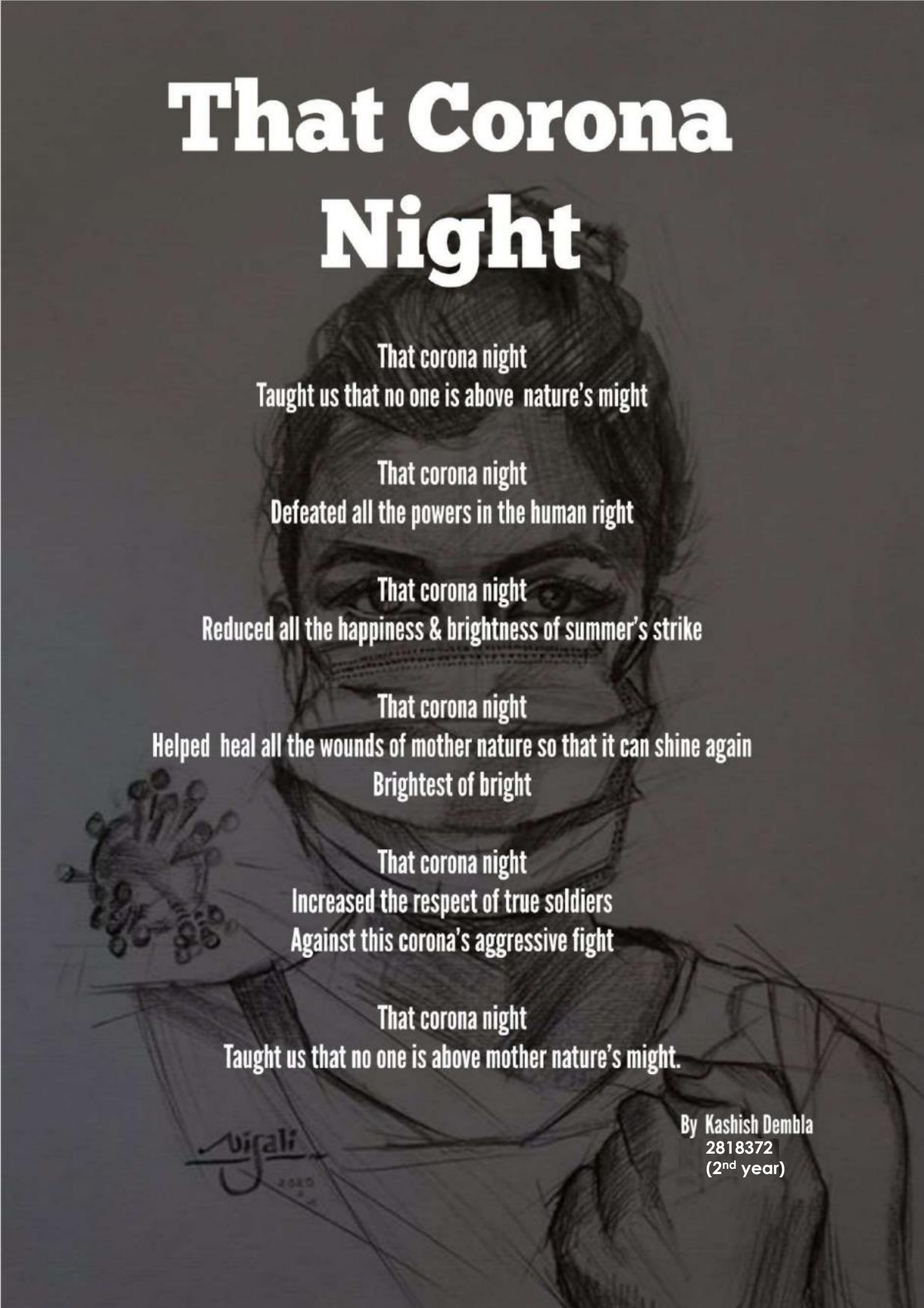
In August started the new session
Study was then out of Question!
In August & September, the temperature was high
I couldn't study I don't know why

September & October were pleasant
And I forgot about my lessons
October & November were cold
My heavy loads of books, I wasn't able to hold

Now month of December is going to arrive
I don't know what to write in exams to survive

By Anjali Kumari
2818257
(2nd year)

That Corona Night



That corona night
Taught us that no one is above nature's might

That corona night
Defeated all the powers in the human right

That corona night
Reduced all the happiness & brightness of summer's strike

That corona night
Helped heal all the wounds of mother nature so that it can shine again
Brightest of bright

That corona night
Increased the respect of true soldiers
Against this corona's aggressive fight

That corona night
Taught us that no one is above mother nature's might.

By Kashish Dembla
2818372
(2nd year)

Crossword

Answers 1.Firewall 2.Backdoor 3.Phishing 4.BlendThreat 5.Trojanhorse 6.Bug 7.Broadcasting 8.Telemedicine 9.Bots 10.Encryption 11.Worm 12.Malicioussode 13.Client 14.Browser

Down

1. A part of a computer system or network that is designed to block unauthorized access while permitting outward communication.

2. A method, often secret, of bypassing normal authentication in a Product

3. The activity of defrauding an online account holder of financial information by posing as a legitimate company.

4. Refers to the process of making copies of data or data files to use in the event the original data or data files are lost or destroyed.

5. Any malicious computer program which is used to hack into a computer by misleading users of its true intent

6. An error, flaw, failure, or fault in a computer program or system that causes it to produce an incorrect or unexpected result or to behave in unintended ways.

8. The use of networking technology to provide medical information and services

9. Are similar to worms and Trojans, but earn their unique name by performing a wide variety of automated tasks on behalf of their master (the cybercriminals) who are often safely located somewhere far across the Internet.

11. A standalone malware computer program that replicates itself in order to spread to other computers.

Across

7. A method of transmitting data in which data is sent out to all nodes on a network and is retrieved only by the intended recipient.

10. Made possible by using algorithms to create complex codes out of simple data, effectively making it more difficult for cyberthieves to gain access to the information

12. Used to describe any code in any part of a software system or script that is intended to cause undesired effects, security breaches or damage to a system.

13. In a client server network, a computer or other device that requests and uses network resources.

14. A client software program that runs against a Web server or other Internet server and enables a user to navigate the World Wide Web (WWW) to access and display data.

From notebooks to canvas

COVID 19 PANDEMIC: COLLABORATION WITH TECHNOLOGY

Today the whole world is restless because of a deadly virus- Covid19 that has put a full stop on the growth of the world economy. Even superpowers are kneeling down against such a pandemic. Doctors and scientists are spending day and night to find an antidote. In such a situation, collaboration with the technology is the only way out, instead of criticizing it for its ill effects.

This is how Asia is using Tech to tackle Covid-19 Pandemic:

- Emerging technologies are being deployed all across Asia to help fight the corona virus outbreak.

- In China, where the virus emerged late last year, robots are disinfecting hospitals, drones are delivering medical supplies and AI is being used to sort scans to spot the infection.

- In Singapore, where open government data has enabled detailed mapping of the outbreak, robots are delivering meals and medication to patients. Some can also talk.

- While in South Korea, authorities are tracking potential carriers using cell phone and satellite technology.

Disinfecting drones, Talking robots, Artificial intelligence that can scan thousands of medical images in a flash,these are just some of the technologies rolled out by Asian countries including Singapore and China to contain the corona virus pandemic that has killed more than 210 K people worldwide.

Technology powered by artificial intelligence (AI) is helping track the outbreak, clean hospitals, deliver supplies and develop vaccines, with Asian governments encouraging universities and corporations to expedite innovations.

"Sometimes the pace of innovation in emerging digital technologies can be held back by infrastructure, financing and bureaucratic constraints," said Jonathan Tanner, a digital consultant at the Overseas Development Institute think tank.

When faced with a challenge like responding to the corona virus outbreak, there are strong incentives to overcome these constraints quickly and put new technology to the test," he told the Thomson Reuters Foundation.

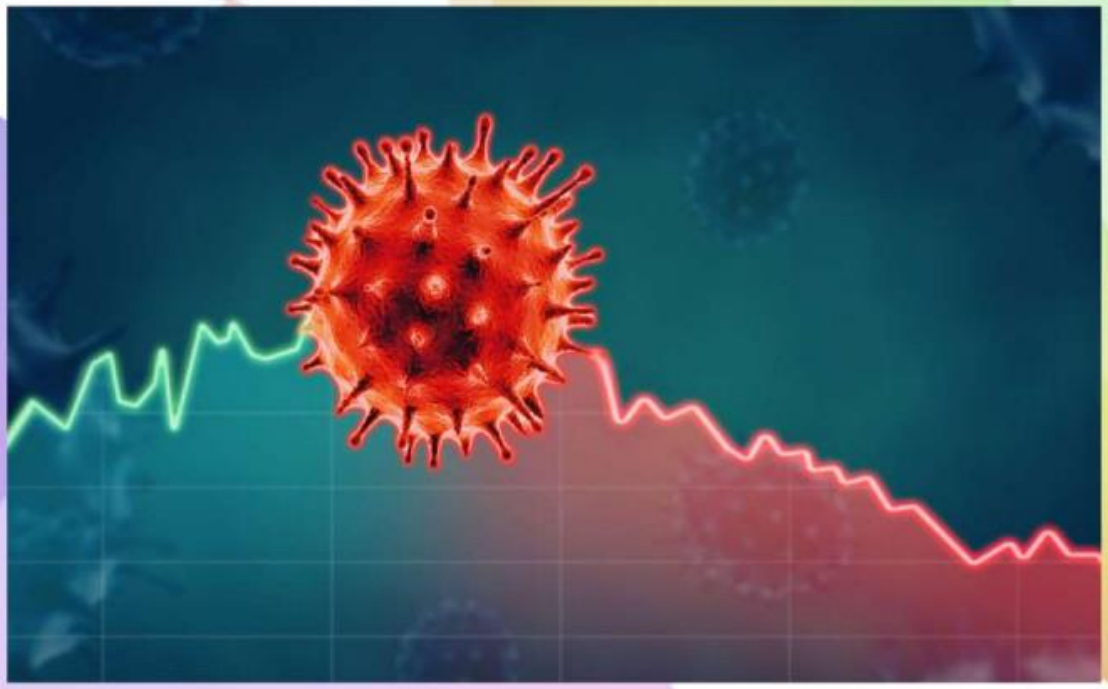
By Shreya Gupta
2818404
(2nd year)

COVID-19: EFFECTS ON GLOBAL ECONOMY

The World Health Organization (WHO) first declared COVID-19 a world health emergency in January 2020. Since the virus was first diagnosed in Wuhan, China, it has been detected in over 190 countries and all U.S. states. In early March, the focal point of infections shifted from China to Europe, especially Italy, but by April 2020, the focus shifted to the United States, where the number of infections were accelerating. The infection has sickened over 2.1 million people, with thousands of fatalities. More than 80 countries have closed their borders to arrivals from countries with infections, ordered businesses to close, instructed their populations to self-quarantine, and closed schools to an estimated 1.5 billion children. In late January 2020, China was the first country to impose travel restrictions, followed by South Korea and Vietnam. Over the period from mid-March to mid-April 2020, more than 22 million Americans filed for unemployment insurance, raising the prospect of a deep economic recession and a significant increase in the unemployment rate.

The extent of the damage will depend on how quickly the virus is contained, the steps authorities take to contain it, and how much economic support governments are willing to deploy during the epidemic's immediate impact and the aftermath.

Early indications of COVID-19's impact on the Chinese economy are worse than initially forecast. Surveys of China's manufacturing and services sector plunged to record lows in February, automobile sales sank a record 80 per cent, and China's exports fell 17.2 per cent in January and February. The official data confirmed a widespread slowdown in economic activity foreshadowed in low pollution levels and depressed shipping traffic, among other informal barometers. Analysts have sharply revised down estimates of Chinese growth, with many now predicting a drop in first-quarter GDP, the first contraction since China began reporting quarterly data in 1992. As COVID-19 spreads, China's economic recovery will be challenged as demand from other countries drops as they cope with the virus.



Although the outbreak appears to have slowed in China, COVID-19 and its impacts have gone global. Infections are mounting in Europe, South Korea, Iran, the United States, and other countries, with authorities implementing increasingly restrictive measures to contain the virus. Europe and Japan are likely already in recession territory given their weak fourth-quarter performance and high reliance on trade. The International Monetary Fund (IMF) further slashed India's growth estimate for FY21 to 1.9% from 5.8% estimated in January, warning that the "worst recession since the Great Depression" will dwarf the economic damage caused by the global financial crisis a decade back. It is also said that India and China would be the only two major economies likely to register growth, with all others contracting. But still, India has a great market to go, since, after the COVID-19, European Countries are planning to shift their manufacturing units to India. India needs to focus on its International Businesses in Budget FY21.

Now if we see which of the sectors will be more injured after the hit by COVID-19: At the sectoral level, tourism and travel-related industries will be among the hardest hit as authorities encourage "social distancing" and consumers stay indoors. The International Air Transport Association warns that COVID-19 could cost global air carriers between $63 billion and $113 billion in revenue in 2020, and the international film market could lose over $5 billion in lower box office sales. Similarly, shares of major hotel companies have plummeted in the last few weeks and Entertainment Industries. Restaurants, sporting events, and other services will also face significant disruption. Industries less reliant on high social interaction, such as agriculture, will be comparatively less vulnerable but will still face challenges as demand wavers.

By Utkarsh Pandey
2818363
(2nd year)

RIDDLES

1.No sooner spoken than broken. What is it?

2.The more you take the more you leave behind. What is it?

3.You can't keep this until you have given it

4.What word in the English language does the following: the first two letters signify a male, the first three letters signify a female, the first four letters signify a great, while the entire world signifies a great woman. What is the word?

5.I come from a mine and get surrounded by wood always. Everyone uses me. What am I?

6.I have keys, but no locks and space, and no rooms. You can enter, but you can't go outside. What am I?

7.A is the brother of B. B is the brother of C. C is the father of D. So how is D related to A?

8.This belongs to you, but everyone else uses it

9.I have cities, but no houses. I have mountains, but no trees. I have water, but no fish. What am I?

10.I speak without a mouth and hear without ears. I have no body, but I come alive with wind. What am I?

Answers: 1. Silence 2. Footsteps 3. Promise 4. Heroine 5. A pencil lead 6. Keyboard 7. A is D's aunt 8. Your Name 9. A map 10. An echo

Words from Alumni

Himanshi Chawla Garg (2013-2017): It would be difficult to sum up four years of PIET in just few lines. I must say that the faculty is just amazing and they stand by you from the first day to the end of placement days. The faculty have been very helpful and friendly especially Sourabh Sir, Nisha Mam, Gaurav Sir.
College Life is the best life I've experienced so far.
As far as academics is considered, it finally comes down to YOU! It's your choice whether to take advantage of your independence, enjoy life out of limits and eventually flunk in the exams or work hard and pass with flying colors.
I will definitely cherish these moments forever.

Akshay Garg (2010-2014): The department is very helpful in perceiving the basic decorum that you need to have as a professional. Learning from a highly qualified and experienced teacher helps to learn the basics of the industry and technology.

Divya Verma (2013-2017): It gives me immense pleasure to share my experience with PIET(The Right Choice). My 4 year journey was the complete package of entertainment, discipline, studies. In PIET we not only get to graduate by getting degree but it also teaches you many meaningful lessons of life like how to cope up with ups and downs of life. I was a student of IT Department(best dept) and I don't even have to think twice in saying that all the teachers are so helpful and caring, it just feels like a second home. Staff is so co-operative and loving and ofcourse it is the best placement institute. I'm proud to be a PIETian.Yes, the RIGHT CHOICE.

Shivani Rawal (2011-2015)- The department of information technology is enhanced with well qualified faculty members who bring out the best in students. The faculty is always forthcoming with guidance and support, pushing students to perform their best.

Karan Relan(2009-2013)- Being a part of IT Dept. in PIET was an exciting experience. Our faculty members work as mentors for us. The learning atmosphere I experienced here has taught me professionalism. The Journey we had was full of learning, joy, celebration experiments, fun. We always rejoice the memories we collected in this department as the environment we got was super friendly. I would like to thank my college faculty, juniors and seniors for being a great support and companion during my tenure.