



NEWSLETTER

JANUARY - JUNE 2024

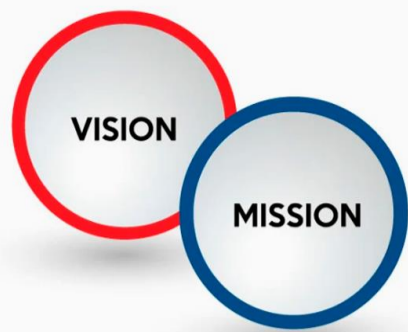
DEPARTMENT OF COMPUTER APPLICATIONS - PG

Master Of Computer Applications



**PANIPAT INSTITUTE OF
ENGINEERING AND TECHNOLOGY**

An Autonomous Institute



Vision of the Department

To be recognized as a centre of excellence for academic repute to create competent, ethical, and responsible Computer Applications professionals with the abilities to contribute globally to the industry, environment and the society at large.

Mission of the Department

M1: Equip students with knowledge and practical skills in computer applications in line with the needs of the industry.

M2: Foster research and innovation capabilities, imbibe ethics and values, and instill leadership in students to support sustainable development.

M3: To develop students with an analytical mindset and the competence to solve real-life problems.

M4: Facilitate linkages with industry and professional bodies, provide experiential learning opportunities, and develop responsible students with abilities to learn and work independently.

Program Educational Objectives (PEOs)

PEO1: Demonstrate analytical abilities, design skills, multidisciplinary competence, critical thinking, and the ability to foster innovations.

PEO2: Demonstrate leadership and supportive roles in the dynamic work environment with ethical behavior and responsibility in their professions.

PEO3: To excel in careers in the diverse domains of computer applications, higher education, and entrepreneurship.

PEO4: Adapt to evolving technologies with the ability to learn independently.



Learning computer applications is essential in today's digital era, as it equips individuals with the skills to efficiently use software tools and technologies for various tasks. From word processing and data analysis to graphic design and coding, computer applications enable users to solve real-world problems and enhance productivity. Mastery of these applications fosters creativity, critical thinking, and adaptability, empowering individuals to succeed in diverse fields such as education, business, healthcare, and technology. As the world continues to rely on digital solutions, learning computer applications becomes a vital step toward personal and professional growth.

Interactive Session on iOS Experiential Learning



The Department of Computer Applications-PG successfully conducted an engaging and interactive session on “iOS Experiential Learning” on 1st March 2024. The event featured **Ms. Anagha Ahire**, a distinguished expert from **SKLZ Tech LLP**, as the esteemed resource person.

This session was a key component of a value-added course designed to enhance students' knowledge of **User Interface (UI)** and **User Experience (UX)** design. It also provided practical training in developing iOS applications, equipping participants with industry-relevant skills.

A significant highlight of the event was the **Center of Excellence for Apple iOS**, recently established by the Department in collaboration with **SKLZ Tech LLP**. The Center is equipped with 15 high-configuration systems, fostering a hands-on learning environment for students.

During the session, participants interacted with Ms. Ahire, gaining valuable insights into **current industry trends, best practices, and professional tools** used in iOS app development. The interactive format allowed students to ask questions, clear doubts, and connect theoretical concepts with real-world applications.

The event was highly appreciated by students for its informative and practical approach. It successfully deepened their understanding of **UI/UX design** and the **iOS app development process**, leaving them inspired to apply their newfound knowledge in future endeavors.

This milestone event underscores the Department's commitment to providing students with cutting-edge learning opportunities and preparing them for successful careers in the ever-evolving tech industry.

Exploring Kali Linux: A Hands-On Workshop

What is Kali Linux primarily used for?

- a) Graphic design
- b) Ethical hacking and penetration testing
- c) Web development
- d) Game development

Which of the following tools in Kali Linux is used for network scanning?

- a) Metasploit
- b) Wireshark
- c) Nmap
- d) Burp Suite

What is the default package manager used in Kali Linux?

- a) yum
- b) apt
- c) pacman
- d) zipper

Which tool in Kali Linux is commonly used for analyzing network traffic?

- a) John the Ripper
- b) Wireshark
- c) Hydra
- d) Nessus



The Department of Computer Applications successfully organized an interactive session titled “Exploring Kali Linux” on 22nd March 2024 in E-Audi-504. The session, led by **Mr. Nitesh Saini**, introduced MCA students to the powerful tools and functionalities of Kali Linux, a leading platform for ethical hacking and cybersecurity.

The workshop covered the installation and setup of Kali Linux on virtual machines, followed by practical demonstrations of essential tools such as **Nmap, Metasploit, and Wireshark**. Students gained hands-on experience in network scanning, vulnerability detection, and penetration testing, along with valuable insights into real-world applications of these tools.

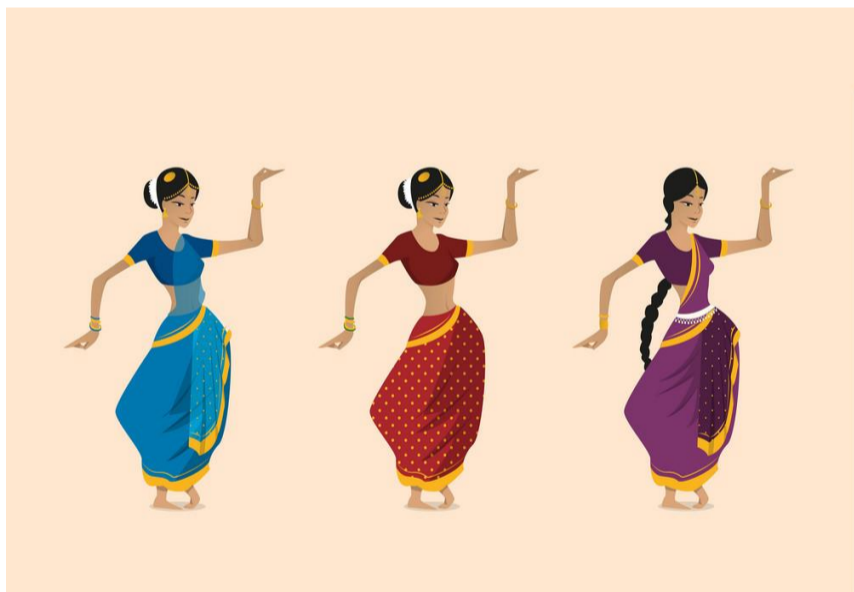
Insightful Session on Privacy Concerns in Cloud Computing



The Department organized an enlightening session on **"Privacy Concerns in Cloud Computing: Challenges and Solutions"** for MCA students, featuring **Mr. Anup Girdhar**, CEO and Founder of Sedulity Solutions and Technology. Known for his expertise in cloud security and privacy, Mr. Girdhar provided an in-depth analysis of the critical issues organizations face when managing sensitive data on cloud platforms.

The session covered a wide range of topics, including the privacy risks associated with cloud computing, such as data breaches and unauthorized access, and explored innovative solutions like encryption techniques and privacy-enhancing technologies. Practical advice on implementing best practices for organizational cloud security further enriched the discussion.

Students gained valuable insights into the complexities of cloud privacy, real-world challenges, and cutting-edge solutions shaping the industry. The interactive session enhanced their understanding of cloud computing technologies, equipping them with essential knowledge for navigating this crucial aspect of the digital era.



Expert Lecture on MongoDB



The Department of Computer Applications conducted an expert lecture titled **"MongoDB: Overview, Concepts, and Query Operations"** on **4th March 2024 at 2:30 PM**. This session aimed to provide a comprehensive understanding of MongoDB, a leading NoSQL database, focusing on its fundamental concepts, architecture, and practical applications.

Understanding NoSQL databases, particularly MongoDB, equips students with skills that are increasingly in demand in the tech industry. This session also opened up avenues for exploring careers in database administration, development, and data engineering, making it a valuable addition to the academic calendar.

The session introduced participants to the key features of MongoDB, including its data modeling principles and flexibility in handling unstructured data. Emphasis was placed on differentiating MongoDB from traditional relational databases, showcasing its strengths in scalability and performance for modern applications.

Participants gained practical knowledge of performing query operations in MongoDB and learned techniques for optimizing data modeling and query performance. This hands-on approach helped strengthen their database management skills, making the session both informative and practical.

EthnoFest 2024: A Grand Celebration of Culture and Unity



The Department hosted **Ethno Fest 2024** on **10th May 2024**, celebrating the vibrant diversity of Panipat Institute of Engineering and Technology (PIET). The event brought students together to showcase their cultural heritage through an exciting line up of activities, including **dance performances, singing,** and a dazzling **ramp walk**.

Participants embraced the spirit of the event by wearing traditional attire and presenting items that symbolized their heritage, creating a vibrant display of cultural pride and unity. The enthusiastic participation and lively performances made the day truly memorable, fostering a spirit of solidarity and appreciation for diversity.

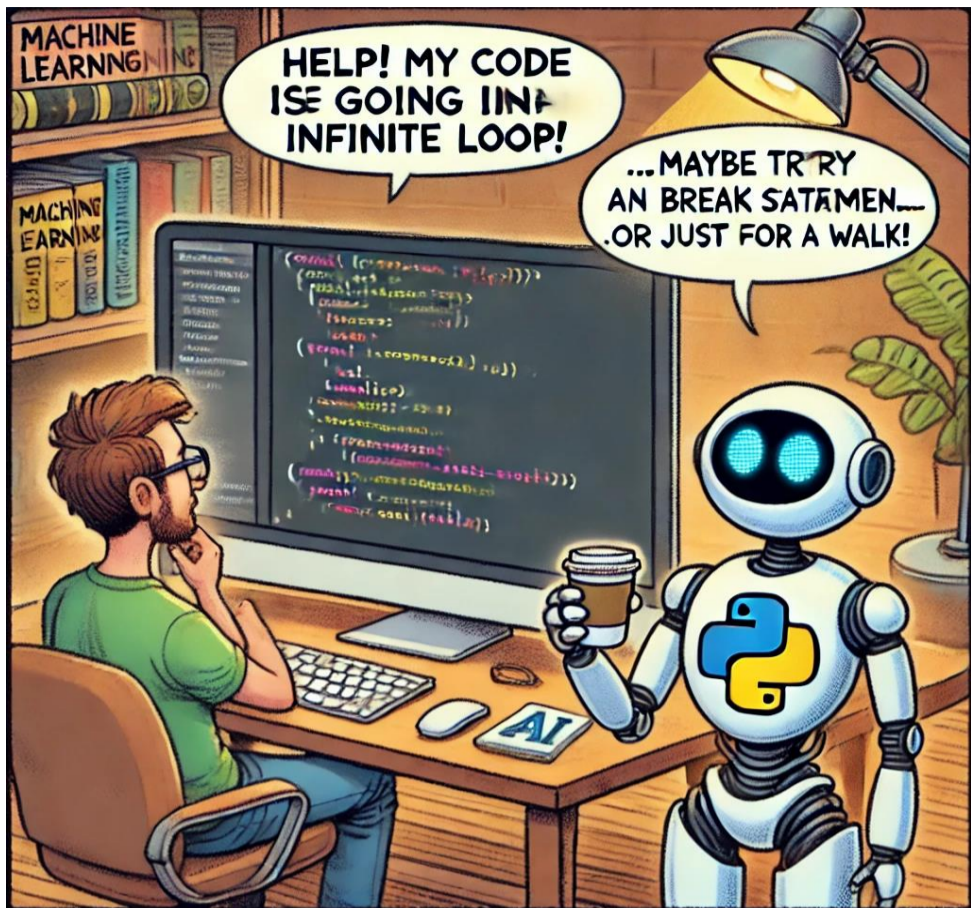
Ethno Fest 2024 was a resounding success, leaving everyone with cherished memories and a deeper connection to the rich cultural tapestry of PIET.

Students Bid Heartfelt Farewell to Seniors in a Spectacular Event



MCA departments gathered for a grand farewell ceremony to honor their senior classmates in an event brimming with culture, entertainment, and heartfelt emotions. The event was designed to celebrate the achievements of the final-year students while fostering unity and a sense of belonging among all attendees. The occasion commenced with a serene Ganesh Vandana, where a group of talented students performed a traditional dance to seek the blessings of Lord Ganesha, setting an auspicious tone for the day. The ceremonial lamp lighting followed, a symbolic gesture representing knowledge and enlightenment, with key members of the management team participating to demonstrate their support and involvement in the success of the event. As the formalities concluded, the stage came alive with a vibrant series of cultural performances. The festivities began with a dynamic group dance that energized the crowd, followed by a stunning trio dance, showcasing precision and grace. Solo and group singing performances filled the air with melodies, while a student band added a lively, rhythmic touch to the celebration. The cultural performances were met with enthusiastic applause from the audience, reflecting the incredible talent within the student body. The event captured the essence of unity, joy, and optimism as the college bid farewell to its final-year students, wishing them all the best in their future endeavours.

When AI Tries to Help with Coding!

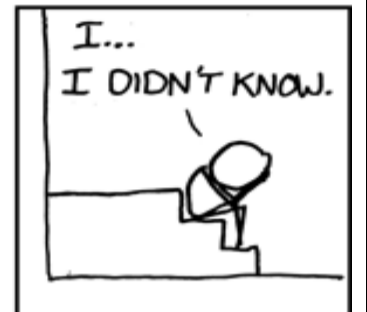
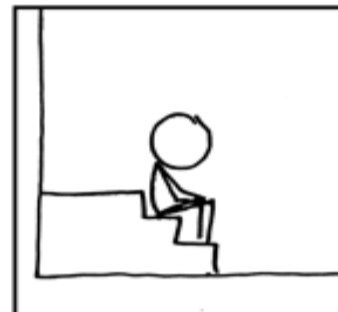
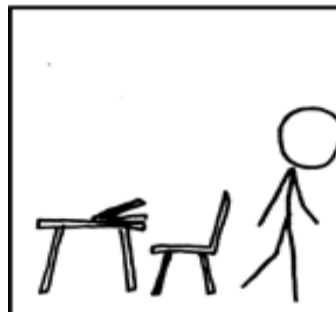


In this fun and relatable cartoon, we see a computer facing a common struggle that every coder can empathize with: the dreaded infinite loop! The Python code on the screen is caught in a never-ending cycle, and the computer is desperately asking for help. This is a situation many developers, especially those learning programming languages like Python, have encountered at one point or another.

What makes this scene even more entertaining is the presence of an AI-powered robot who is attempting to offer some advice. Holding a coffee cup, the robot suggests, "Maybe try adding a break statement... or just go for a walk!" This humorous line reflects a truth many programmers know: sometimes, a break from the screen is the best way to solve a problem—whether it's a coding bug or just a mental block. The robot, embodying both AI and a sense of humor, offers a lighthearted solution that brings a smile to anyone who's been caught in the loop of a never-ending bug.

The cozy tech office setting, with books on Machine Learning and AI in the background, further highlights the tech-oriented atmosphere of the scene. It's a playful nod to the world of computer applications, where AI and Machine Learning are increasingly integrated into coding and problem-solving.

This cartoon serves as both a humorous commentary on the daily challenges of programming and a subtle reminder that sometimes, taking a step back and a deep breath can help us find the solution we need. Whether you're dealing with Python, Machine Learning, or Artificial Intelligence, a little humor can make the toughest coding challenges a bit more bearable!



Viruses are microscopic infectious agents that require a host cell to replicate and propagate. Unlike living organisms, viruses do not possess the machinery for metabolic processes or reproduction on their own. Instead, they invade a host cell, hijack its cellular machinery, and use it to produce copies of themselves. This can result in the destruction or malfunction of the host cell, leading to a variety of diseases in plants, animals, and humans. Viruses consist of genetic material (either DNA or RNA) enclosed in a protein coat called a capsid, and sometimes an outer lipid envelope. Due to their inability to reproduce outside of a host, viruses are considered obligate intracellular parasites. The study of viruses, known as virology, has revealed important insights into the mechanisms of infection, immunity, and molecular biology.

Types of Computer Viruses



1. What is the output of the following code?

```
x = 10
y = 5
print(x // y)
```

- a) 2
- b) 2.0
- c) 5
- d) 0

2. Which of the following is used to create a set in Python?

- a) []
- b) {}
- c) ()
- d) <>

3. How do you declare a function in Python?

- a) function myFunction():
- b) def myFunction():
- c) def function myFunction():
- d) function: myFunction()

4. What is the purpose of the self keyword in a Python class?

- a) It represents an instance of the class.
- b) It is used to access variables within a class.
- c) It is used to create class methods.
- d) Both a and b.

5. Which of the following is a valid list in Python?

- a) [1, 2, 3, 4]
- b) (1, 2, 3, 4)
- c) {1, 2, 3, 4}
- d) None

6. What is the output of the following code?

```
print(type(3.14))
```

- a) int
- b) float
- c) str
- d) complex

7. Which of the following statements is used to handle exceptions in Python?

- a) try-except
- b) try-catch
- c) catch-except
- d) exception-try

8. Which of the following is a mutable data type in Python?

- a) int
- b) str
- c) list
- d) tuple