KNOWLEDGE AND AWARENESS MAPPING PLATFORM
KNOWLEDGE SESSION 2024: EPISODE 60

Organized By: Knowledge & Awareness Mapping Platform (KAMP)
In Knowledge Alliance with CSIR -NIScPR and M/s NCPL

Topic: From Basics to Breakthroughs: How coding with Python can shape your career

Category: Career & Professional Development   **Organized for:** Students

Speakers/Presenters: Ms Kavya R Mada   **Date:** September, 26th, 2024

**No. of Participants:** 500+ Students from different schools across India

Overview:

On September 26th, KAMP hosted an exclusive Fortnightly Session titled "From Basics to Breakthroughs: How Coding with Python Can Shape Your Career" tailored to engage and inspire students from grades 3rd to 12th. Ms. Kavya R. Mada, a Coding Mentor led this session, offering students a comprehensive exploration into the dynamic field of language or coding, and how it can shape their career.

Ms. Kavya's session provided an in-depth introduction to the world of coding, highlighting its importance and applications across various fields and emphasizing how students of all ages can benefit from coding as a skill.

Ms. Kavya opened the session by explaining what coding is, why it is an essential skill in today's technology-driven world, and how coding serves as a powerful tool for problem-solving, creativity, and logical thinking. She illustrated that learning coding from an early age offers

numerous advantages, including the development of critical skills such as problem-solving, mathematical reasoning, creativity, and communication. Ms. Kavya also highlighted how coding fosters important life skills like organization, resilience, and self-confidence, all of which are valuable in personal and professional contexts.
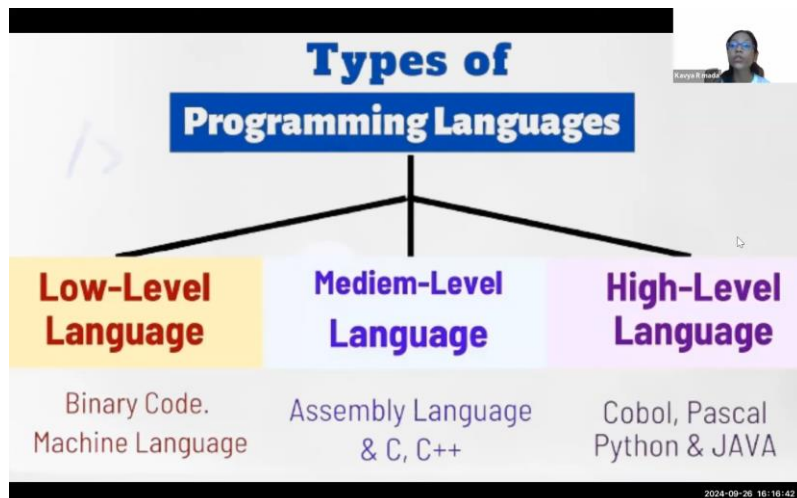
Ms. Kavya introduced students to foundational programming concepts, including:

- Variables: Basic storage units for data in programming.
- Loops: Structures that allow for repetitive tasks.
- If/Else Statements: Conditional statements that enable decision-making in code.
- Functions: Code blocks that perform specific tasks and can be reused.
- Arrays: Data structures for storing multiple values.

She then explored the various types of programming languages, categorizing them based on their complexity and application:

- Low-Level Languages: Including binary code and machine-level programming, which directly communicate with the computer's hardware.
- Medium-Level Languages: Such as assembly language, C, and C++, which offer a balance of efficiency and control.
- High-Level Languages: Such as Cobol, Pascal, Python, and Java, which are user-friendly, more abstract, and widely used for application development.

The session also addressed why Python has become one of the most versatile and accessible languages, underscoring its simplicity and wide range of applications in areas like data analysis, artificial intelligence, web development, and automation. Ms. Kavya guided students through Python's practical uses and its role in various career paths, helping students understand the potential career opportunities available to those skilled in coding.

In closing, Ms. Kavya emphasized the role of coding as a foundational skill in the digital age, preparing students to excel in numerous industries, from technology to business. This session provided students with a clear pathway to developing coding skills and underscored the importance of coding as a future-oriented competency, positioning them to make informed decisions about their career paths and to embrace the growing impact of technology.

KAMP's fortnightly workshops aim to help students develop creativity, meaningful learning, and critical reading and thinking skills, bringing out their inherent abilities. The vision of KAMP is to

identify and capture the Scientific and Technological temperament in students, contributing to making India a Global Leader in the fields of science, technology, and the humanities.

These workshops, conducted by KAMP, cover various topics falling under the categories of science, technology, and innovation, Scientific and Life Skills, Career and Professional Development, Academic development, and training trainers and teachers.

KAMP believes that exposure to such topics from experts within specific fields helps students become aware of real-life situations and challenges, develop a problem-solving nature, understand their core values and personal interests, evaluate their skills within the given area, and achieve their best in their most desirable way.

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