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Empowering Minds, Transforming Futures

Python Programming for Beginners

Explore the world of programming with Python, a beginner-friendly language widely used in various fields. This course is designed for school students looking to grasp the fundamentals of coding and gain a valuable skill for the future. Learning Python opens doors to problem-solving, automation, and creativity in today's digital age.

What you'll learn:

- Understand the basics of Python programming language
- Create simple programs and scripts
- Apply programming concepts to solve real-world problems

Skills you'll gain:

- Coding basics
- Problem-solving skills

Detailed Course Outline:

Module 1: Introduction to Python Programming (Module Number: 1)

- Introduction to Python and its uses
- Setting up the programming environment
- Writing and running your first Python program

Module 2: Variables and Data Types (Module Number: 2)

- Understanding variables and data types in Python
- Working with numbers and strings
- Hands-on practice with data manipulation

Module 3: Control Structures (Module Number: 3)

- Learning about conditional statements
- Implementing loops for repetitive tasks
- Writing programs with decision-making structures

Module 4: Functions and Modules (Module Number: 4)

- Defining and calling functions
- Organizing code into reusable modules
- Exploring built-in and external modules

Module 5: Lists and Dictionaries (Module Number: 5)

- Working with lists and dictionaries
- Manipulating data collections
- Using list comprehensions for efficient coding

Module 6: File Handling (Module Number: 6)

- Reading and writing files in Python
- Handling different file formats
- Implementing file I/O operations in programs

Module 7: Error Handling and Debugging (Module Number: 7)

- Catching and handling exceptions
- Debugging techniques and best practices
- Strategies for improving code reliability

Module 8: Mini-Project (Module Number: 8)

- Applying learned concepts to a small project
- Solving a real-world problem using Python
- Presenting and sharing project outcomes