Introduction to Python: Level I
Suitable for: G10 - G12

Prerequisite: None
Duration: 24 Weeks
Classes per Week: 1 class (45 minutes each)

Course Overview:

This beginner course introduces students to Python programming, covering fundamental concepts such as data types, variables, conditionals, loops, and functions. Students will gain a solid understanding of programming basics and develop problem-solving skills. By the end of the course, students will be able to write simple Python programs and apply logic to solve tasks.

Covered Topics

Unit 1: Introduction to JavaScript Basics
- Understanding JavaScript as a programming language for the web
- Using innerHTML to manipulate web content
- Working with variables to store data

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Unit 2: Data Types and Operators
- Introduction to different data types (numbers, strings, booleans)
- Working with arrays and objects to manage collections of data
- Applying operators for calculations and logic

Unit 3: Functions and Events
- Creating and using functions to organize code
- Implementing on-click buttons and event-driven programming
- Understanding input handling with ParseInt

Unit 4: Conditionals and Logic Structures
- Using conditionals to make decisions in code
- Applying multiple conditionals for complex logic
- Practicing logic operators for advanced control flow

Unit 5: Final Project and Applications
- Developing a bot chat project
- Combining functions, conditionals, and events in a final application
- Demonstrating JavaScript proficiency through an interactive web project

Materials Needed:
- Access to a computer or tablet
- Internet connection
- Chrome browser

Assessment
At the end of each lesson, learners will be assessed on their ability to apply programming concepts, including data types, variables, conditionals, and loops. Assessments will focus on students' skills in writing functional and logical Python programs.

Certification
A certificate of completion will be awarded to students who successfully complete the course, demonstrating proficiency in introductory Python programming.