Introduction to Programming

CADS
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1-day, Instructor-led Live Workshop
(Online and Physical Class Options Available)

Introduction to Programming

Let's start to turn coffee-making into code

Programmers with data wrangling power are highly sought after. Learn how to think like a programmer by breaking big problems into smaller ones and converting these byte-sized problems into code.

Breakdown processes into lines of codes for automation

Introduction to Programming module lays the foundation for beginners to convert simple concepts to workable code. You are introduced to the inner workings of a computer and how algorithms work.

They will then use flowcharts to break problems down into logical steps. Finally, they will combine these concepts with writing simple Python code.

Learning Outcome

- Ability to understand how computers work and how to instruct computers.
- Learn how to draw flowcharts and write Pseudocodes.
- Design and implement solutions by writing Python programs.

Who Should Attend

Business professionals who want to automate data processing and business operations by building own programs and applications.

AEDA
Associate Enterprise Data Analyst

informs.PEP
PROFESSIONAL EDUCATION PARTNER
PDU Approved

Introduction to Programming is one of the modules under our Associate Enterprise Data Analyst (AEDA) program. AEDA is a seventeen-day program that provides analysts with the tools required for efficient data analysis.

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18 CPD HOURS

REGISTRATION:
Register at
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Course Outline

How Computers Work

Computers are ubiquitous in society but for many of us it's just a black box that takes our commands and outputs whatever we desire. Gain insight into how computers work and leverage this knowledge when you program to speed up processes or minimise the limitations of your hardware.

- Memory
- Binary number system
- How a CPU works
- Input and Output

Introduction to Algorithms

Algorithms are the backbone of programming. Concepts developed here such as assigning variables and creating repeating loops as a concept that cuts across all programming languages.

- Variables
- Sequence
- Selection
- Repetition

Flowcharting and Pseudocode

Breaking down a big problem into smaller, solvable problems is at the heart of what programmers do. Flowcharts are a handy tool to help visualise this process and follow the logic of your commands from the beginning to the end. By converting these flowcharts into pseudocode, we move one step closer to create our own working code.

- Flowchart node types
- Draw simple flowcharts
- Pseudocodes

Introduction to Python

This chapter will put together knowledge from preceding sections to finally start writing simple Python code. Python is a widely used general purpose programming language that is versatile and relatively easy to pick up.

- Input / Output statements
- Assigning Variables
- Datatypes Relational and Logical Operators
- Conditional Statements
- Loops
- Lists

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