KOENIG SOLUTIONS · COURSE OUTLINE

Programming Basics: Flowcharts & Pseudocode

Learn to plan programs using flowcharts and pseudocode, covering variables, operators, conditionals, loops, functions and exceptions.

9 MODULES

30 TOPICS

COURSE OVERVIEW

This course introduces programming through flowcharts and pseudocode, starting with installing Diagrams.net and creating a first flowchart alongside pseudocode syntax. It then covers core coding concepts including variables and their types, operators, conditional statements and loops. It continues with functions, comments and concludes with exceptions.

WHO THIS COURSE IS FOR

- **Aspiring Programmers**
- **Computer Science Students**
- **Beginner Developers**
- **IT Trainees**

LEARNING OBJECTIVES

- Explain what programming is and how to get started
- Create flowcharts using Diagrams.net
- Describe pseudocode and its syntax
- Identify variable types such as integer, float and boolean
- Apply operators within pseudocode expressions
- Compare conditional statements including if, if-else and switch
- Analyse loop types and their correct usage
- Explain the purpose of functions, comments and exceptions

COURSE SYLLABUS

9 Modules, 30 Topics

01

Course Introduction

TOPICS

What is Programming? How do I get Started?

02

Introduction to Programming Fundamentals

TOPICS

- Download and Install Diagrams.net to Create Flowcharts
- **Demo:** Create Your First Flowchart
- What is Pseudocode?
- Pseudocode Syntax

03

Coding Concept 1: Variable and Its Types

TOPICS

Introduction · What is a Variable? · Integer Variables · Float Variables · Boolean Variables · Character Variables · String Variables · A Note on Keywords

04

Coding Concept 2: Operators

TOPICS

What are Operators?

05

Coding Concept 3: Conditional Statements

TOPICS

- Overview of Program Flow
- What are Conditional Statements?
- If Statement
- If Else Statements
- Nested If Else Statements
- Switch Statements
- 3 Tips for Right Usage of Conditional Statements

06

Coding Concept 4: Loops

TOPICS

What are Loops? · Types of Loops · 3 Tips for Right Usage of Loops

07

Coding Concept 5: Functions

TOPICS

What are Functions? · What is Function Signature? · Types of Functions

08

Coding Concept 6: Comments

TOPICS

What are Comments? · Types of Comments

09

Coding Concept 7: Exceptions

TOPICS

What are Exceptions?

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

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