Introduction to Programming Training

Duration: **2 Day**

BILGINÇ IT Academy
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The **Introduction to Programming** course is designed for beginners who want to build a solid foundation in **Computer Programming**, **Software Development**, and **Coding Fundamentals**.

Participants will learn essential programming concepts including **Variables**, **Data Types**, **Operators**, **Functions**, **Loops**, **Conditionals**, **Programming Logic**, and **Debugging Techniques**.

This course is ideal for anyone looking to start a career in software development, automate everyday tasks, or gain practical coding skills.

Prerequisites

- A desire to learn programming.
- Basic math and algorithm skills would be helpful

Who Should Attend

- Beginners interested in programming
- Future software developers
- Students entering technical careers
- Professionals looking to automate tasks
- Anyone seeking a **Coding for Beginners** course

What You Will Learn

By the end of this course, participants will be able to:

- Understand **Programming Fundamentals**
- Explain how programming solves real-world problems
- Differentiate between **Compiled** and **Interpreted Languages**
- Create simple programs
- Use **Variables**, **Data Types**, and **Operators**
- Build conditional logic and loops
- Create reusable **Functions**
- Apply basic **Debugging Techniques**

Training Outline

1. Introduction to Programming

Programming Fundamentals

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- What is Programming?
- Why Programming Matters
- Problem Solving with Code
- Programming History
- Software Development Basics

2. Programming Languages & Environment Setup

Programming Languages

- Procedural Programming
- Object-Oriented Programming
- Functional Programming
- Scripting Languages

Popular Languages

- Python
- JavaScript
- Java
- C++
- C#

Development Environment

- VS Code
- Online Editors
- Runtime & Interpreters
- Terminal Usage

3. Structure of Code

Code Structure

- Syntax
- Semantics
- Indentation
- Comments
- Pseudocode

4. Data Types & Variables

Variables and Data Types

- Numbers
- Strings
- Booleans
- Arrays
- Lists
- Objects

5. Operators & Expressions

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Programming Operators

- Arithmetic Operators
- Comparison Operators
- Logical Operators

6. Control Flow

Conditionals

- If Statements
- Else If Statements
- Else Statements
- Switch Statements

7. Functions

Functions and Reusability

- Parameters
- Arguments
- Return Values
- Scope

8. Loops & Iteration

Loops

- For Loops
- While Loops
- Do-While Loops
- Nested Loops

9. Basic Data Structures

Arrays and Lists

- Data Storage
- Indexing
- Accessing Elements

10. Debugging

Debugging Techniques

- Syntax Errors
- Runtime Errors
- Logic Errors
- Logging
- Troubleshooting