

## **Basic Computer Programming Training for Beginners**

Zero to Hero Programming skills development, learn how to get started with Programming from the beginning, and how to deal with Programming logical issues using C++, Java, and Dart. Get started with written complex algorithms.

## Requirement

- Be Able to Use PC at A Beginner Level, Including Being Able to Install Programs
- Prior Knowledge of the English language and good listening
- A Desire to Learn Basic Computer Skills

## **Prerequisite**

This program requires no prerequisite courses. It's designed for beginners learning from scratch. Our goal is to help you go from 0 to 100 and learn enough to learn more.

# How do you teach?

We teach in real-time online 1-on-1 using Google Meet, Skype, or Zoom. You can ask any questions any time, and you will get them answered. Our tutors are ready to mentor you.

## Do I get a certificate?

Yes. We will provide you a Course Certificate on the condition that you complete and submit all projects and assignments by the end of the course. The certificate is not academic; it is a professional training certificate.

# Do I need equipment?

Yes. You need your computer. Windows, Mac, and Linux operating systems are all supported by the curriculum. You also need to have a stable internet connection.

# Do you accept beginners?

Yes. The program is from zero to hero, so all knowledge will be covered. No much experience required to join this course.

#### What is C++?

is a middle-level programming language developed by Bjarne Stroustrup starting in 1979 at Bell Labs. **C++** runs on a variety of platforms, such as Windows, Mac OS, and the various versions of UNIX. This **C++** tutorial adopts a simple and practical approach to describe the concepts of **C++** for beginners to advanced software engineers.

## What is Java?

Java is a general-purpose programming language that is class-based, object-oriented, and designed to have as few implementation dependencies as possible.

### What is Dart?

Dart is a client-optimized programming language for apps on multiple platforms. It is developed by Google and is used to build mobile, desktop, server, and web applications. Dart is an object-oriented, class-based, garbage-collected language with C-style syntax. Dart can compile to either native code or JavaScript.

# What can you do?

This course is for beginning programming students who are struggling with understanding how to solve programming problems. We will be showing you how to go about solving problems; how to break everything down into something easy to understand and easy to program.

# Why Basic Programming?

Many people are unable to build high-class software applications that has to do with complex design and implementation, its because the main programming logic has not been acquired perfectly from the inception. Understanding how programming works from beginning end to end is the key. C++ and Java are the most common use programming languages and they are the root of most of today's programming languages. So if you understand them, there is a 99% chance of you to understand any today's programming language easily. If you know house, routing to the rooms is easy. C++ and Java is the main house of any today's programming language.

# What you'll learn?

- 1. Understand how to break down problems into smaller easier to understand tasks
- 2. Take those tasks and translate them into C++ code
- 3. You'll be able to make small
- 4. Written complex Algorithms
- 5. Understanding how algorithms works
- 6. Complex Loops and statistics
- 7. Mathematical calculations and analysis.

### **Course Content**

### 1. C++ Programming Language

#### C++ Basic

- Course Overview
- Environment Setup
- C++ Basic Syntax
- C++ Comments
- C++ Data Types
- C++ Variable Types
- C++ Variable Scope
- C++ Constants/Literals
- C++ Modifier Types
- C++ Storage Classes
- C++ Operators
- C++ Loop Types
- C++ Decision Making
- C++ Functions
- C++ Numbers
- C++ Arrays
- C++ Strings

### C++ Object Oriented

- C++ Classes & Objects
- C++ Inheritance
- C++ Overloading
- C++ Polymorphism
- C++ Abstraction
- C++ Encapsulation
- C++ Interfaces

#### C++ Advanced

- C++ Files and Streams
- C++ Exception Handling
- C++ Dynamic Memory
- C++ Namespaces
- C++ Templates
- C++ Preprocessor
- C++ Signal Handling
- C++ Multithreading
- C++ Web Programming

### 2. Java Programming Language

Java is a high-level programming language originally developed by Sun Microsystems and released in 1995. Java runs on a variety of platforms, such as Windows, Mac OS, and the various versions of UNIX.

#### **Java Basic**

- Java Overview
- Java Environment Setup
- Java Basic Syntax
- Java Object & Classes
- Java Constructors
- Java Basic Datatypes
- Java Variable Types
- Java Modifier Types
- Java Basic Operators
- Java Loop Control
- Java Decision Making
- Java Numbers
- Java Characters
- Java Strings
- Java Arrays
- Java Date & Time
- Java Regular Expressions
- Java Methods
- Java Files and I/O
- Java Exceptions
- Java Inner classes

## **Java Object Oriented**

- Java Inheritance
- Java Overriding
- Java Polymorphism
- Java Abstraction
- Java Encapsulation
- Java Interfaces
- Java Packages

#### **Java Advanced**

- Java Collections
- Java Serialization
- Java Networking
- Java Multithreading
- Java Applet Basics

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#### 3. Dart Programming

Dart is an open-source general-purpose programming language. It is originally developed by Google and later approved as a standard by ECMA. Dart is a new programming language meant for the server as well as the browser. Introduced by Google, the **Dart SDK** ships with its compiler – the **Dart VM**.

#### **Dart Programming Overview**

- Dart Programming Environment
- Dart Programming Syntax
- Dart Programming Data Types
- Dart Programming Variables
- Dart Programming Operators
- Dart Programming Loops
- Dart Programming Decision Making
- Dart Programming Numbers
- Dart Programming String
- Dart Programming Boolean
- Dart Programming Lists
- Dart Programming Lists
- Dart Programming Map
- Dart Programming Symbol
- Dart Programming Runes
- Dart Programming Enumeration
- Dart Programming Functions
- Dart Programming Interfaces
- Dart Programming Classes
- Dart Programming Object
- Dart Programming Collection
- Dart Programming Generics
- Dart Programming Packages
- Dart Programming Exceptions
- Dart Programming Debugging
- Dart Programming Typedef
- Dart Programming Libraries
- Dart Programming Async
- Dart Programming Concurrency
- Dart Programming Unit Testing
- Dart Programming HTML DOM