

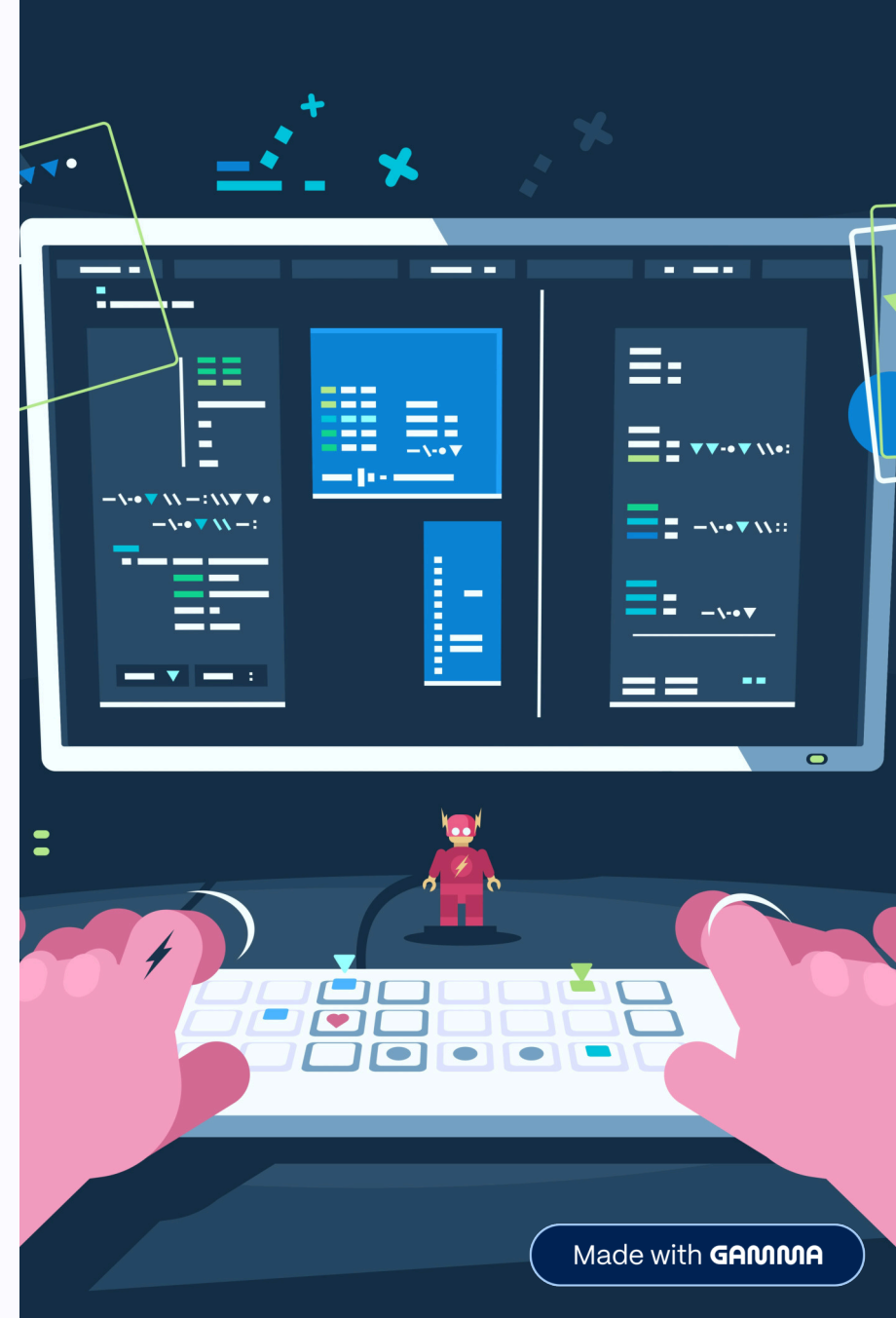
# Python For Everyone: Beginner to Intermediate

4 weeks, daily 12-1 PM sessions on icodeguru platform

Trainers: Muhammad Aqib Javed, Samina Jan, Umer Majeed

Moderators: M Fahad Bashir, Mehtab Ahmed

Course runs May 19-June 09, 2025





# WELCOME

## Welcome to Python For Everyone!



Accessible Learning

Designed for absolute beginners



Fun & Easy

Engaging, hands-on approach



Supportive Community

Learn together, ask questions

# Course Goals

## Understand Basics

Key programming concepts

## Write Python Code

Build and run programs

## Problem Solving

Apply logic to real-world tasks

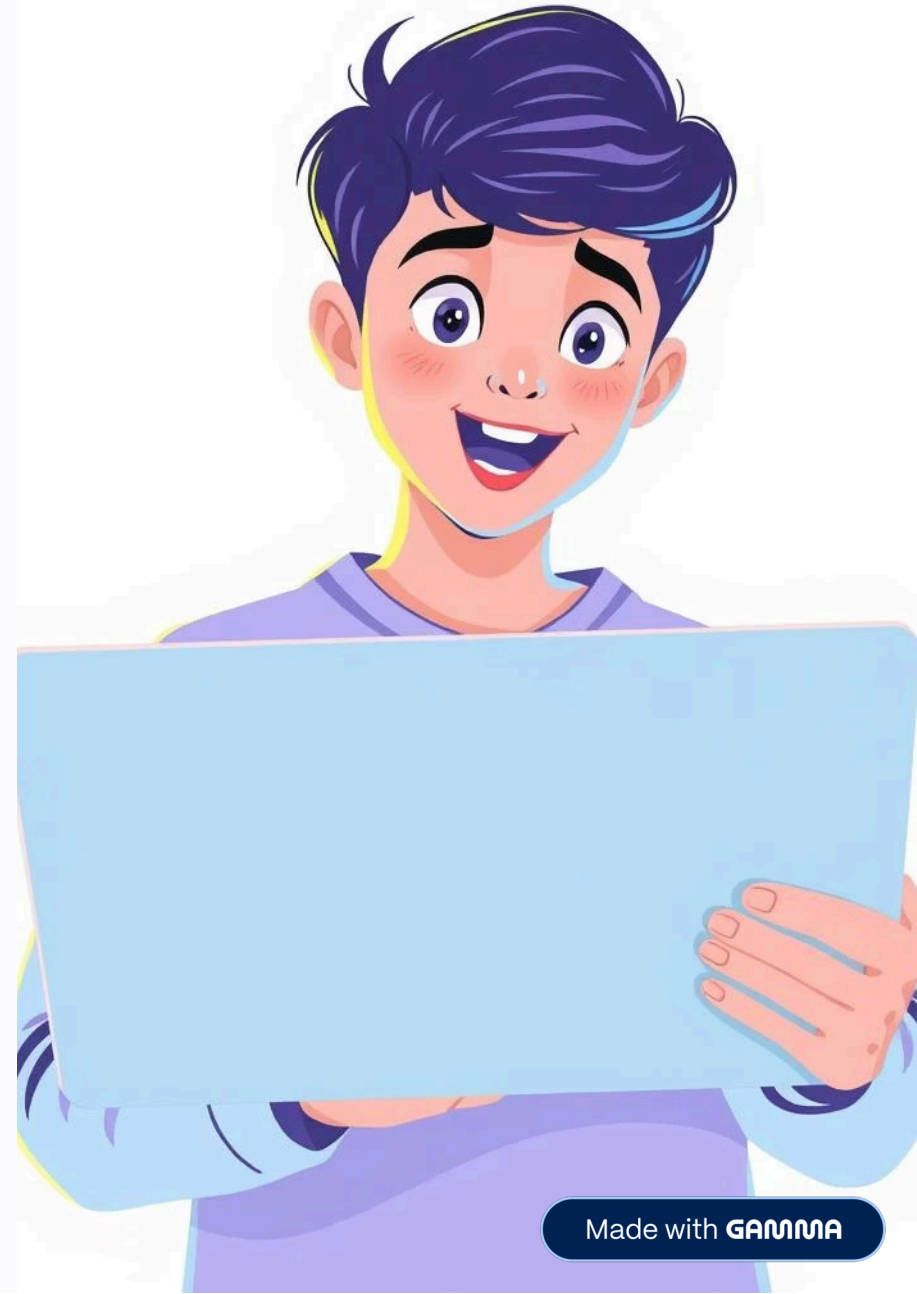
## Confidence

Continue coding independently



# Day 1 Agenda: Getting Started

- 1 Course Introduction
- 2 What is Programming?
- 3 Why Learn Python?
- 4 Key Programming Concepts
- 5 Setting Up Python
- 6 Your First Python Program
- 7 Homework Task



# Course Introduction

## Course Title: Python For Everyone

**Course Duration:** 4-Weeks  
**Trainers:** Muhammad Aqib Javed | Samina Jan | Umer Majeed  
**Moderators:** M Fahad Bashir, Mehtab Ahmed  
**Start Date:** May 19, 2025  
**Expected End Date:** June 09, 2025  
**Schedule:** Monday to Friday, 12pm-1pm

### Week 1: Python Programming Fundamentals

Day	Topics
Day 1	Introduction to Programming, Python Importance, Setup, Syntax, First Program
Day 2	Character Set, Comments, Variables, Expressions, Data Types



Google Docs



## Python For Everyone

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# What is Programming?

**Programming** is the process of **giving instructions to a computer** to perform specific tasks.

Just like you follow a recipe to cook a dish, a computer follows a **program** (a set of instructions) to complete a task.

## Step-by-Step Instructions

Computers follow exact commands

## No Thinking Required

Computers execute what you tell them

## Real-Life Example

Making tea instructions for a robot

## Why Do We Program?

- To **automate tasks** (e.g., sending emails, sorting files)
- To **build websites and apps**
- To **analyze data** and make decisions
- To **solve problems efficiently**

# Programming Languages

A **programming language** is a special language used to **write instructions** for a computer.

Just like humans speak English or Urdu, **computers understand programming languages** like Python, Java, or C++.

## 1 Purpose:

- To **communicate** with the computer
- To **create software, apps, websites**, and automate tasks
- Each programming language has **its own rules (syntax)**

## 2 Languages

- Java
- javascript
- C/C++
- Scracth

# Low-Level & High Level Languages

## Low Level:

- Closer to **machine (hardware) language**
- **Difficult to read** and write for humans
- Gives more **control over memory & hardware**
- Used in: system programming, hardware drivers

## Examples:

- **Machine Language** (Binary: 0s and 1s)
- **Assembly Language** (uses short codes like `MOV`, `ADD`)

## Analogy:

Like talking directly to a machine using switches and signals

## High-Level Languages

- Closer to **human language** (easy to read and write)
- Focus on solving problems, not hardware
- Used for **apps, websites, data science**, and more

## Examples:

- **Python, Java, C++, JavaScript**

## Analogy:

Like giving instructions in English instead of Morse code



# Why Learn Python?

## Easy to Read

English-like syntax

## Versatile

Web, AI, data, automation

## Large Community

Lots of help available

## Great for Beginners

Powerful for pros too



# Key Concepts to Understand

## Syntax

Rules for correct code

## Interpreter

Runs code line-by-line  
(Python)

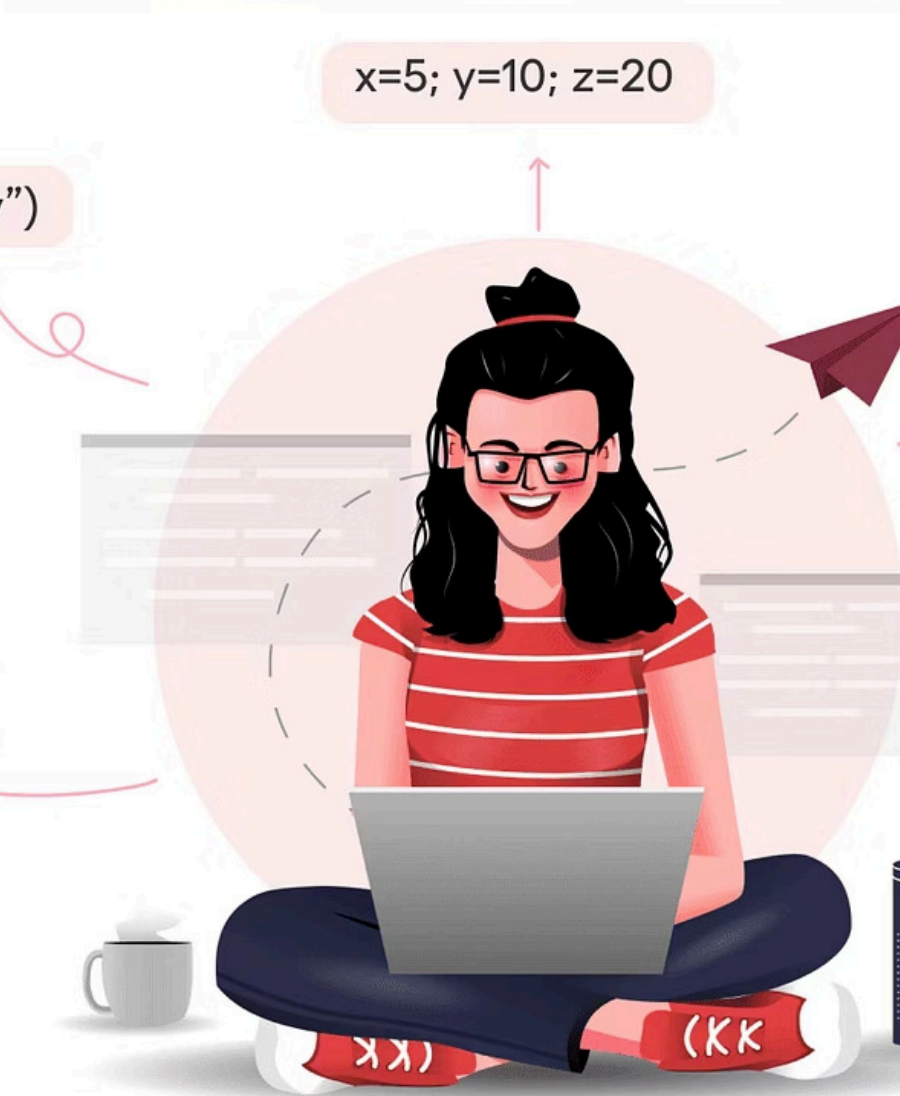
## Compiler

Translates full code (C/C++)

## Code Editors

Tools like VS Code, Replit,  
Colab

# Python Syntax



## Syntax

- The **rules and structure** for writing code correctly
- Just like grammar in a language — if the rules are broken, it won't work
- Example (correct): `print("Hello")`
- Example (incorrect): `Print(Hello)`
- Each programming language have different syntax

# Interpreter vs Compiler

## Interpreter

- A tool that **reads and runs your code line by line**
- Python uses an interpreter
- Helps find and fix errors easily
- Slower but beginner-friendly

## Compiler

- Translates the **entire code at once** into machine language before running
- Used in languages like C, C++, Java
- Faster execution but harder to debug for beginners

# Code Editors

- Tools where you **write, run, and test your code**
- Help you write code faster with suggestions and error highlighting
- Examples:
  - **Replit** – Online, beginner-friendly, no setup
  - **Google Colab** – Online, great for notebooks and data tasks
  - **VS Code** – Lightweight, powerful, many extensions
  - **PyCharm** – Full-featured, great for bigger Python projects

## Factors for choosing right code editors could be

- programming experience
- online vs offline
- features ( syntax highlighting, autocomplete, error checking )
- System Requirements
- Extensions/Plugins



Hello world

# Setting Up & Your First Program

1

## Setup Options

Install Python or use online editors

2

## Online Editors

Replit.com, Google Colab — no install needed

3

## Your First Code

`print("Hello, world!")` — try changing it!

4

## Practice Task

Write simple prints, build comfort

# Thank You

Thank you for joining Python For Everyone!. We appreciate your attention and participation.

Please share your feedback and ask any questions.

1

## Your Feedback Matters

Helps us improve future sessions and content.

2

## Ask Questions

No question is too small or too big.

3

## Next Steps

Practice regularly and explore more Python topics.