

WEB DEV FOR BEGINNERS

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1 Introduction to Programming Languages and Tools of the Trade -

- **Programming** (or **coding**) is the process of **writing instructions** that a computer can understand and follow to
- Programming is just like a recipe and out is dish.
- Example-`print("Hello, world!")` this line shows the message hello world on the screen.
- What is program??

Ans- A **program** is something made with **code**.

It can be things like:

- A **website** (like Google),
- A **game** (like Minecraft),
- Or a **phone app** (like WhatsApp).
- When a program is **running**, it means the computer or phone is **doing what the code tells it to do**, step by step.
- The world's **first computer programmer** is widely considered to be **Ada Lovelace**.
- **Famous for:** Writing the **first algorithm** meant to be carried out by a machine.

What are programming languages?

- Ans- Computers only understand **binary** (just 1s and 0s).

But writing in 1s and 0s is hard for humans. So we use **programming languages** to write instructions in a way that humans can understand.

- Think of programming languages like a **translator** between humans and computers.

- **Fibonacci sequence-** The **Fibonacci sequence** is a list of numbers where:

- The first number is **0**
- The second number is **1**
- After that, **each number is made by adding the two numbers before it**
- Start with: 0
- Next: 1
- Then: $0 + 1 = 1$
- Then: $1 + 1 = 2$
- Then: $1 + 2 = 3$
- Then: $2 + 3 = 5$
- Then: $3 + 5 = 8$
- Then: $5 + 8 = 13$
- Then: $8 + 13 = 21$
- Then: $13 + 21 = 34$
- First 10 numbers are 1,2,3,5,8,13,21,34.

Tools used by developers are -

- **Editors-** where developers write code
- **Browser-** Web developers rely on the browser to see how their code runs on the web. It's also used to display the web page that are written in the editor, like HTML..

- **DevTools** (Developer Tools) are built-in tools in web browsers like **Chrome, Firefox, or Edge** that help develop a website
- **Version Control System**
- **Programing Language Like** javascript,python etc

2 Introduction to GitHub

• What is GitHub?

GitHub is a website and platform where developers can store, share, and collaborate on code.

It works with Git, a tool that keeps track of code changes. GitHub adds extra features like backups, collabora interface.

- **Git** = A tool to track changes in your code (like saving versions)
- **GitHub** = A place online to store your code and work with others

Some basic git terms-

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Term	Simple Meaning
○ Repository (Repo)	A folder on GitHub where your project lives. It stores code, files, and the full his
○ Commit	A saved snapshot of your code changes. Like a save point in your project.
○ Push	Sends your commits (saved changes) from your computer to GitHub.
○ Pull	Brings the latest changes from GitHub to your local machine.
○ Clone	Copies a GitHub repo to your computer so you can work on it.
○ Branch	A separate version of your code where you can work on new features without affecting
○ Main (or Master)	The default branch of your project. Usually holds the final or production-ready code
○ Merge	Combines changes from one branch into another (often used to bring updates into the i
○ Pull Request (PR)	A request to merge code changes from one branch to another. Used for code review and
○ Fork	Makes a copy of someone else's GitHub repo under your own account so you can make ch
○ README	A file that describes your project—what it is, how to use it, etc. (written in Markc
○ Git	A tool used to track changes in your code. Git runs on your computer.
○ Version Control System	A system that tracks changes in code over time and lets you go back to earlier versio
○ git init	Initializes a new Git repository in your project folder (starts version tracking).
○ git add	Tells Git which files you want to include in your next commit (save).
○ git commit -m "message"	Saves the added changes with a short message explaining what you did.
○ git config	Used to set your Git user information, like your name and email (needed for commits) global user.name "Your Name"

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