

Getting Started with Programming



With so many different languages and methods for programming, where do you begin? Here are some steps that can help guide you towards the right path.

Step 1: Languages

If you are completely new to programming, there are only a handful of languages which can be learned easily from the start. **Python** and **JavaScript** are two of the most widely used languages in the programming world and they both have numerous amounts of support online. Here are some characteristics of both:



Python

- *One of the most in demand languages in business as of now (2022)*
- *Used in server-side development, mobile apps, known to be able to do 'everything'*
- *Extremely high-level language which incorporates many English words into its library*

JavaScript

- *The most used programming language in the world.*
- *Used in websites, small browser games, mobile apps, and front-end and back-end software*
- *Slightly more complicated language which uses symbols and terms found in many other programming languages*

Step 2: Installation

To start programming with any language, you need a workspace. There are many different **IDEs (Integrated Development Environments)** to choose from, however **replit.com** is recommended. For programming in JavaScript, select Node.js. For programming in Python, you can select the Python option. These IDEs allow you to run code over the cloud and simplifies the process significantly. Once you begin to have an intermediate grasp on a programming language, you can search for others until you find the IDE that works best for you.

Step 3: Create your first program

Begin with a simple statement, 'Hello World'. If using Python, write the statement **print('Hello World!')**, for JavaScript a similar line of code is written as **console.log("Hello World!");**. Congratulations! You wrote your first line of code.



Step 4: Create your own program

For either language, start by trying to create a simple calculator program using all the resources found online. Some suggested sources include:

<https://www.tutorialspoint.com/index.htm>

<https://www.w3schools.com/>

Some basic guidelines for this project would be to have the user input two numbers and ask the user if they would like to 'add', 'subtract', 'multiply', or 'divide'. From there, you can be as creative as you want! Do not be afraid to look up examples, as these will help.

Step 5: Intermediate topics

After having grasped the basics of your chosen language you can go further into the programming journey. Intermediate topics to investigate are:



- Classes and objects
- Data type manipulation
- Packages and virtual environments
- Data structures and algorithms

FAU Courses

COP2034 – Introduction to Programming in Python

COP4633 – Mobile App Projects

COP3014 – Foundations of Computer Science

