

# Hands on Lab: GitHub Copilot for Beginners

A quick and easy way to learn how to use GitHub Copilot to write code

## Introduction

GitHub Copilot is a tool that helps you write code faster and better. It is powered by a large neural network that has learned from billions of lines of code. GitHub Copilot can suggest code completions, write whole functions, and even generate comments and tests for your code.

In this hands on lab, you will learn how to use GitHub Copilot to write some simple Python programs. You will also see how GitHub Copilot can help you with common coding tasks, such as debugging, refactoring, and documentation.

## Prerequisites

- A GitHub account
- A Visual Studio Code editor with the GitHub Copilot extension installed
- A basic knowledge of Python syntax and programming concepts

## Exercises

For each exercise, you will follow these steps:

1. Create a new Python file in Visual Studio Code and name it according to the exercise.
2. Type a comment that describes the goal of the exercise, such as "# Write a function that returns the factorial of a given number".
3. Press Ctrl+Enter to activate GitHub Copilot and see what it suggests.
4. Review the suggested code and accept it if it is correct, or modify it if it is not.
5. Run the code and test it with some inputs.
6. Add some comments and docstrings to explain the code and its parameters and outputs.
7. Use GitHub Copilot to generate some tests for the code and run them to check the code coverage and correctness.

Here are some examples of exercises you can try:

- Exercise 1: Write a function that returns the nth Fibonacci number.
- Exercise 2: Write a function that checks if a given string is a palindrome.
- Exercise 3: Write a function that sorts a list of numbers using bubble sort.
- Exercise 4: Write a function that converts a decimal number to binary.
- Exercise 5: Write a function that calculates the area of a circle given its radius.

## Conclusion

In this hands on lab, you learned how to use GitHub Copilot to write some simple Python programs. You also saw how GitHub Copilot can help you with common coding tasks, such as debugging, refactoring, and documentation. GitHub Copilot is a powerful tool that can enhance your productivity and creativity as a programmer. You can explore more features and capabilities of GitHub Copilot by visiting its official website: [\[URL\]](#)