Welcome: What Coding Is, and What You'll Make

Python for Absolute Beginners · Lesson 1

What you'll learn

- What coding actually is, in plain words
- What a programming language does for you
- What you will be able to make by the end of this course
- How this course works, lesson by lesson

What coding actually is

- Coding is writing instructions for a computer to follow — that is the whole idea
- You write the instructions in a language the computer understands
- The computer carries them out, one step at a time, exactly as written
- A program is a finished set of instructions saved as a file
- When you “run” a program, the computer follows it from top to bottom

Instructions you already know

- A recipe is a list of instructions for making food
- Directions to a friend's house are instructions for getting somewhere
- Coding is the same skill, aimed at a computer instead of a person
- Except the computer is extremely literal: it does exactly what you wrote, not what you meant
- So learning to code is mostly learning to be clear and precise



What a programming language does for you

- Computers really only understand numbers, but nobody wants to write programs as numbers
- A programming language is a simplified way of writing instructions
- Python lets you write instructions in words that look a lot like plain English
- Python turns those words into the numbers the computer needs



Why Python is a good first language

- It reads much like English, so you spend your energy on ideas, not strange symbols
- You can get something working in minutes — your very first program is one line long
- It is a real language used by professionals for websites, data work, games, and AI tools
- What you learn here is not a toy version of coding — it is the real thing, taught from the beginning

A complete Python program

```
print("I am learning to code!")

Output:
I am learning to code!
```

print means “show this on the screen.” The words inside the quotes are the message. You will write your own version in Lesson 3.

What you will make in this course

- Write programs that print messages, do arithmetic, and remember values
- Make decisions in a program (“if this, do that”) and repeat actions with loops
- Store collections of things in lists and dictionaries
- Draw shapes and pictures with code
- Build a working number-guessing game from scratch — the course mini-project in Lesson 16

How this course works

- Learn — a short explanation with code you can try yourself
- Try it — a small hands-on exercise with an expected result, so you can check your own work
- Quick quiz — five short questions with an answer key
- Key takeaways — the ideas worth remembering
- You need no experience at all to start: if you can type and use a computer, you are ready

A habit to start now

- When something does not work, read the message the computer gives you
- It is usually pointing at the exact problem
- Errors are not failures — they are how every programmer finds out what to fix next
- The only tool you need is Python itself, which you will install in the next lesson

Hands-on exercise

- Explain in your own words what a program is, to someone who has never heard the word
- Think about what would happen if you changed the words inside the quotes in the one-line program to your own name
- Write down one thing you would like to make with code someday — and keep it

Key takeaways

- Coding is writing instructions for a computer to follow, exactly as written
- A program is a saved set of instructions; running it means the computer follows them from top to bottom
- Python reads much like English and is a real professional language, not a toy
- By the end of this course you will build a working number-guessing game
- Errors are normal: read the message, find the problem, fix it, and move on

Take the quiz

Take the Lesson 1 quiz — 5 quick questions to check what you learned.

Next lesson

What Is Python, and Installing It