

The Rust Compiler

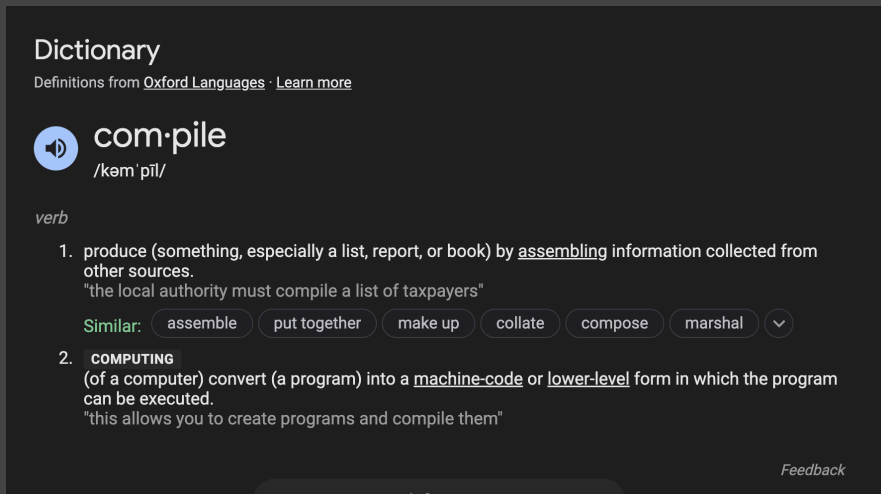
Learn to Code with Rust

Source Code

- **Source code** is the code that developers write.
- **Source code** is meant to be readable by humans.
- The computer cannot understand the Rust code itself.

```
main.rs x
src > main.rs
3 fn main() {
4     println!("Guess the number!");
5
6     println!("Please input your guess.");
7
8     let mut guess: String = String::new();
9
10    io::stdin().stdin
11        .read_line(buf: &mut guess) Result<usize, Error>
12        .expect(msg: "Failed to read line");
13
14    println!("You guessed: {}", guess);
15}
```

The Rust Compiler



- The **Rust compiler** is a program that translates our source code into an executable program.
- The executable program is called a **binary or binary executable**.
- The computer can understand and execute the instructions in the binary.
- Think of the compiler like a translator.

Syntax

- **Syntax** describes the characters/symbols that developers use to write source code.
- Programming languages are strict. Rust is among the strictest of them all. Every detail matters to the compiler.
- Case sensitivity matters. A capital letter is not equal to a lowercase letter.
- Spaces matter. One space is not equal to two spaces or no spaces.
- Symbols matter. A semicolon is not equal to a comma.
- Line breaks matter.