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workshop-markdown / **helloworld.md**

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Raw

Helloworld Programs

Hello, World!

We list below Helloworld programs for different programming languages, i.e. programs that print "Hello, World!". The specified compiler or interpreter is required for each programming languages.

The table below summarizes the programs:

Language	Language (Spec) Site	Section	Build / Run Toolchain	Debian / Ubuntu Packages
C	The Standard - C	C	GCC	`build-essential`
C++	The Standard - C++	C++	GCC / G++	`build-essential` , `g++`
Dlang	D Programming Language: Home	Dlang	GCC / GDC	`build-essential` , `gdc`
Go	The Go Programming Language	Go	Go	`golang`
Rust	Rust Programming Language	Rust	Rust (Crate)	`rustlang`
Java	Java Programming Language	Java	JDK	`openjdk-17-jdk`
x86_64 assembly	x86 and amd64 instruction reference	x86_64 Assembly	GCC / GAS	`build-essential`
ARM64 assembly	Arm A64 Instruction Set Architecture	ARM64 Assembly	GCC / GAS (AArch64)	`build-essential`
Bash	Bash Reference Manual	Bash	Bash	`bash`
Python	Welcome to Python.org	Python	Python	`python`
Ruby	Ruby Programming Language	Ruby	Ruby	`ruby`
PHP	PHP: Hypertext Preprocessor	PHP	PHP	`php`
Perl	The Perl Programming Language	Perl	Perl	`perl`
Lua	The Programming Language Lua	Lua	Lua	`lua`

C

```
#include <stdio.h>

int main(void)
{
        puts("Hello, World!");
        return 0;
}
```

Build with:

```
gcc -Wall -o helloworld helloworld.c
```

Run with:

```
./helloworld
```

C++

```
#include <iostream>

int main()
{
        std::cout << "Hello, World!" << std::endl;
        return 0;
}
```

Build with:

```
g++ -Wall -o helloworld helloworld.cpp
```

Run with:

```
./helloworld
```

Dlang

```
import std.stdio;

void main()
{
    writeln("Hello, World!");
}
```

Build with:

```
gdc -Wall -o helloworld helloworld.cpp
```

Run with:

```
./helloworld
```

Go

```
package main

import "fmt"

func main() {
    fmt.Println("Hello, World!")
}
```

Build and run with:

```
go run helloworld.go
```

Rust

```
fn main() {
    println!("Hello, World");
}
```

Build with:

```
rustc hello.rs
```

Run with:

```
./helloworld
```

Java

```java
public class HelloWorld {
    public static void main(String[] args) {
        System.out.println("Hello, World!");
    }
}
```

Build with:

```
javac HelloWorld.java
```

Run with:

```
java HelloWorld
```

x86_64 Assembly

```
```

Build with:

```
TODO
```

Run with:

```
./helloworld
```

TODO

ARM64 Assembly

```

```

Build with:

```
TODO
```

Run with:

```
./helloworld
```

Bash

```
echo "Hello, World!"
```

Run with:

```
bash helloworld.sh
```

Python

```python
print("Hello, World!")
```

Run with:

```
python helloworld.py
```

Ruby

```ruby
puts "Hello, World!"
```

Run with:

```
ruby helloworld.rb
```

PHP

```php
<?php
echo "Hello, World!"
?>
```

Run with:

```
./helloworld
```

Perl

```
print("Hello, World!\n")
```

Run with:

```
perl helloworld.pl
```

Lua

```
print("Hello, World!")
```

Run with:

```
lua helloworld.lua
```