

# The Hello World Program

This lesson acquaints you with the Hello World program and gives a basic introduction to D.

## WE'LL COVER THE FOLLOWING



- An example
- Contents of the “**Hello World**” program

## An example #

Most programming languages start with a basic **Hello World** program. This concise and simple program merely displays “Hello, World!” on the screen and terminates. However, the program is important because it teaches you some of the most basic yet essential concepts of a programming language.



Hello world

Here is how a “Hello, World!” program looks like in D:

```
import std.stdio;

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

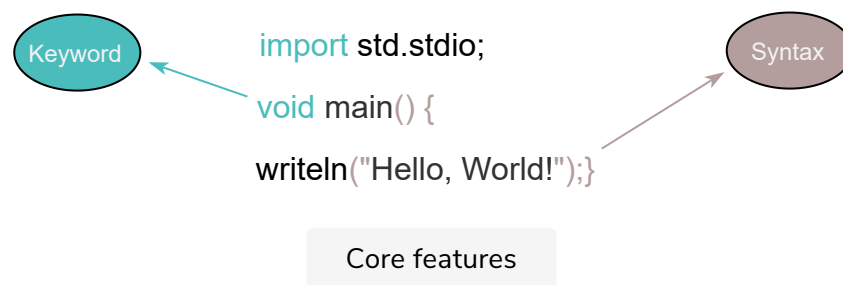


The Hello World program

# Contents of the “Hello World” program #

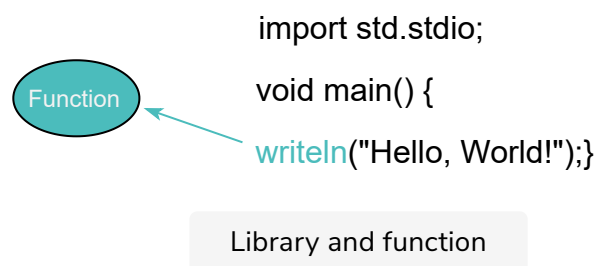
Here is a quick list of the many D concepts that have appeared in this short program:

- **Core features:** Every language defines its syntax, fundamental types, keywords, rules, etc. All of these make the core features of that language. The parentheses, semicolons, and words like `main` and `void` are all placed according to the rules of D. These are similar to the rules of English: subject, verb, punctuation, sentence structure, etc.

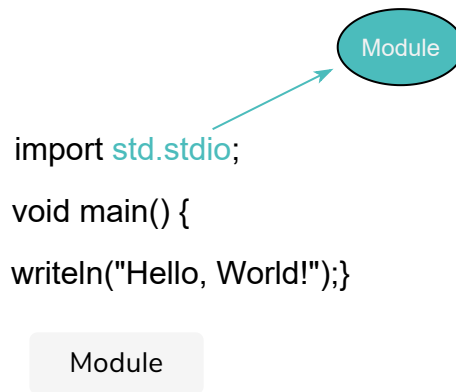


- **Libraries and functions:** The core features only define the structure of a language. These are used for defining *functions* and user-defined types, and those, in turn, are used for building *libraries*. **Libraries** are collections of reusable program parts that get linked with your programs to help them achieve their purposes.

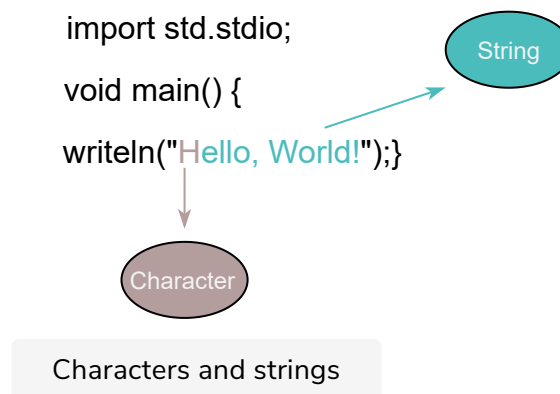
`writeln` is a function in D’s standard library. As its name suggests (*write line*), it is used for printing a line of text.



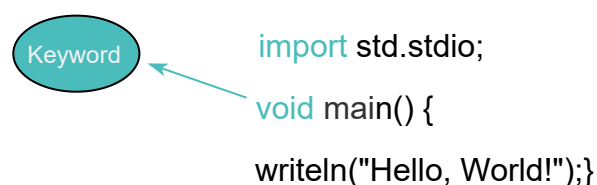
- **Modules:** Library contents are grouped by the types of tasks that they intend to help with. Such a group is called a **module**. The only module that this program uses is `std.stdio`, which handles data input and output.



- **Characters and strings:** Expressions like “Hello, World!” are called **strings**, and the elements of strings are called **characters**. The only *string* in this program contains the characters ‘H’, ‘e’, ‘!’, and others.

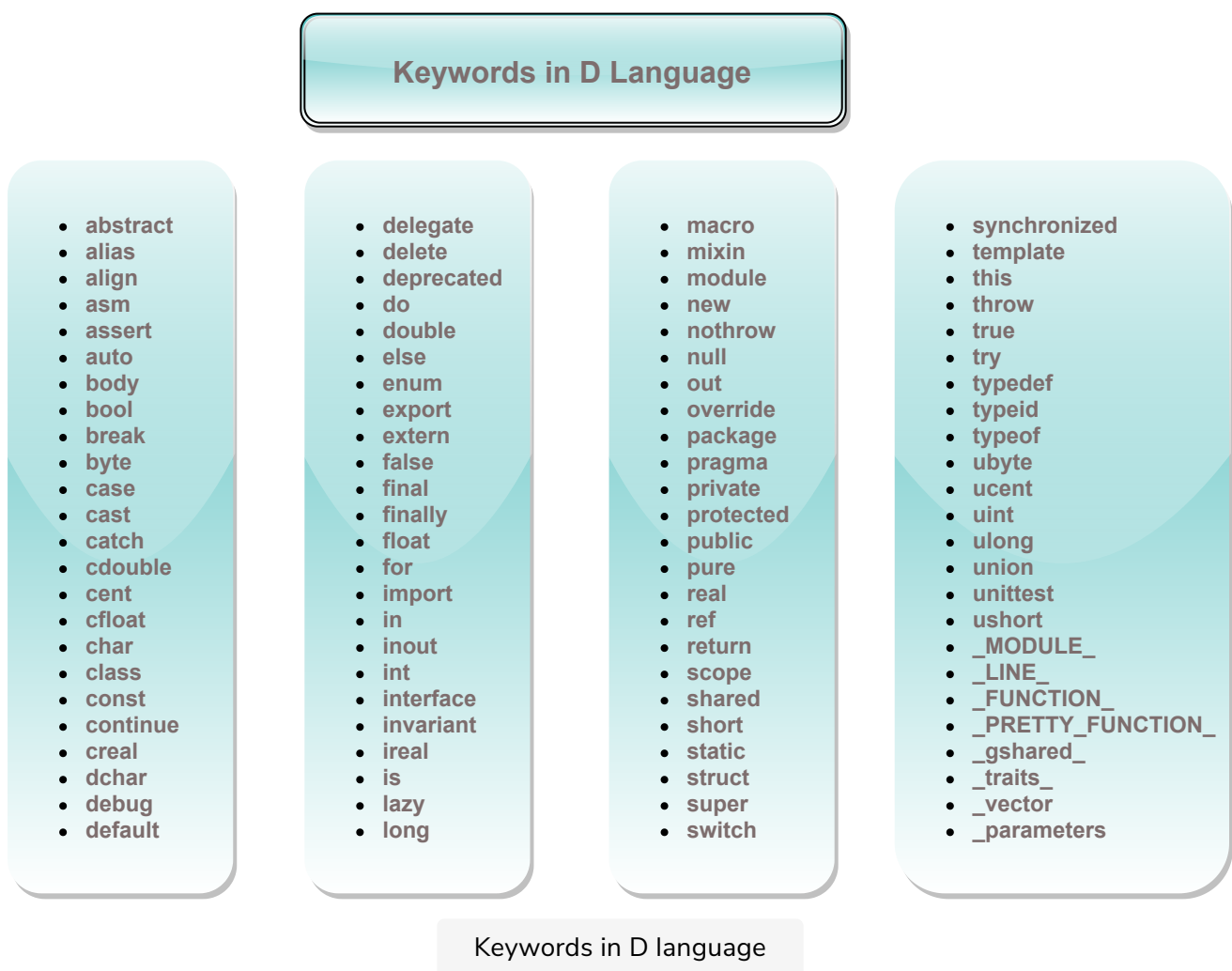


- **Order of operations:** Programs complete their tasks by executing operations in a certain order. These tasks start with the operations that are written in the function named **main**. The only operation in this program writes, “Hello world!”.
- **Keywords:** Special words that are a part of the core features of the language are called **keywords**. Such words are reserved for the language itself, and cannot be used for any other purpose in a D program. There are two keywords in the example program: **import**, which is used to introduce a module to the program, and **void**, which here means “not returning anything”.



- **Significance of uppercase and lowercase letters:** You can choose to type any character inside a string, but you must type the keywords exactly as they appear in the program. This is because lowercase vs. uppercase is significant in D programs. For example, `writeln` and `Writeln` are two different names and using `Writeln` will make the program throw an error.

Here is a list of the most commonly used keywords in D language. You can find the complete list at [D Grammar](#).



**Note:** We will cover these keywords in the upcoming chapters with the exception of the following: `asm1` and `__vector2` are outside of the scope of this course; `body`, `delete`, `typedef`, and `volatile` are deprecated; and `macro` is unused by D at this time.

In the next lesson, we will explore the difference between functions `writeln`

and `write`.