Identifiers in C++

In this lesson, you will study identifiers.

We'll cover the following

- Identifiers
- Rules for naming a variable
  - Example program with valid identifiers
  - Example program with invalid identifiers

Identifiers

A variable in C++ is given a unique name known as an identifier.

> 🖉 **Best coding practice:** Use descriptive and meaningful names for the variables to make the code self-explanatory.

Rules for naming a variable

The general rules for naming the variables are:

- An identifier can only contain uppercase alphabets (A to Z), lowercase alphabets (a to z), numbers (0 to 9), and underscore (_).
- The first letter of an identifier can be an alphabet or an underscore.

> 🖉 **Best coding practice:** It is not a good practice to start an identifier with an underscore.

- The first letter of an identifier cannot be a number.
- C++ is a case-sensitive language. Therefore, an identifier written in the upper case will be different from the one written in the lower case.

> 📝 **Note: numbers** and **Numbers** are two different identifiers.

- An identifier cannot contain white space.
- An identifier cannot have special characters such as: &, @, *, !, etc.
- We cannot use keywords as identifiers.

> 📝 **Note:** Keywords are a collection of reserved words and predefined identifiers in a language used for specific purposes.

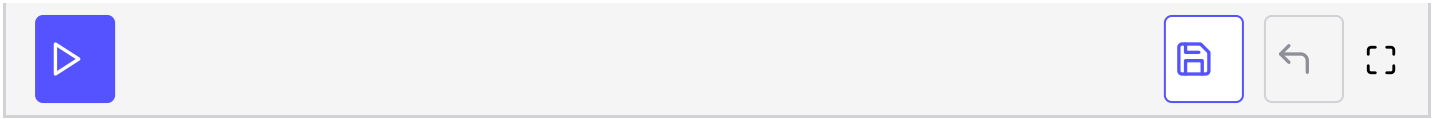
Example program with valid identifiers

Run the code below and see the output!

```
#include <iostream>

using namespace std;

int main() {
  int number1;
  int _number;
  int number;
}
```



Valid identifiers

The code given above contains valid identifiers. Therefore, if you run the code, it does not generate an error.

Example program with invalid identifiers

Let's write some invalid variable names.

> ⚠ **Error:** The program given below will generate an error.

```
#include <iostream>

using namespace std;

int main() {
  int 1;
  int number 1;
```

```
  int return;
}
```

Invalid identifiers

Since the above code has invalid identifiers, it generates an error upon execution.

Quiz

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`_var` is not a valid identifier.

Retake Quiz

Let’s discuss the constants in the upcoming lesson.

Stay tuned!