# Strings and Escape Sequences

Let's discuss string data type and escape sequences in C++.

**We'll cover the following**



## String

We can consider **string** as plain text that represents alphanumeric data. A string comprises one or more characters. A character can be a letter, number, and space.

> **Note:** We are considering string as text even if it contains a number. Then, how can we distinguish between the string and the actual code? To distinguish the string from the normal code, we always write string data inside the double-quotes.

### Example program

Try running the code below!

```
#include <iostream>

using namespace std;

int main() {
  // Initialize a string variable
  string text = "Hey12345";
  // Displays value of string variable
  cout << text;

}
```

Strings

In the code above, `Hey12345` is recognized as a string. With the double quotes, `12345` is considered a string, not a number.

> 📝 **Note:** Like fundamental data types, `strings` are not allocated a fixed amount of memory during the time of declaration.

## Escape sequence #

An **escape sequence** comprises two or more characters that are used to modify the format of the output. The first character in the escape sequence is the backslash `\`, and the remaining characters determine what our escape sequence will actually do. Here is the list of the most commonly used escape sequences.

| Escape Sequence | Meaning | Description |
|---|---|---|
| \n | New line | Moves the cursor to the beginning of next line |
| \t | Horizontal Tab | Moves the cursor 8 spaces towards the right |
| \" | Double quote | Inserts double quote in the output |
| \r | Carriage return | Moves the cursor to the beginning of the current line |
| \\ | Backslash | Displays backslash character |
| \' | Single quote | Inserts single quote in the output |
| \b | Backspace | Deletes the last character |

Escape sequences

## Example program #

Let's write a program that demonstrates the use of an escape sequence.

```
#include <iostream>

using namespace std;

int main() {
```

```
  // Initialize string variable with text and escape characters
  string text = "Hello\nI\tam\tJohn";
  // Displays value of string variable

  cout << text;
}
```

Escape sequence

When we run the code above, it displays the `text` in a special format. First, it displays `Hello`, then it encounters the escape character `\n`. Therefore, it moves the cursor to the next line. In the next line, it displays `I`, then it encounters an escape character `\t` and resultantly moves the cursor eight spaces towards the right. It prints `am` and then, again, moves the cursor eight spaces towards the right because of an escape character, there it displays `John`.

Quiz

Q

`\r` moves the cursor to the:

Retake Quiz

That’s all about the data types. Let’s discuss how we can take input from the user in the upcoming lesson.

Stay tuned!