# Character and String

This lesson discusses character and string type.

**We'll cover the following**

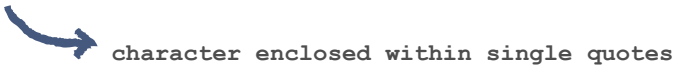


## Character

The variable is used to store a single character value, such as a single digit or a single alphabet. The value assigned to a char variable is enclosed in a single quote(`''`) .

> **Note:** Unlike some other languages, a character in Rust takes up 4 bytes rather than a single byte. It does so because it can store a lot more than just an ASCII value like emojis, Korean, Chinese, and Japanese characters.

```
let my_char = 'a';
```




### Example

The code below defines a character both explicitly and implicitly:

### Explicit Definition

The following code explicitly defines the variable using the `char` keyword:

```
fn main() {
    // explicitly define
    let char_1:char = 'e';
    println!("character1: {}", char_1);
}
```

### Implicit Definition

The following code implicitly defines the character type of the variable by assigning the single value enclosed within single quotes to them.

```
fn main() {
    // implicitly define
    let char_2 = 'a';
    let char_3 = 'b';
    println!("character2: {}", char_2);
    println!("character3: {}", char_3);
}
```

## String

A string is any sequence of characters enclosed within double quotes (`" "`).


## Example

The code below defines a string both explicitly and implicitly:

### Explicit Definition

The following code explicitly defines the variable using the `&str` keyword:

```
fn main() {
    // explicitly define
```

```
    let str_1:&str = "Rust Programming";
    println!("String 1: {}", str_1);
}
```

### Implicit Definition #

The following code implicitly defines the string type of the variable by assigning the single value enclosed within double quotes to them.

```
fn main() {
    // implicitly define
    let str_2 = "Rust Programming";
    println!("String 2: {}", str_2);
}
```

> More detail on strings will be covered in chapter 9.

## Quiz #

Test your understanding of Boolean and Character data types in Rust!

Quick Quiz on Character and String!

1 What is the output of the following code?

```
let value:str = "Rust Programming";
println!("{}", value);
```

2 What is the valid syntax for defining a character explicitly?

Retake Quiz

Now that you have learned about the scalar types, let's learn about the compound type "Arrays" in the next lesson.