



## Loop

a loop is a sequence of instructions that is continually repeated until a certain condition is reached.

## Types of loops in rust

- while
- for
- loop

## For loop

The for loop executes the code block for a specified number of times. It can be used to iterate over a fixed set of values, such as an array.

```
for x in 1..10 {  
    println!("{}", x);  
}
```

## loop

The loop is not a conditional loop. It is a keyword that tells the Rust to execute the block of code over and over again until and unless you explicitly stop the loop manually.

```
loop{  
    println!("Hello world");  
}
```

## While loop

The 'while-loop' is a conditional loop. When a program needs to evaluate a condition then the conditional loop is used. When the condition is true then it executes the loop otherwise it terminates the loop.

```
fn main(){  
    let mut x = 1;  
    while x<10 {  
        println!("{}", x);  
        x+=1;  
    }  
}
```

## Difference between the while loop and for loop:

If the index length of an array is increased at runtime, then the while loop shows the bug but this would not be happened in the case of for loop. Therefore, we can say that for loop increases the safety of the code and removes the chances of the bugs.