

# R while Loop (With Examples)



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Loops are used in programming to repeat a specific block of code. In this article, you will learn to create a while loop in R programming.

In R programming, while loops are used to loop until a specific condition is met.

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## Syntax of while loop

```
while (test_expression)
{
  statement
}
```

Here, `test_expression` is evaluated and the body of the loop is entered if the result is `TRUE`.

The statements inside the loop are executed and the flow returns to evaluate the `test_expression` again.

This is repeated each time until `test_expression` evaluates to `FALSE`, in which case, the loop exits.

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## Flowchart of while Loop

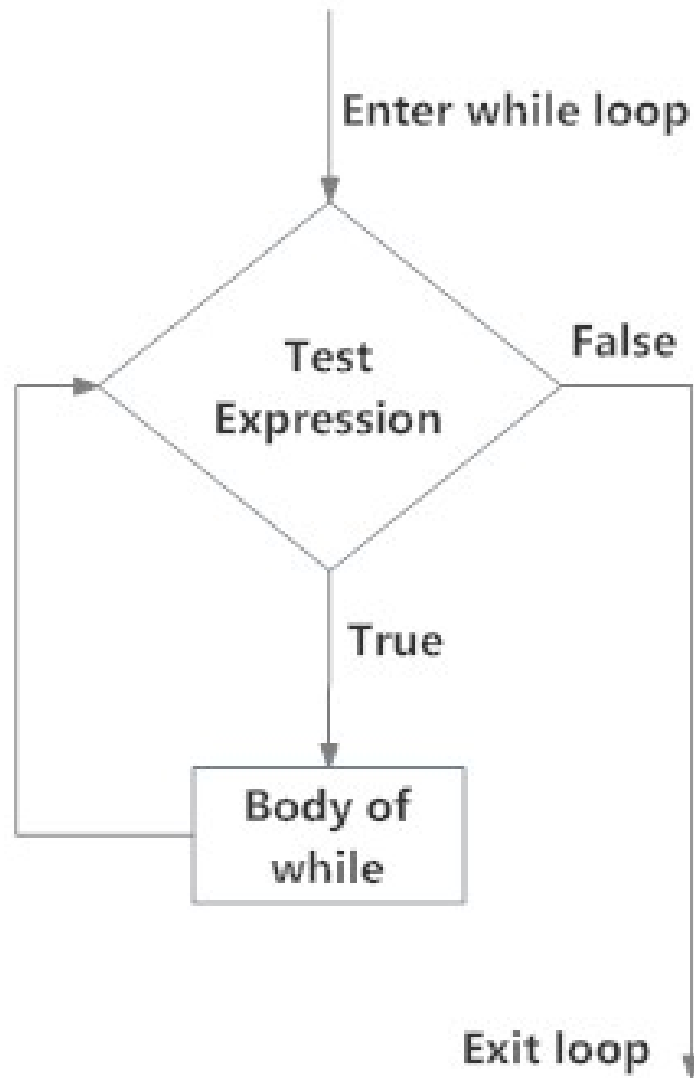


Fig: operation of while loop

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## Example of while Loop

```
i <- 1
while (i < 6) {
  print(i)
  i = i+1
}
```

### Output

```
[1] 1
[1] 2
[1] 3
[1] 4
[1] 5
```

In the above example, `i` is initially initialized to 1.

Here, the `test_expression` is `i < 6` which evaluates to `TRUE` since 1 is less than 6. So, the body of the loop is entered and `i` is printed and incremented.

Incrementing `i` is important as this will eventually meet the exit condition. Failing to do so will result into an infinite loop.

In the next iteration, the value of `i` is 2 and the loop continues.

This will continue until `i` takes the value 6. The condition `6 < 6` will give `FALSE` and the while loop finally exits.

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Check out these examples to learn more:

- Check Armstrong Number
- Print the Fibonacci Sequence
- Find the Sum of Natural Numbers