

# R Program to Find Minimum and Maximum



# R Program to Find Minimum and Maximum

In this example, you'll learn to find the minimum and maximum numbers from a list using `min()` and `max()` function respectively. You'll also learn to use the `range()` function.

To understand this example, you should have the knowledge of following R programming topics:

- R Variables and Constants
- R Functions

---

We can find the minimum and the maximum of a vector using the `min()` or the `max()` function.

A function called `range()` is also available which returns the minimum and maximum in a two element vector.

---

## Example: Find Minimum and Maximum

```
> x
[1] 5 8 3 9 2 7 4 6 10
> # find the minimum
> min(x)
[1] 2
> # find the maximum
> max(x)
[1] 10
> # find the range
> range(x)
[1] 2 10
```

If we want to find where the minimum or maximum is located, i.e. the index instead of the actual value, then we can use `which.min()` and `which.max()` functions.

# R Program to Find Minimum and Maximum

Note that these functions will return the index of the first minimum or maximum in case multiple of them exists.

```
> x
[1] 5 8 3 9 2 7 4 6 10
> # find index of the minimum
> which.min(x)
[1] 5
> # find index of the maximum
> which.max(x)
[1] 9
> # alternate way to find the minimum
> x[which.min(x)]
[1] 2
```