

# R Language

## While Loop

Dr. Aamir Alaud Din

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### Objectives

- To learn the logic of while loop.
- To learn how to write while loop in r.
- To solve examples implementing while loop in r.

## The Why Section

- Repetitive tasks
- Repetition is conditional
- If condition is true, computation proceeds
- If condition is false, computation stops and program moves to next part/end
- Repetition occurs a specified number of times

## Example: Working of Air Conditioners

```
init_temp <- 38
set_temp <- 26

while (init_temp >= set_temp) {
  init_temp <- init_temp - runif(1)
  cat("Temperature: ", init_temp, "\n")
}
```

## Repeat Loop

The Repeat loop executes the same code again and again until a stop condition is met.

- The basic syntax is shown below.

```
repeat {  
  code block  
  if (condition) {  
    break  
  }  
}
```

### Example

Starting from 1, keep on adding every next number until the summation is less than or equal to 15 (or any other number). Print the numbers.

## For Loop

A For loop is a repetition control structure that allows you to efficiently write a loop that needs to execute a specific number of times.

- The syntax of a for loop is given below.

```
for (member in vector) {  
  code block  
}
```