Week6_lab

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Built-in Functions:

Syntax: function_name(argument1, argument2, . . .)

```
numbers <- c(4, 7, 3, 8, 23, -4)
sum_value <- sum(numbers)
mean_value <- mean(numbers)
max_value <- max(numbers)
sort_value <- sort(numbers)
abs_value <- abs(numbers)
print(sum_value)
```

```
## [1] 41
```

```
print(mean_value)
```

```
## [1] 6.833333
```

```
print(max_value)
```

```
## [1] 23
```

```
print(sort_value)
```

```
## [1] -4  3  4  7  8 23
```

```
print(abs_value)
```

```
## [1]  4  7  3  8 23  4
```

Example 2: User-defined Functions

```r
square <- function(x) {
  return(x^2)
}

factorial <- function(n) {
  if (n == 0 || n == 1)
    return(1)
  else
    return(n * factorial(n - 1))
}

circle_area <- function(radius){
  return(pi * radius^2)
}

result_square <- square(4)
result_factorial <- factorial(5)
result_area <- circle_area(4)

cat("Square of the number 4 is :", result_square , "\n")
```

```
## Square of the number 4 is : 16
```

```r
cat("Factorial of the number 5 is:", result_factorial, "\n")
```

```
## Factorial of the number 5 is: 120
```

```r
cat("Area of the circle with radius 4 is:", result_area, "\n")
```

```
## Area of the circle with radius 4 is: 50.26548
```

```r
default_passing <- function(name, age=10){
  cat("Hello", name, "with age", age, "\n")
}

default_passing("naveen", 30)
```

```
## Hello naveen with age 30
```

```r
function_with_argument <- function(x){
  result <- x * 2
  return(result)
}

returned_result <- function_with_argument(4)
cat("Returned results is", returned_result, " ")
```

```
## Returned results is 8
```

```r
function_with_2_argument <- function(a,b){
  result = a - b
  return(result)
}

returned_subtract <- function_with_2_argument(19,9)
cat("returned subtract",returned_subtract, "\n")
```

```
## returned subtract 10
```

Odd or even - Accept number from the user

```r
even_odd  <- function(number) {
  if (number %% 2 ==0){
    return("Even")
  }else
    return("Odd")
}
number <- as.numeric(readline(prompt = "Enter the number: "))
```

```
## Enter the number:
```

```r
if (is.na(number)){
  cat("Enter correct number")
}else if(number<0){
  abs_number = abs(number)
  result_even_odd <- even_odd(abs_number)
  cat("Enter number", number, "is", result_even_odd)
}else{
  result_even_odd <- even_odd(number)
  cat("Enter number", number, "is", result_even_odd)
}
```

```
## Enter correct number
```