LOOPING:

"Repeat" Looping Statement:

In [1]:

```
res =1
i=1
repeat
    {
    print(res)
    i=i+1            #increment operator
    res=res+1
if(i>5)              #condition
    {
    break
}
}
```

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

Switch Statement:

In [2]:

```
switch(1,"add","sub","mul")
switch(2,"add","sub","mul")
switch(3,"add","sub","mul")
```

'add'

'sub'

'mul'

In [3]:

```
case=as.integer(readline("Enter your Case:"))
switch(case,"add","sub","mul")
```

```
Enter your Case:1
```

'add'

In [4]:

```
switch("color", name="xyz", age=18, dept="AIML", color="white")
switch("dept", name="xyz", age=18, dept="AIML", color="white")
```

'white'

'AIML'

Function:

* A function is a set of Statements organised together to perform a specfic task.
* The value that are declared within a function,when the function is called as an Arguments.
* Function Parameters are the names listed in the Function definition.
* Buildin Function (and) User Defined Function

Function Syntax:

```
fun_name=function(parameter1,....)
    {
    statement
}
```

```
fun_name(argument1,........)
```

In [5]:

```
a=function(name)
    {
    print(name)
}
a("xyz")
```

```
[1] "xyz"
```

Types of Argument:

*Required argument
*Default Argument
*Keyword Argument

Required Argument:

In [6]:

```
a=function(name,dept)
    {
    print(paste("name",name))
    print(paste("dept", dept))
}
a(dept="AIML",name="NANTHIESH")
```

```
[1] "name NANTHIESH"
[1] "dept AIML"
```

Default Argument:

In [7]:

```
a=function(name,dept="MBA",age=18)
    {
    print(paste("Name:",name))
    print(paste("Dept:", dept))
    print(paste("Age:", age))
}
a("Nantheish","AIML", "18")
```

```
[1] "Name: Nantheish"
[1] "Dept: AIML"
[1] "Age: 18"
```

In [8]:

```
a=function(name,dept="MBA",age=18) # default values mentioned here will get printed if no value is given
    {
    print(paste("Name:",name))
    print(paste("Dept:", dept))
    print(paste("Age:", age))
}
a("Nantheish")
```

```
[1] "Name: Nantheish"
[1] "Dept: MBA"
[1] "Age: 18"
```

Keyword Argument:

In [9]:

```
a=function(name,age)
    {
     print(paste("Name:",name))
    print(paste("Age:", age))
}
a(name="nanthiesh",age=18)
```

```
[1] "Name: nanthiesh"
[1] "Age: 18"
```

SIMPLE CALCULATOR USING SWITCH CASE:

In [10]:

```
add=function(x,y){
    return(x+y)
}
substract=function(x,y){
    return(x-y)
}
multiply=function(x,y){
    return(x*y)
}
divide=function(x,y){
    return(x/y)
}
#taking input from the user:
print("Select your Operation:")
print("1.Addition")
print("2. Subtraciton")
print("3. Multiplication")
print("4. Division")
choice=as.integer(readline("Enter your choice[1,2,3,4]"))
num1=as.integer(readline("Enter your first number:"))
num2=as.integer(readline("Enter your second number:"))
operator=switch(choice,"+","-","*", "/")
result=switch(choice, add(num1,num2), substract(num1,num2), multiply(num1,num2), division(num1,num2))
print(paste(num1, operator, num2 ,"=", result ))
```

```
[1] "Select your Operation:"
[1] "1.Addition"
[1] "2. Subtraciton"
[1] "3. Multiplication"
[1] "4. Division"
Enter your choice[1,2,3,4]1
Enter your first number:12
Enter your second number:3
[1] "12 + 3 = 15"
```

Distribution:

Normal Distribution:

* To print random numbers we can use normal distribution and uniform distribution.
* It makes the given number's Mean as 0 and Standard Deviation as 1

In [11]:

```
rnorm(3)
```

-0.805753657068895 1.34477646956052 -0.35599665148199

In [13]:

```
rnorm(2, mean=5,sd=5)
```

4.45021843070102 -2.29223283984963

Uniform Distribution:

Type *Markdown* and LaTeX: α^2

In [14]:

```
runif(5)
```

0.408610422397032 0.876104540424421 0.77699021762237 0.934145430102944 0.277572336839512

In [15]:

```
runif(5,min=10, max=100)
```

59.7657469240949 89.4578255712986 30.2212617942132 57.6453824737109 18.8192942854948

In [17]:

```
set.seed(101) # seed is used for not changing the randomly generated values
runif(5,min=10, max=100)
```

43.4978538705036 13.9442333881743 73.8715616450645 69.1921356879175 32.4870150908828

In [ ]:

```

```

In [ ]:

```

```