1806554 Assignment 2 (R Language)

In [2]:
```r
v <- as.integer(readline(prompt = "enter: "))
if (v>0){
  print("pos")
}else{
  print("Neg")
}
```

```
enter: 113
[1] "pos"
```

In [3]:
```r
num <- as.double(readline(prompt="Enter : "))
if(num > 0) {
  print("Positive number")
}else {
  print("Negative number")
  }
```

```
Enter : 23
[1] "Positive number"
```

In [4]:
```r
num <- as.double(readline(prompt="Enter: "))
if(num %% 4 == 0) {
  if(num %% 100 == 0){
    if(num %% 400 == 0){
      print(paste(num,"is leap yr"))
    }else{
      print(paste(num,"is not leap yr"))
    }
  }else{
    print(paste(num,"is leap yr" ))
  }
} else{
  print(paste(num,"is not leap yr" ))
}
```

```
Enter: 2000
[1] "2000 is leap yr"
```

In [5]:
```r
n1 <- as.double(readline(prompt="Enter a number 1: "))
n2 <- as.double(readline(prompt="Enter a number 2: "))
if(n1>n2){
  print(paste(n1,"is greater than ",n2))
}else{
  print(paste(n2,"is greater than ",n1))
}
```

```
Enter a number 1: 3
Enter a number 2: 4
[1] "4 is greater than  3"
```

In [6]:

```
n <- as.double(readline(prompt="Enter a number "))
x <- n %% 10
y <- n / 100
y = floor(y)
if(x == y){
print(paste(n, "is palindrome"))
}else{
  print(paste(n, "is not palindrome"))
}
```

```
Enter a number 121
[1] "121 is palindrome"
```

In [8]:

```
a <- as.double(readline(prompt="Enter a sub 1 "))
b <- as.double(readline(prompt="Enter a sub 2 "))
c <- as.double(readline(prompt="Enter a sub 3 "))

x = a+b+c
y = (a+b+c)/3
print(paste(x,"sum",y,"average"))
if(x >200 && x <=300){
  print("O grade")
}else if(x >100 && x <=200){
  print("E Grade")
}else{
  print("A Grade")
}
```

```
Enter a sub 1 23
Enter a sub 2 43
Enter a sub 3 23
[1] "89 sum 29.6666666666667 average"
[1] "A Grade"
```

In [11]:

```
h = as.integer(readline())
  w = as.integer(readline())
  r = as.integer(readline())
  val3 = as.character(readline(prompt = "enter: "))
  result = switch(
    val3,
    "c"= cat("cir area =", 3.14 * r*r),
    "r"= cat("ret area =", h * w),
    "t"= cat("tri area = ", 1/2 * h * w),
  )
```

```
2
3
1
enter: c
cir area = 3.14
```

In [12]:

```
val3 = as.character(readline(prompt = "enter: "))
  result = switch(
    val3,
    "r"= cat("RED"),
    "g"= cat("GREEN"),
    "b"= cat("BLUE"),
  )
```

```
enter: r
RED
```

In [13]:

```
n <- as.integer(readline(prompt = "ent"))
  i <- 1
  x <- 1
  while (x < n){
    print(i*i)
    i = i + 1
    x = x + 1
  }
```

```
ent12
[1] 1
[1] 4
[1] 9
[1] 16
[1] 25
[1] 36
[1] 49
[1] 64
[1] 81
[1] 100
[1] 121
```

In [14]:

```
i = 1
  ans = 1
  x <- as.double(readline(prompt = "enter val"))
  while(x>0){
    ans = ans * x
    x = x - 1
  }
  print(ans)
```

```
enter val12
[1] 479001600
```

In [15]:

```
i = n
  a = 0
  b = 1
  c = a + b
  x <- as.double(readline(prompt = "enter val"))
  print(a)
  print(b)
  while(c < x){
    print(c)
    a = b
    b = c
    c = a + b
  }
```

```
enter val12
[1] 0
[1] 1
[1] 1
[1] 2
[1] 3
[1] 5
[1] 8
```

In [16]:

```
num = as.integer(readline(prompt="Enter : "))
  flag = 0
  if(num > 1) {
    flag = 1
    for(i in 2 : (num/2)) {
      if ((num %% i) == 0) {
        flag = 0
        break
      }
    }
  }
  if(num == 2)    flag = 1
  if(flag == 1) {
    print(paste(num,"prime number"))
  } else {
    print(paste(num," not prime number"))
  }
```

```
Enter : 12
[1] "12  not prime number"
```

In [17]:

```r
n <- as.integer(readline(prompt = "Enter: "))
  i = 1
  s = 0

  while (i < n) {
    if (n %% i == 0) {
      s = s + i
    }
    i = i + 1
  }

  if (s == n) {
    print(paste("perfect :",n))
  } else{
    print(paste("not perfect :",n))
  }
```

```
Enter: 121
[1] "not perfect : 121"
```

In [18]:

```r
sum <- 0
  n <- as.integer(readline(prompt = "enter: "))
  for(i in 1:n){
    sum = sum + i*(i+1)/2
  }
  print(paste("sum : ",sum))
```

```
enter: 12
[1] "sum :  364"
```

In [19]:

```r
n <- as.double(readline(prompt = "ent: "))
  rev = 0
  while(n > 0){
    rev = rev*10 + (n %% 10)
    n = n %/% 10
  }
  print(paste("reverse : ",rev))
```

```
ent: 123
[1] "reverse :  321"
```

In [24]:

```
n <- as.double(readline(prompt = "ent: "))
rem = n
arm = 0
while(n > 0){
    x = n%%10
    arm = arm + x*x*x
    n = n %/% 10
}
if(arm == rem){
    print(paste("armstrong : ",rem))
}else{
    print("not armstrong")
}
```

```
ent: 156
[1] "not armstrong"
```

In [26]:

```
n <- as.double(readline(prompt = "ent: "))
  for(i in 1:n){
    if(i%%2 == 0){
      for(j in i:1){
        cat(paste(j,' '))
      }
      cat("\n")
    }else{
      for(j in 1:i){
        cat(paste(j,' '))
      }
      cat("\n")
    }
  }
```

```
ent: 10
1 
2  1 
1  2  3 
4  3  2  1 
1  2  3  4  5 
6  5  4  3  2  1 
1  2  3  4  5  6  7 
8  7  6  5  4  3  2  1 
1  2  3  4  5  6  7  8  9 
10  9  8  7  6  5  4  3  2  1 
```

In [ ]:

```

```