Assignment 1 – Function And Class

Problem Statement:

You work in XYZ Corporation as a Data Analyst. Your corporation has told you to work on functions and classes.

Tasks To Be Performed:

1. Create a function named 'factor' that can only accept 1 argument. The function should return the factorial of that number.

In [6]:
```
def factor(n):
    result = 1
    for i in range(n,0,-1):
        result *= i
    return(result)

factor(10)
```

Out[6]:
```
3628800
```

2. Create a function named 'check_string', the function should accept a string data from the user and the function should check if the user input contains the letter 's' in it. If it contains the letter 's' then print- 'The string is containing the letter 's'', if not then print- 'The string doesn't contain the letter 's''.

In [11]:
```
def check_string(inp):
    if 's' in inp.lower():
        print('The string is containing the letter s')
    else:
        print('The string doesn\'t contain the letter s')

check_string('Hello')
check_string('Sup')
```

```
The string doesn't contain the letter s
The string is containing the letter s
```

3. Create a class named 'student' and inside the class, create a function named 'fun1'- this method should accept the user defined input and return that value:

- a. Create another method named- message() and that method should print the user defined input that we have defined in 'fun1'.

In [32]:
```
class student:
    def fun1(self):
        inp = input()
        return(inp)
    def message(self):
        print(self.fun1())

o = student()
o.message()
```

```
hello
hello
```

4. Create a lambda function that should double or multiply the number (that we will be passing in the lambda function) by 2. Store the lambda function in a variable named 'double_num'.

In [33]:
```
double_num = lambda x:x*2

double_num(4)
```

Out[33]:
```
8
```

5. Take user input string and check whether that string is palindrome or not.

In [37]:
```
s = input()
if s==s[::-1]:
    print('Palindrome')
```

```
else:
    print('Not a palindrome')
```

```
abcba
Palindrome
```