Encapsulation

```
1  Encapsulation is one of the fundamental concepts in object oriented programming and is a supported in
   Python.
2  It refers to the practice of building dat(attributes or properties) and methods(functions)
3  that operates on that data into a single unit called a class.
4  This unit provides a way to control the access to the internal state of an object,
5  meaning that the data is hidden from external access and can only be manipulated through well-defined
   methods
```

Why we need?

```
1  1.Data Hiding
2  2.Controlled Access
3  3.Security
```

In [5]:

```python
class emp:

    def __init__(self):
        self.__name = ""
        self.__pwd = ""
        self.__salary = ""
        self.__id =""
        self.empDetails()

    def get_name(self):
        return self.__name

    def set_name(self,new_name):
        temp1 = input("Enter Your Password ")
        if temp1 == self.__pwd:
            self.__name = new_name
        else:
            print("Incorrect Password")


    def get_pwd(self):
        return self.__pwd

    def set_pwd(self,new_pwd):
        temp2 = input("Enter your password:")
        if temp2 == self.__id:
            self.__pwd = new_pwd
        else:
            print("Incorrect user Id")

    def empDetails(self):
        user_input = input("""
Welcome to Edutech
1.Create Account
2.Login

""")

        if user_input == "1":
            self.createAcc()
        else:
            self.login()
```

```
44
45      def createAcc(self):
46          self.__name =input("Enter your name: ")
47          self.__pwd = input("Enter your Password: ")
48          self.__id = input("Enter your id: ")
49          self.__salary = int(input("Enter your salary: "))
50
51          print(f"Account Created.. Hello {self.__name} Welcome to EduTech")
52
53      def login(self):
54          temp1 = input("Enter your Name: ")
55          temp2 =input("Enter your Id: ")
56          temp3 = input("Enter your password: ")
57
58          if temp2 == self.__id and temp3 ==self.__pwd:
59              print(f"Hello {self.__name} Your current Salary is {self.__salary}")
60
61          else:
62              print("please Check Your Id and Password")
```

In [6]:   1 e1 = emp()

```
        Welcome to Edutech
        1.Create Account
        2.Login


        1
Enter your name: Trupti
Enter your Password: 12345
Enter your id: trupti99
Enter your salary: 700000
Account Created.. Hello Trupti Welcome to EduTech
```

In [7]:   1 e1.login()

```
Enter your Name: Trupti
Enter your Id: 123
Enter your password: 123
please Check Your Id and Password
```

In [8]:
```python
e1.login(
)
```

Enter your Name: Trupti
Enter your Id: trupti99
Enter your password: 12345
Hello Trupti Your current Salary is 700000

In [10]:
```python
e1.set_name("Aarya")
```

Enter Your Password 12345

In [11]:
```python
e1.get_name()
```

Out[11]: 'Aarya'

In [15]:
```python
# Access the data without using get method
print(e1._emp__name)    # object._className__variableName

```

Aarya

In [ ]:
```python

```