PFSD SKILL-1

1. Create a Python script using OOP concepts with following criteria:

a) Create a class Name Students with following attributes: Student ID, Student First Name, Student Last Name, Course, Year, GPA,University, Email, Mobile. Create at least 3 instances for the above class.

 b) Use appropriate types of Attributes.

c) Use appropriate types of Properties.

d) Use appropriate types of Methods.

e) Create Email based on First Name and Last Name of the Student. (NOTE: If we modify First Name or Last Name it has to reflect in Email.)

f) Find the Count whenever we create a new instance for the above mentioned class.

```python
class Students:

    count=0

    def __init__(self,id,fname,lname,course,year,gpa,university,mobile):

        self.StudentID=id

        self.StudentFirstName=fname

        self.StudentLastName=lname

        self.Course=course

        self.Year=year

        self.Gpa=gpa

        self.University=university

        self.Email=self.Gen_Email()

        self.Mobile=mobile

        Students.count+=1

    def Gen_Email(self):

        return self.StudentFirstName+self.StudentLastName+'@'+self.University+'.in'

    def StudentDetails(self):

        out="ID = "+self.StudentID+"\n"+"FirstName = "+self.StudentFirstName+"\n"+"LastName = "+self.StudentLastName+"\n"+"University = "+self.University+"\n"+"Email = "+self.Email

        return out
```

```python
if __name__=="__main__":

    st1=Students('190031187','Nerella','Radhakrishna','CSE',2,9.67,'kluniversity',7286009239)

    print("count= ",Students.count)

    print(st1.StudentDetails())

    print()

    st2=Students('190031134','Nerella','Pavan','CSE',2,9,'kluniversity',9866341486)

    print("count= ",Students.count)

    print(st2.StudentDetails())

    print()

    st3=Students('190031249','Panapakam','Mohith','CSE',2,9,'kluniversity',8328130161)

    print("count= ",Students.count)

    print(st3.StudentDetails())
```
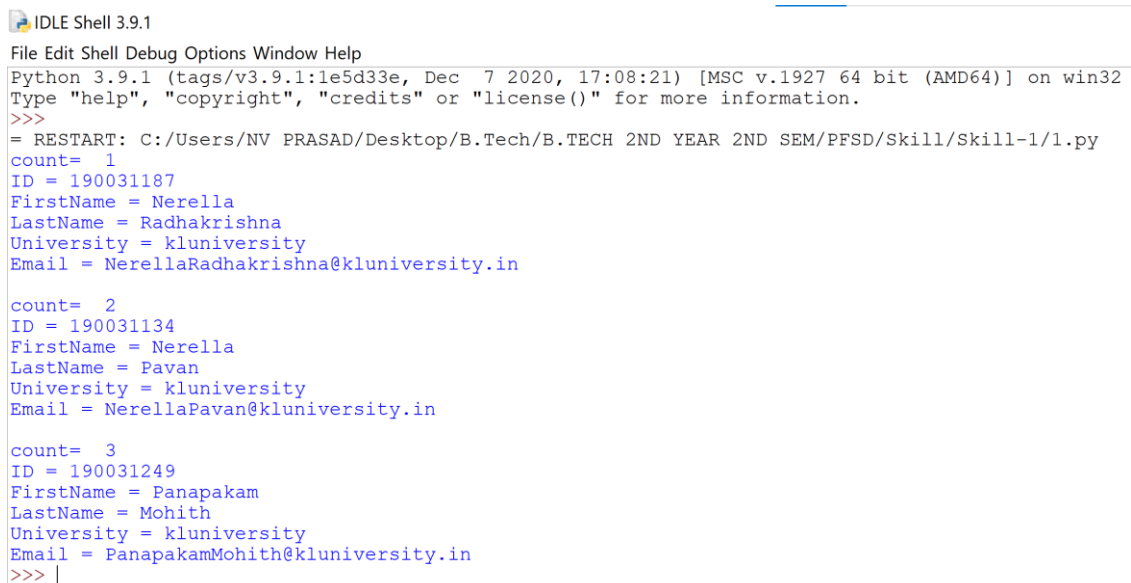

1.py - C:/Users/NV PRASAD/Desktop/B.Tech/B.TECH 2ND YEAR 2ND SEM/PFSD/Skill/Skill-1/1.py (3.9.1)

```python
class Students:
    count=0
    def __init__(self,id,fname,lname,course,year,gpa,university,mobile):
        self.StudentID=id
        self.StudentFirstName=fname
        self.StudentLastName=lname
        self.Course=course
        self.Year=year
        self.Gpa=gpa
        self.University=university
        self.Email=self.Gen_Email()
        self.Mobile=mobile
        Students.count+=1
    def Gen_Email(self):
        return self.StudentFirstName+self.StudentLastName+'@'+self.University+'.in'
    def StudentDetails(self):
        out="ID = "+self.StudentID+"\n"+"FirstName = "+self.StudentFirstName+"\n"+"LastName = "+self.StudentLastName+"\n"+"University = "+self.University+"\n"
        return out

if __name__=="__main__":
    st1=Students('190031187','Nerella','Radhakrishna','CSE',2,9.67,'kluniversity',7286009239)
    print("count= ",Students.count)
    print(st1.StudentDetails())
    print()
    st2=Students('190031134','Nerella','Pavan','CSE',2,9,'kluniversity',9866341486)
    print("count= ",Students.count)
    print(st2.StudentDetails())
    print()
    st3=Students('190031249','Panapakam','Mohith','CSE',2,9,'kluniversity',8328130161)
    print("count= ",Students.count)
    print(st3.StudentDetails())
```

OUTPUT


```
IDLE Shell 3.9.1
File Edit Shell Debug Options Window Help
Python 3.9.1 (tags/v3.9.1:1e5d33e, Dec  7 2020, 17:08:21) [MSC v.1927 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/NV PRASAD/Desktop/B.Tech/B.TECH 2ND YEAR 2ND SEM/PFSD/Skill/Skill-1/1.py
count=  1
ID = 190031187
FirstName = Nerella
LastName = Radhakrishna
University = kluniversity
Email = NerellaRadhakrishna@kluniversity.in

count=  2
ID = 190031134
FirstName = Nerella
LastName = Pavan
University = kluniversity
Email = NerellaPavan@kluniversity.in

count=  3
ID = 190031249
FirstName = Panapakam
LastName = Mohith
University = kluniversity
Email = PanapakamMohith@kluniversity.in
>>>
```

2) Create an BankAccount, MobileBankAccount and InternetBankAccount classes with appropriate Attributes, properties and methods.

a) Use Inheritance among the above-mentioned class.

b) Demonstrate super() mechanism. (NOTE: Use super() at both init() level and methods level.)

c) Work with name or main concept.

```python
class BankAccount:
    def __init__(self,accno):
        self.accountno=accno
    def get_Account(self):
        return str(self.accountno)
class MobileBankAccount(BankAccount):
    def __init__(self,accno,pin,balance):
        super().__init__(accno)
        self.pin=pin
        self.accBalance=balance
    def AccountDetails(self):
        return "AccountNo = "+super().get_Account()+"\n"+"Balance = "+str(self.accBalance)
class InternetBankAccount(BankAccount):
    def __init__(self,accno,pin,balance):
        super().__init__(accno)
        self.pin=pin
        self.accBalance=balance
    def AccountDetails(self):
        return "AccountNo = "+super().get_Account()+"\n"+"Balance = "+str(self.accBalance)
if __name__=="__main__":
    acc1=MobileBankAccount(123456789,5643,20000)
    print("Mobile Bank Account")
    print(acc1.AccountDetails())
    acc2=InternetBankAccount(987654321,3465,10000)
    print("Internet Bank Account")
```

print(acc2.AccountDetails())

```python
class BankAccount:
    def __init__(self,accno):
        self.accountno=accno
    def get_Account(self):
        return str(self.accountno)
class MobileBankAccount(BankAccount):
    def __init__(self,accno,pin,balance):
        super().__init__(accno)
        self.pin=pin
        self.accBalance=balance
    def AccountDetails(self):
        return "AccountNo = "+super().get_Account()+"\n"+"Balance = "+str(self.accBalance)
class InternetBankAccount(BankAccount):
    def __init__(self,accno,pin,balance):
        super().__init__(accno)
        self.pin=pin
        self.accBalance=balance
    def AccountDetails(self):
        return "AccountNo = "+super().get_Account()+"\n"+"Balance = "+str(self.accBalance)
if __name__=="__main__":
    acc1=MobileBankAccount(123456789,5643,20000)
    print("Mobile Bank Account")
    print(acc1.AccountDetails())
    acc2=InternetBankAccount(987654321,3465,10000)
    print("Internet Bank Account")
    print(acc2.AccountDetails())
```

OUTPUT

```
Python 3.9.1 (tags/v3.9.1:1e5d33e, Dec  7 2020, 17:08:21) [MSC v.1927 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/NV PRASAD/Desktop/B.Tech/B.TECH 2ND YEAR 2ND SEM/PFSD/Skill/Skill-1/2.py
Mobile Bank Account
AccountNo = 123456789
Balance = 20000

Internet Bank Account
AccountNo = 987654321
Balance = 10000
>>>
```