

2140232_inheritance

August 12, 2022

1 Module Creation (12 - 8 -22)

```
[ ]: class client:
    name_list = []
    num_of_clients = 0

    raise_amt = 1.04

    def __init__(self, first, last, gender,savings):
        self.first = first
        self.last = last
        self.gender = gender
        self.savings = savings
        self.regno = client.num_of_clients
        client.num_of_clients += 1
        client.name_list.append(self)

    def fullname(self):
        return "{} {}".format(self.first.title(), self.last.title())

    def email(self):
        return self.first + "." + self.last + str(1000 + self.regno)+ "@company.
↪com"

    def apply_interest(self):
        self.savings = int(self.savings * self.raise_amt)

class info():
    def __init__(self) -> None:
        pass
    def display(self):
        print("Name of client : ", "{} {}".format(self.first.title(), self.last.
↪title()))
```

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        print(self.first + "." + self.last + str(1000 + self.regno)+ "@company.
↪com")
        print("Savings : ",self.savings)

```

```

class employee(client,info):
    name_list = []
    num_of_employees = 0
    def __init__(self, first, last, gender , clients = None):
        self.first = first
        self.last = last
        self.gender = gender
        self.regno = employee.num_of_employees
        employee.num_of_employees += 1
        if clients is None:
            self.clients = []
        else:
            self.clients = clients
        employee.name_list.append(self)

    def add_client(self,i):
        if i not in self.clients:
            self.clients.append(i)
    def remove_client(self,i):
        if i in self.clients:
            self.clients.remove(i)
    def print_client(self):
        print("Clients under",self.fullname(),"with their emails")
        for i in self.clients:
            i.display()

        return ""

```

```

class manager(employee):
    pass
    name_list = []
    num_of_employees = 0

    def __init__(self, first, last, gender, employees = None):
        super().__init__(first, last, gender)
        if employees is None:
            self.num_of_employees = []
        else:
            self.employees = employees

    def add_emp(self,emp):

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        if emp not in self.employees:
            self.employees.append(emp)
    def remove_emp(self,emp):
        if emp in self.employees:
            self.employees.remove(emp)
    def print_emp(self):
        for emp in self.employees:
            emp.display()

```

```

[ ]: n1 = client("joel","varghese","M",9000)
      n2 = client("jo","anna","F",9000)
      n3 = client("christopher","columbus","M",9000)
      n4 = client("rem","doe","F",10000)
      n5 = client("kevin","spacey","M",8000)
      n6 = client("nila","rajashekar","F",9900)

```

```

[ ]: # displaying full name and applying interest to the savings

      print("full name of first client : ",n1.fullname())

      print("savings : ")
      print(n1.savings)

      print("savings after applying interest :")
      n1.apply_interest()
      print(n1.savings)

```

```

full name of first client :  Joel Varghese
savings :
9000
savings after applying interest :
9360

```

```

[ ]: # printing fullnames and emails
      print(n1.fullname())
      print(n1.email())

      print(n2.fullname())
      print(n2.email())

      print(n5.fullname())
      print(n5.email())

```

```

Joel Varghese
joel.varghese1000@company.com
Jo Anna
jo.anna1001@company.com

```

Kevin Spacey
kevin.spacey1004@company.com

```
[ ]: # creating an employee instance and assigning clients to the employee
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```
e1 = employee("fred", "luxemborg", "M", [n1, n3])  
print(e1.email())  
print(e1.fullname())  
print(e1.print_client())
```

fred.luxemborg1000@company.com
Fred Luxemborg
Clients under Fred Luxemborg with their emails
-> Joel Varghese - joel.varghese1000@company.com
-> Christopher Columbus - christopher.columbus1002@company.com

```
[ ]: # adding a client to employee
```

```
e1.add_client(n5)  
print(e1.print_client())
```

Clients under Fred Luxemborg with their emails
-> Joel Varghese - joel.varghese1000@company.com
-> Christopher Columbus - christopher.columbus1002@company.com
-> Kevin Spacey - kevin.spacey1004@company.com

```
[ ]: e1.remove_client(n1)  
print(e1.print_client())
```

Clients under Fred Luxemborg with their emails
-> Christopher Columbus - christopher.columbus1002@company.com
-> Kevin Spacey - kevin.spacey1004@company.com

```
[ ]: for i in client.name_list:  
    if i.gender == "M":  
        print(i.fullname())
```

Joel Varghese
Christopher Columbus
Kevin Spacey