Django Multiple model inheritance

Multiple model inheritance is nothing but deriving the fields from multiple parent models into a single child model.

It is like multiple inheritance in Python

```
        class A(m.M)        Class B(m.M)



                 Class C(A,B)
```

Create a project to perform the database interactions using Multiple Model Inheritance:

Step1: Create a Django ProjectName like **Multiple_Project**

Step2: Create a Application Name like **Miltiple _App**

Step3: Create Database Name like **7am_multipledb**

Step4: Goto settings.py file and configure database details under DATEBASE section.

```
DATABASES = {
   'default': {
      'ENGINE'  :  'django.db.backends.mysql',
      'NAME' : '7am_multipledb',
      'USER' : 'root',
      'PASSWORD' : 'root',
   }
}
```

Goto **settings.py** file, add our appName inside **installed_app** section and configure the database

Step5: Open models.py file and create required models

```
from django.db import models

class Bank(models.Model):
    bank_id = models.IntegerField(primary_key=True)
    bank_name = models.CharField(max_length=30)
    address = models.CharField(max_length=50)
    ifsc = models.CharField(max_length=50,unique=True)

class  Loan(models.Model):
    loan_id = models.IntegerField(primary_key=True)
    loan_type = models.CharField(max_length=50)

class Person(Bank,Loan):
    customer_name = models.CharField(max_length=30)
    account_number = models.IntegerField(unique=True)

    def __str__(self):
        return self.customer_name

class Employee(Bank,Loan):
    emp_name = models.CharField(max_length=30)
    account_number = models.IntegerField(unique=True)

    def __str__(self):
        return self.emp_name
```

Step6: Open admin.py file and create required admin logics

```
from django.contrib import admin
from .models import Bank,Loan,Person,Employee

class BankAdmin(admin.ModelAdmin):
    list_display = ['bank_id','bank_name','address','ifsc']

class  LoanAdmin(admin.ModelAdmin):
    list_display = ['loan_id','loan_type']
```

```
class  PersonAdmin(admin.ModelAdmin):
    list_display = ['customer_name','account_number']

class  EmployeeAdmin(admin.ModelAdmin):
    list_display = ['emp_name','account_number']


admin.site.register(Bank,BankAdmin)
admin.site.register(Loan,LoanAdmin)
admin.site.register(Person,PersonAdmin)
admin.site.register(Employee,EmployeeAdmin)
```

Step7: Execute the makemigrations command to convert model code into SQL code format

```
python  manage.py   makemigrations
```

Step8: Execute the migrate command to execute SQL code in database site and creating tables more models.

```
python  manage.py   migrate
```

Step9: Execute the createsuperuser command for creating admin creadentials.

```
python  manage.py   createsuperuser
```

Then it will ask like below details,

Username: Virat

Email : virat@gmail.com
Password: admin123
Password (again): admin123

Step11: Now execute the runserver command for running the project

```
python  manage.py   runserver   8000
```

Step12: Now open the required browser and then send **admin/** url request from the browser then we will get admin login page response like below

Step13 : Open admin site and add some data into tables.

Step14: Open the mysql prompt and select the tables and see the data.

```
mysql> select  * from multiple_app_bank;

bank_id       bank_name          address                   ifsc
101           SBI                Hyderabad          SBIN0001010
102           ICICI              Delhi              SBIN0001020
103           HDFC               Mumbai             HDFC1010
104           Canera              Chennai           CNR1010


mysql> select * from multiple_app_loan;

loan_id       loan_type
201           Home
202           Car
203           Home
204           Bike

mysql> select * from multiple_app_customer;

bank_ptr_id         loan_ptr_id          customer_name     account_number
101                 201                  Sandeep              111122222
102                 202                  Mohan                222223333


mysql> select * from multiple_app_employee;

bank_ptr_id          loan_ptr_id          emp_name          account_number
103                        203                  Virat             33333444
104                        204                   Rohit            444455555
```