

Django Multilevel Model Inheritance:

- It is the process of deriving the fields from one parent model to another child model and we can derive the fields from this child model to another child model like "one after the other" process.

Class A (models.Model):

pass 2

Class B (A):

pass 2 + 2

Class C (B):

pass 2 + 2 + 2

Create a project using multilevel model inheritance:

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

Step2: Create a Application Name like **Miltilevel_App**

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

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

```
DATABASES = {  
    'default': {  
        'ENGINE' : 'django.db.backends.mysql',  
        'NAME' : '7am_multileveldb',  
        '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_name = models.CharField(max_length=30)
```

```

    bank_address = models.TextField()
    ifsc_code = models.CharField(max_length=30)

    def __str__(self):
        return self.bank_name

class Customer(Bank):
    customer_name = models.CharField(max_length=30)
    customer_address = models.TextField()
    customer_account_number = models.IntegerField(unique=True)

    def __str__(self):
        return self.customer_name

class Loan(Customer):
    loan_type = models.CharField(max_length=30)

    def __str__(self):
        return self.loan_type

```

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

```

from django.contrib import admin
from MultiLevel_App.models import Bank,Employee,Loan

class BankAdmin(admin.ModelAdmin):
    list_display = ['bank_name','ifsc_code','bank_location']

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

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

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

```

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 the mysql prompt and select the tables and see the data.

```
mysql> select * from multilevel_app_bank;
```

ID	BANK_NAME	IFSC_CODE	BANK_ADDESS
1	HDFC	00010001	KPHB
2	SBI	00010002	Ameerpet

```
mysql> select * from multilevel_app_customer;
```

bank_ptr_id	customer_name	customer_address	customer_account_number
1	Prem	Pune	1111122222
2	Ravi	Mumbai	1111133333

```
mysql> select * from multilevel_app_loan;
```

customer_ptr_id	loan_type
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1	Home Loan
2	Car Loan

Here car loan is taken by customer_ptr_id 2 , His name is Ravi and his address is Mumbai. His bank_ptr_id is 2 and its name is SBI, its ifsc code is 00010002 and it is located in Ameerpet location.