

Creating Models in Django:

- SQL Lite presents in django which database we can use SQL Lite for medium scale applications.
- But in real time projects we can't use because it is light weight SQL Lite.

Example for creating a table in SQL Query:

```
create      table      student(name      varchar(100),fathername
varchar(100),classname int,contact varchar(30));
```

Steps to create Models:

- 1. Check database configurations in settings.py file in project folder.**
- 2. Open models.py file in application folder at application level and define models (create a class for each model).**

```
from django.db import models

class student(models.Model):
```

3. Attributes we have to define in that model

```
from django.db import models

class student(models.Model):

    name = models.CharField(max_length=100)

    fathername = models.CharField(max_length=100)

    classname = models.IntegerField()

    contact = models.CharField(max_length=100)
```

Basic Field Types:

1. AutoField -> Automatic increment used for integers
2. BigAutoField -> Big Integers
3. Boolean Field -> true or false
4. CharField -> String
5. DateField -> Date
6. DecimalField -> Double
7. DurationField -> Timestamp
8. FloatField -> Float
9. IntegerField -> Int
10. TextField -> Text
11. TimeField -> Time

4. Run 2 commands

makemigrations

migrate

makemigrations command:

python manage.py makemigrations

- When we execute that command 0001_initial.py file will be created.
- To see what happen in the SQL point of view in the background of python manage.py makemigrations the command is

python manage.py sqlmigrate admissions 0001

5) migrate command:

```
python manage.py migrate
```

- admin,admissions,auth,contenttypes,sessions all files related to them will create by using above command.

All the Queries executes in database. This database we will set in settings.py file.

To find how makemigrations and migrate have run:

```
python manage.py shell
```

It will open the interactive console shell

- we have imported connection to connect databases(SQL Lite,MySQL)

```
from django.db import connection  
  
cur=connection.cursor() #creating cursor object  
  
cur.execute("select * from admissions_student")  
  
res=cur.fetchall()  
  
print(res)
```

After typing this above code it will shows the output in the list format

o/p:[]

To exit the interactive console shell **ctrl+z**