

Task1:multipleapps

creating project

```
Django-admin startproject projectname
```

```
cd projectname
```

creating application

```
python3 manage.py startapp appone
```

```
python3 manage.py startapp apptwo
```

```
python3 manage.py startapp appthree
```

<https://github.com/Swatilingshetty/Django24>

<https://localhost:8000/d1>

<https://localhost:8000/d2>

<https://localhost:8000/d3>

urls.py

```
path('d1',l.d1)
```

```
path('d2',t.d2)
```

```
path('d3',s.d3)
```

views.py

appone

d1

list

apptwo

d2

tuple

appthree

d3

str

<http://127.0.0.1:8000/d1/>

<http://127.0.0.1:8000/d2/>

<http://127.0.0.1:8000/d3/>

Task2: DTL:Django templete language

1. By using DTL we develop HTML pages
2. in HTML we cannot write code directly because use it Markup language to write python code in HTML we use DTL
3. We need to configure Django Templates configuration in settings.py file
4. `'DIRS':[os.path.join(BASE_DIR,'templates')]` and import os
5. we need to configure the application in `INSTALLED_APPS=[appone]`

a.variables

b.Filters

c.Tags

d.Comments

e.Template inheritance

Variables: Variables associated with a context can be accessed by `{{ }}`

HTML file

```
<h1>{{Welcome}}</h1>
```

```
def welcomeMessage(request):
    template=loader.get_template('welcomeMessage.html')
    text={'welcome':'welcome to django'}
    return HttpResponse(template.render(context=text))
```

HTML file

```
<h1>{{key1}}</h1>
<h1>{{key2}}</h1>
<h1>{{key3}}</h1>
```

```
def welcomeMessage(request):
    template=loader.get_template('welcomeMessage.html')
    text={"key":"value","key":"value","key":"value"}
    return HttpResponse(template.render(context=text))
```

Filters

HTML file

```
<h1>{{key1 | upper}}</h1>
<h1>{{key2 | lower}}</h1>
<h1>{{key3 | capfirst}}</h1>
<h1>{{key4 | length}}</h1>
<h1>{{key5 | truncatechars :10}}
</h1>
<h1>{{key6 | slice:"0.5"}}</h1>
<h1>{{key7 | truncateeords:"5"}}
</h1>
```

```
def getNames(request):
    template=loader.get_template('welcomeMessage.html')
    names={
        "key1":"nameone"
        "key1":"nameone"
        "key1":"nameone"
        "key1":"nameone"
        "key1":"nameone"
        "key1":"nameone"
        "key1":"nameone"
    }
    return HttpResponse(template.render(context=names))
```

For loop

HTML File

<body>

(% for i in mobiebrands %)

<h1>{{i.productbrand}}</h1>

<h1>{{i.productcost}}</h1>

<h1>{{i.productmodel}}</h1>

{% end for %}

</body>

Mobilebrands = {

{

‘productbrand’:‘samsung’

productcost’:‘10000’

productmodel’:‘note 10’

}

{

‘productbrand’:‘redmi’

‘productcost’:11000’

‘productmodel’:‘redmi 10’

}

def getproducts(request):

template=loader.get_template{‘welcomeMessage.html’}

p={‘mobilebrands’:‘mobilebrands’}

return HttpResponse(template.render(context=names))

if else

path('getID/',views.getID)

```
<body>
    {% if id%}
    <h1>user ID :{{id}}</h1>
    {% else %}
    <h1>no user ID : {{id}}</h1>
    {% endif %}
</body>
```

```
def getID(request):
    template=loader.get_template('getID.html')
    context={'id:': [ ]}
    return HttpResponse(template.render(context))
```

Template inheritance

DTL supports Template inheritance allowing you to create a base template with common elements and extend or override specific blocks in child template

```
from django.shortcuts import render
```

```
# Create your views here.
```

```
def home(request):
```

```
    return render(request, 'home.html')
```

```
def about(request):
```

```
    return render(request, 'about.html')
```

```
def contact(request):
```

```
    return render(request, 'contact.html')
```

```
def services(request):
```

```
    return render(request, 'services.html')
```

```
INSTALLED_APPS = [
```

```
    'django.contrib.admin',
```

```
    'django.contrib.auth',
```

```
    'django.contrib.contenttypes',
```

```
    'django.contrib.sessions',
```

```
    'django.contrib.messages',
```

```
    'django.contrib.staticfiles',
```

```
    'appone',
```

```
]
```

```
'DIRS': [BASE_DIR/ 'templates'],
```

```
STATIC_URL = 'static/'
```

```
STATICFILES_DIRS=[
```

```
os.path.join(BASE_DIR, 'static')
```

```
]
```

```
{% load static %}
```

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
    <head>
```

```
        <meta charset="UTF-8">
```

```
        <meta name="viewport" content="width=device-width", initial="s
```

```
        <title>{% block title %}{% endblock %} </title>
```

```
        <link rel="stylesheet" type="text/css" href="{% static 'style.css' %}
```

```
    </head>
```

```
    <body>
```

```
        <div id="content">
```

```
            {% block content %}
```

```
            {% endblock %}
```

```
        </div>
```

```
    </body>
```

Django models

Django **models** are a part of Django **object Relational mapping** (ORM) Layer they can define structure of the database tables and provides a pythonic way to interact with the database.

Each model maps to single database tables

`django-admin startproject projectone`

`python manage.py startapp appone`

open the installed apps and configure the project (appone)

open templates and configure templates folder with `base_Dir`

open databases and configure

`database,username,password,engine`

`models.py` (we write models here)

`from django.db import models`

models.py (we write models here)

```
from django.db import models
```

```
C:\Django24\django04_models\projectone>python
```

```
Python 3.12.1 (tags/v3.12.1:2305ca5, Dec 7 2023, 22:03:25) [MSC v.1937 64 bit (AMD64)] on win32
```

```
Type "help", "copyright", "credits" or "license" for more information.
```

```
>>> from django.db import models
```

```
>>> dir(models)['Aggregate', 'AutoField', 'Avg', 'BLANK_CHOICE_DASH', 'BaseConstraint', 'BigAutoField', 'BigIntegerField',  
'BinaryField', 'BooleanField', 'CASCADE', 'Case', 'CharField', 'CheckConstraint', 'Choices', 'CommaSeparatedIntegerField',  
'Count', 'DEFERRED', 'DO_NOTHING', 'DateField', 'DateTimeField', 'DecimalField', 'Deferrable', 'DurationField', 'EmailField',  
'Empty', 'Exists', 'Expression', 'ExpressionList', 'ExpressionWrapper', 'F', 'Field', 'FileField', 'FilePathField', 'FilteredRelation',  
'FloatField', 'ForeignKey', 'ForeignObject', 'ForeignObjectRel', 'Func', 'GeneratedField', 'GenericIPAddressField',  
'IPAddressField', 'ImageField', 'Index', 'IntegerChoices', 'IntegerField', 'JSONField', 'Lookup', 'Manager', 'ManyToManyField',  
'ManyToManyRel', 'ManyToOneRel', 'Max', 'Min', 'Model', 'NOT_PROVIDED', 'NullBooleanField', 'ObjectDoesNotExist',  
'OneToOneField', 'OneToOneRel', 'OrderBy', 'OrderWrt', 'OuterRef', 'PROTECT', 'PositiveBigIntegerField',  
'PositiveIntegerField', 'PositiveSmallIntegerField', 'Prefetch', 'ProtectedError', 'Q', 'QuerySet', 'RESTRICT', 'RestrictedError',  
'RowRange', 'SET', 'SET_DEFAULT', 'SET_NULL', 'SlugField', 'SmallAutoField', 'SmallIntegerField', 'StdDev', 'Subquery', 'Sum',  
'TextChoices', 'TextField', 'TimeField', 'Transform', 'URLField', 'UUIDField', 'UniqueConstraint', 'Value', 'ValueRange',  
'Variance', 'When', 'Window', 'WindowFrame', '__all__', '__builtins__', '__cached__', '__doc__', '__file__', '__loader__', '__name__',  
'__package__', '__path__', '__spec__', 'aggregates', 'aggregates_all', 'aprefetch_related_objects', 'base', 'constants',  
'constraints', 'constraints_all', 'deletion', 'enums', 'enums_all', 'expressions', 'fields', 'fields_all', 'functions', 'indexes',  
'indexes_all', 'lookups', 'manager', 'options', 'prefetch_related_objects', 'query', 'query_utils', 'signals', 'sql', 'utils']
```

models.py (we write models here)

```
from django.db import models

# Create your views here.
class userprofile(models.Model):

    username=models.CharField(max_length=100)
    email=models.EmailField(max_length=100)
    contact=models.IntegerField()
```

commands for migrations

pip install mysql

python manag.py makemigrations

python manag.py sqlmigrate appone 0001

python manage.py migrate

views.py(get all the records from the database)

```
from django.shortcuts import models
from django.template import loader
from django.http import HttpResponse
from appone.models import userprofile

# Create your views here.
def userprofiledetails(request):
    template=loader.get_template("userprofiledetails.html")
    details=userprofile.objects.all()
    d={"details":details}
    return HttpResponse(template.render(context=d))
```

urls.py

```
from django.contrib import admin
from django.urls import path
from appone import views

urlpatterns = [
    path('admin/', admin.site.urls),
    path('userprofiledetails/',views.userprofiledetails),
]
```

templates

userprofiledetails.html

```
<body>
  <h3>user profile</h3>
  {% if details %}
  <table style="width: 100;">
    <thead>
      <th>Username</th>
      <th>Email</th>
      <th>Contact</th>
    </thead>
    {% for p in details %}
    <tr>
      <td> {{p.Username}}</td>
      <td> {{p.Email}}</td>
      <td> {{p.Contact}}</td>
    </tr>
    {% endfor %}
    {% else %}
    <p>no records found in database</p>
    {% endif %}
  </table>
</body>
```

<http://127.0.0.1:8000/userprofiledetails/>

<http://127.0.0.1:8000/userprofiledetails/>

comands for creating super user

python manage.py createsuperuser

username>admin

email address>

password>admin

password>admin

Y/N:Y

Admin.py

```
from django.contrib import admin  
from appone.models import userprofile
```

```
# Register your models here.
```

```
admin.site.register(userprofile)
```

admin.py

```
from django.contrib import admin
from appone.models import userprofile
# Register your models here.

class userprofileadmin(admin.ModelAdmin):
    list_display=("username","email","contact")
    search_fields=(“username”,)

admin.site.register(userprofile,userprofileadmin)
```

admin.py

```
from django.contrib import admin
from appone.models import userprofile
# Register your models here.

class userprofileadmin(admin.ModelAdmin):
    list_display=("username","email","contact")

admin.site.register(userprofile,userprofileadmin)
```

ORM

Django ORM (object relational mapping) is a component of Django that allow you to interact with your database like you would use SQL

Field lookups

__exact

__iexact

__contains

__gt

__gte etc

Steps in the console

Open last model project and insert some records

open shell and follow up some commands

```
>>>python manage.py shell
```

```
>>> from appone.models import userprofile
```

```
>>> userprofile .object.all()
```

```
>>> u=userprofile.objects.all()
```

```
>>> print(u)
```

```
>>> print(type(u))
```

```
<class 'django.db.models.query.QuerySet'>
```

```
>>> u=userprofile.objects.get(id=1)
```

```
>>> print(u)
```

```
userprofile object (1)
```

```
userprofile object (1)
```

```
>>> print(u.username,u.email,u.contact)
```

```
nameone nameone@gmail.com 878765432
```


Field lookups

userprofile.objects.all()

userprofile.objects.filter(username__contains="swati")

userprofile.objects.filter(username__icontains="name")

userprofile.objects.filter(id__in=[2,6,3])

userprofile.objects.filter(username__startswith="n")

userprofile.objects.filter(username__startswith="n")

userprofile.objects.filter(username__endswith="n")

userprofile.objects.filter(id__exact=None)

userprofile.objects.filter(id__exact=2)

userprofile.objects.filter(username__exact="nameone")

userprofile.objects.filter(username__startswith="none")| userprofile.objects.filter(username__startswith="swati")

userprofile.objects.filter(username__startswith="bheem")& userprofile.objects.filter(username__startswith="bheem")

userprofile.objects.filter(username__startswith="name")& userprofile.objects.filter(username__startswith="name")

userprofile.objects.all().values("username","email")

userprofile.objects.all().values("username","email",named=True)

Field lookups

```
userprofile.objects.all().order_by("salary")
userprofile.objects.all().order_by("-salary")
userprofile.objects.all().order_by("salary")[0:3]
userprofile.objects.all().order_by("username")[0:3]
userprofile.objects.all().order_by("username")
userprofile.objects.all().order_by("email")
```

Aggregation Functions

```
userprofile.objects.all().aggregate(Avg("salary"))
userprofile.objects.all().aggregate(Count("salary"))
userprofile.objects.all().aggregate(Max("salary"))
userprofile.objects.all().aggregate(Min("salary"))
userprofile.objects.all().aggregate(Sum("salary"))
```

Methods

create

```
userprofile.objects.create(username="harsha",email="harsha@gmail.com",contact=636445158,salary=35000)
```

Save

```
details=userprofile(username="harshith",email="harsha@gmail.com",contact=900872471,salary=30000)
```

```
details.save()
```

```
details=userprofile.objects.filter(username="bheem").update(salary="50000")
```

bulk_records

```
userprofile.objects.bulk_create([
    userprofile(username="vishal",email="vishal@gmail.com",contact=900872471,salary=30000),
    userprofile(username="harshini",email="harshini@gmail.com",contact=900872471,salary=30000),
    userprofile(username="satya",email="satya@gmail.com",contact=900872471,salary=30000),
    userprofile(username="shashii",email="shashii@gmail.com",contact=900872471,salary=30000),
])
```

update

```
userprofile.objects.filter(username="bheem").update(salary="50000") or
```

```
details=userprofile.objects.get(id=8)
```

```
details.salary=50000
```

```
details.save()
```

delete

```
details=userprofile.objects.filter(username="bheem").delete() or
```

```
# details=userprofile.objects.get(id=1)
```

```
details=userprofile.objects.all()
```

```
details.delete()
```

MODEL FORMS

Models.py

```
from django.db import models
```

```
# Create your models here.
```

```
class Userprofile(models.Model):
```

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

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

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

```
    email=models.EmailField(max_length=100)
```

```
    joindate=models.DateField()
```

views.py

```
from django.shortcuts import render
```

```
from django.http import HttpResponse
```

```
from . import forms
```

```
# Create your views here.
```

```
def adduser(request):
```

```
    form=forms.userprofileform()
```

```
    if request.method == 'POST':
```

```
        f=form.userprofileform(request.POST)
```

```
        print(f)
```

```
    return render(request,'adduser.html',{'form':form})
```

Forms.py

```
from django import forms
```

```
from appone.models import Userprofile
```

```
class userprofileform(forms.ModelForm):
```

```
    class Meta:
```

```
        model=Userprofile
```

```
        fields='__all__'
```

adduser.html

```
<!DOCTYPE html>
```

```
<html>
```

```
    <head>
```

```
        <meta charset="UTF-8">
```

```
        <meta name="viewport" ,content="width=device-width", initial="scale=1.0">
```

```
        <title>table Pr UL </title>
```

```
    </head>
```

```
    <body>
```

```
        <h1>User registration form</h1>
```

```
        <form action="post">
```

```
            {{form.as_table}}
```

```
            {%csrf_token%
```

```
        </form>
```

```
    </body>
```

```
</html>
```

views.py

cleaned data

```
def adduser(request):
```

```
    form=forms.userprofileform()
```

```
    if request.method == 'POST':
```

```
        f=form.userprofileform(request.POST)
```

```
        if f.is_valid():
```

```
            print(f.is_valid())
```

```
            print(f.cleaned_data)
```

```
        return HttpResponseRedirect("data submitted successfullly")
```

```
    else:
```

```
        ff=forms.userprofileform()
```

```
        print(ff.is_valid())
```

```
        return HttpResponseRedirect("data not submitted")
```

```
return render(request,'adduser.html',{'form':form})
```

```
# for database we use this
```

```
def adduser(request):
```

```
    form=forms.userprofileform()
```

```
    if request.method == 'POST':
```

```
        f=forms.userprofileform(request.POST)
```

```
        if f.is_valid():
```

```
            f.save()
```

```
            return HttpResponseRedirect("data submitted successfullly")
```

```
        else:
```

```
            return HttpResponseRedirect("data not submitted ")
```

```
    return render(request,'adduser.html',{'form':form})
```

migrations

- 1.create project
- 2.create application
- 3.configure setting

create forms.py file application

```
from django import forms
```

```
class userprofileform(forms.Form):
```

```
    first_name=forms.CharField(max_length=100)
    last_name=forms.CharField(max_length=100)
    email=forms.EmailField()
    phone=forms.CharField(max_length=15)
```

views.py

```
from django.shortcuts import render
from . import forms
```

```
# Create your views here.
```

```
def userprofileview(request):
```

```
    form=form.userprofileform()
    return render(request,'appone/userprofile.html',{'form':form})
```

Form validation

create templates folder

```
<!DOCTYPE html>
```

```
<html>
```

```
    <head>
```

```
        <meta charset="UTF-8">
```

```
        <meta name="viewport" ,content="width=device-width", initial="scale=1.0">
```

```
        <title>document </title>
```

```
    </head>
```

```
    <body>
```

```
        {{form.as_p}}
```

```
        {%csrf_token%}
```

```
    </body>
```

```
</html>
```

<http://127.0.0.1:8000/>

photo...

<http://127.0.0.1:8000/userprofile/>

photo..

photo..

Impliment cleaned_data

```
def userprofileview(request):

    form=forms.userprofileform()
    if request.method=='POST':
        form=forms.userprofileform(request.POST)
        if form.is_valid():
            print("validation success:")
            print("first name:", form.cleaned_data['first_name'])
            print("last name:", form.cleaned_data['last_name'])
            print("emails:", form.cleaned_data['email'])
            print("phone:", form.cleaned_data['phone'])

    return render(request,'userprofile.html',{'form':form})
```


Open interactive shell

```
C:\Django24\django07_formvalidation\projectone>
```

```
C:\Django24\django07_formvalidation\projectone>python manage.py shell
```

```
Python 3.12.1 (tags/v3.12.1:2305ca5, Dec 7 2023, 22:03:25) [MSC v.1937 64 bit (AMD64)] on win32
```

```
Type "help", "copyright", "credits" or "license" for more information.
```

```
(InteractiveConsole)
```

```
>>> from appone.forms import userprofileform
```

```
>>> u = userprofileform()
```

```
>>> print(u)
```

```
<div>
```

```
  <label for="id_first_name">First name:</label>
```

```
<input type="text" name="first_name" maxlength="100" required id="id_first_name">
```

```
</div>
```

```
<div>
```

```
  <label for="id_last_name">Last name:</label>
```

```
<input type="text" name="last_name" maxlength="100" required id="id_last_name">
```

```
</div>
```

```
<div>
```

```
  <label for="id_email">Email:</label>
```

```
<input type="email" name="email" maxlength="320" required id="id_email">
```

```
</div>
```

```
<div>
```

```
  <label for="id_phone">Phone:</label>
```

```
<input type="text" name="phone" maxlength="15" required id="id_phone">
```

```
/div>
```

```
>>> print(u.as_p())
```

```
<p>
```

```
  <label for="id_first_name">First name:</label>
```

```
  <input type="text" name="first_name" maxlength="100" required id="id_first_name">
```

```
</p>
```

```
<p>
```

```
  <label for="id_last_name">Last name:</label>
```

```
  <input type="text" name="last_name" maxlength="100" required id="id_last_name">
```

```
</p>
```

```
<p>
```

```
  <label for="id_email">Email:</label>
```

```
  <input type="email" name="email" maxlength="320" required id="id_email">
```

```
</p>
```

```
<p>
```

```
  <label for="id_phone">Phone:</label>
```

```
  <input type="text" name="phone" maxlength="15" required id="id_phone">
```

```
</p>
```

```
>>> print(u.as_table())
```

```
<tr>
  <th><label for="id_first_name">First name:</label></th>
  <td>
    <input type="text" name="first_name" maxlength="100" required id="id_first_name">
  </td>
</tr>
<tr>
  <th><label for="id_last_name">Last name:</label></th>
  <td>
    <input type="text" name="last_name" maxlength="100" required id="id_last_name">
  </td>
</tr>
<tr>
  <th><label for="id_email">Email:</label></th>
  <td>
    <input type="email" name="email" maxlength="320" required id="id_email">
  </td>
</tr>
<tr>
  <th><label for="id_phone">Phone:</label></th>
  <td>
    <input type="text" name="phone" maxlength="15" required id="id_phone">
  </td>
</tr>
>>>
```

Form class validations

```
>>> from appone.forms import userprofileform
>>> u=userprofileform()
>>> u.as_valid()
False
```

```
>>> u=userprofileform({})
>>> u.is_valid()
False
```

```
>>>u=userprofileform({'first_name':'sai','last_name':'kumar','email':'saikumar@gmail.com','phone':'8765432986'})
>>> u.is_valid()
True
```

```
>>> u.cleaned_data
{'first_name': 'sai', 'last_name': 'kumar', 'email': 'saikumar@gmail.com', 'phone': '8765432986'}
```

```
>>> type(u.cleaned_data['first_name'])
<class 'str'>
```

```
>>> type(u.cleaned_data['phone'])
<class 'str'>
>>>
```

Validation errors

```
>>> u=userprofileform()
```

```
>>> u.errors
```

```
{}
```

```
>>> u=userprofileform({})
```

```
>>> u.errors
```

```
{'first_name': ['This field is required.'], 'last_name': ['This field is required.'], 'email': ['This field is required.'], 'phone': ['This field is required.']}
```

```
>>>
```

Widgets

forms.py

```
from django import forms
from django.core.validators import RegexValidator

class userprofileform(forms.Form):

    first_name=forms.CharField(max_length=100)
    last_name=forms.CharField(max_length=100)
    email=forms.EmailField()
    phone_regex=r'^\d{1,12}$'
    phone=forms.CharField(validators={RegexValidator[phone_regex]})
    comment=forms.CharField(widget=forms.Textarea)
    LOCATION=[{'HYD','hyderabad'},{'Bnglr','Bangalore'}]
    location=forms.CharField(widget=forms.select(choices="LOCATION"))
    join_date=forms.DateField(widget=forms.SelectDateWidget)
```

views.py

```
def userprofileview(request):

    form=forms.userprofileform()
    if request.method=='POST':
        form=forms.userprofileform(request.POST)
        if form.is_valid():
            print(form.cleaned_data)

    return render(request,'userprofile.html',{'form':form})
```

userprofile.html

```
<body>
    <fieldset>
        <legend>fill the form </legend>
        <form action="" method="post">
            {{form.as_p}}
            {% csrf_token %}

            <input type="submit" value="submit">
        </form>
    </fieldset>
</body>
```

Custom clean Method

```
from typing import Any
from django import forms
from django.core.validators import RegexValidator
from django.core.exceptions import ValidationError
```

```
class userprofileform(forms.Form):
```

forms.py

```
    first_name=forms.CharField(max_length=100)
    last_name=forms.CharField(max_length=100)
    email=forms.EmailField()
    phone_regex=r'^\d{1,12}$'
    phone=forms.CharField(validators=[RegexValidator(phone_regex)])
    comment=forms.CharField(widget=forms.Textarea)
    LOCATION=[{"HYD","hyderabad"},{"Bnglr","Bangalore"}]
    location=forms.CharField(widget=forms.Select(choices=LOCATION))
    join_date=forms.DateField(widget=forms.SelectDateWidget)
```

```
    def clean_first_name(self):
        first_name= self.cleaned_data["first_name"]
        if not first_name.isalpha():
            raise forms.ValidationError("first name should be contain only alphabet")
        return first_name
```

```
    def clean_last_name(self):
        last_name= self.cleaned_data["last_name"]
        if not last_name.isalpha():
            raise forms.ValidationError("last name should be contain only alphabet")
        return last_name
```

```
    def clean(self):
        cleaned_data=super().clean()
        first_name=cleaned_data.get('first_name')
        last_name=cleaned_data.get('last_name')
        if first_name and last_name:
            if first_name==last_name:
                raise forms.ValidationError("ffirst name and last name cannot be same")
```

```
    def clean_email(self):
        email=self.cleaned_data['email']
        if not email.endswith('@mail.com'):
            raise forms.ValidationError("email should be gmail")
        return email
```

Build-in validators

```
from django import forms
from django.core.validators import RegexValidator
from django.core.exceptions import ValidationError
from django.core import validators

class userprofileform(forms.Form):

    first_name=forms.CharField(validators=[validators.MinLengthValidator(3)])
    last_name=forms.CharField(validators=[validators.MinLengthValidator(3)])
    email=forms.EmailField()
    # phone_regex=r'^\d{1,12}$'
    # phone=forms.CharField(validators=[RegexValidator(phone_regex)])
    phone=forms.CharField()
    comment=forms.CharField(widget=forms.Textarea)
    LOCATION=[{"HYD","hyderabad"}, {"Bnglr","Bangalore"}]
    location=forms.CharField(widget=forms.Select(choices=LOCATION))
    join_date=forms.DateField(widget=forms.SelectDateWidget)
```


Custom validators

```
from django import forms
from django.core.validators import RegexValidator
from django.core.exceptions import ValidationError
from django.core import validators
```

```
# custom validators
def validate_name(value):
    if not value.isupper():
        raise ValidationError(f'{value} is not in uppercase')
```

```
class userprofileform(forms.Form):
```

```
    first_name=forms.CharField(validators=[validate_name,validators.MinLengthValidator(3)])
    last_name=forms.CharField(validators=[validate_name,validators.MinLengthValidator(3)])
    email=forms.EmailField()
    # phone_regex=r'^\d{1,12}$'
    # phone=forms.CharField(validators=[RegexValidator(phone_regex)])
    phone=forms.CharField()
    comment=forms.CharField(widget=forms.Textarea)
    LOCATION=[{"HYD","hyderabad"},{"Bnglr","Bangalore"}]
    location=forms.CharField(widget=forms.Select(choices=LOCATION))
    join_date=forms.DateField(widget=forms.SelectDateWidget)
```

Function based views

**create project and app
configure the app settings,
template settings,
database settings,
static files settings,**

models.py (migrations)

forms.py

views.py

urls.py

templates

index.html etc....

static

style.css

```
INSTALLED_APPS = [  
    'django.contrib.admin',  
    'django.contrib.auth',  
    'django.contrib.contenttypes',  
    'django.contrib.sessions',  
    'django.contrib.messages',  
    'django.contrib.staticfiles',  
    'appone', # add this line to add the app to the project
```

```
DATABASES = {  
    'default': {  
        'ENGINE': 'django.db.backends.sqlite3',  
        'NAME': 'django08_functionbasedviews',  
        'USER': 'root',  
        'PASSWORD': 'Swati@123',  
    }  
}
```

```
DATABASES = {  
    'default': {  
        'ENGINE': 'django.db.backends.sqlite3',  
        'NAME': 'django08_functionbasedviews',  
        'USER': 'root',  
        'PASSWORD': 'Swati@123',  
    }  
}
```

```
STATIC_URL = 'static/'  
STATICFILES_DIRS=[  
    BASE_DIR / 'static'  
]
```

Add a little bit of body text

views.py

```
def createproduct(request):

    form=productform() # create an interface of the form
    if request.method == 'POST': #if the form is submitted
        form=productform(request.POST)
        if form.is_valid():
            form.save(commit=True)
            return HttpResponseRedirect('/')
        return render(request,'create.html',{'form':form})
```

urls.py

```
from django.contrib import admin
from django.urls import path
from appone import views
```

```
urlpatterns = [
    path('admin/', admin.site.urls),
    path("",views.getproducts),
    path('product/create/',views.createproduct),
]
```

create

create.html

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="UTF-8">
    <meta name="viewport" ,content="width=device-width", initial="scale=1.0">
    <title>document</title>
  </head>
  <body>
    <form method='POST'>
      <table>
        {{form.as_table}}
        {%csrf.token%}
      </table>
      <input type="submit">
    <.form>
  </body>
</html>
```