**DJANGO FORM (MODEL BASED)**

The class will be developed based on the model class which we have defined.

Model Forms

<Any Form>(forms.ModelForm)

Class Meta:

model: <Model Name>

fields: \_\_all\_\_

if we want to specify certain fields, then can declare that in the list.

settings.py

*"""  
Django settings for modelFormsDemo project.  
  
Generated by 'django-admin startproject' using Django 5.0.4.  
  
For more information on this file, see  
https://docs.djangoproject.com/en/5.0/topics/settings/  
  
For the full list of settings and their values, see  
https://docs.djangoproject.com/en/5.0/ref/settings/  
"""*from pathlib import Path  
  
*# Build paths inside the project like this: BASE\_DIR / 'subdir'.*BASE\_DIR = Path(\_\_file\_\_).resolve().parent.parent  
TEMPLATES\_DIR = Path(BASE\_DIR/'templates')  
STATIC\_DIR = Path(BASE\_DIR/'static')  
  
*# Quick-start development settings - unsuitable for production  
# See https://docs.djangoproject.com/en/5.0/howto/deployment/checklist/  
  
# SECURITY WARNING: keep the secret key used in production secret!*SECRET\_KEY = 'django-insecure-9p&yy=7#g@gjncbw#(eh+e-=!y0fyapr\_ms%#qxq\*a=0y^=&-='  
  
*# SECURITY WARNING: don't run with debug turned on in production!*DEBUG = True  
  
ALLOWED\_HOSTS = []  
  
*# Application definition*INSTALLED\_APPS = [  
 'django.contrib.admin',  
 'django.contrib.auth',  
 'django.contrib.contenttypes',  
 'django.contrib.sessions',  
 'django.contrib.messages',  
 'django.contrib.staticfiles',  
 'modelFormsApp'  
]  
MIDDLEWARE = [  
 'django.middleware.security.SecurityMiddleware',  
 'django.contrib.sessions.middleware.SessionMiddleware',  
 'django.middleware.common.CommonMiddleware',  
 'django.middleware.csrf.CsrfViewMiddleware',  
 'django.contrib.auth.middleware.AuthenticationMiddleware',  
 'django.contrib.messages.middleware.MessageMiddleware',  
 'django.middleware.clickjacking.XFrameOptionsMiddleware',  
]  
  
ROOT\_URLCONF = 'modelFormsDemo.urls'  
  
TEMPLATES = [  
 {  
 'BACKEND': 'django.template.backends.django.DjangoTemplates',  
 'DIRS': [TEMPLATES\_DIR,],  
 'APP\_DIRS': True,  
 'OPTIONS': {  
 'context\_processors': [  
 'django.template.context\_processors.debug',  
 'django.template.context\_processors.request',  
 'django.contrib.auth.context\_processors.auth',  
 'django.contrib.messages.context\_processors.messages',  
 ],  
 },  
 },  
]  
  
WSGI\_APPLICATION = 'modelFormsDemo.wsgi.application'  
  
*# Database  
# https://docs.djangoproject.com/en/5.0/ref/settings/#databases*DATABASES = {  
 'default': {  
 'ENGINE': 'django.db.backends.mysql',  
 'NAME': 'djangodb',  
 'USER': 'root',  
 'PASSWORD': 'Jerrick2911',  
 'HOST': 'localhost',  
 'PORT': '3306'  
 }  
}  
  
*# Password validation  
# https://docs.djangoproject.com/en/5.0/ref/settings/#auth-password-validators*AUTH\_PASSWORD\_VALIDATORS = [  
 {  
 'NAME': 'django.contrib.auth.password\_validation.UserAttributeSimilarityValidator',  
 },  
 {  
 'NAME': 'django.contrib.auth.password\_validation.MinimumLengthValidator',  
 },  
 {  
 'NAME': 'django.contrib.auth.password\_validation.CommonPasswordValidator',  
 },  
 {  
 'NAME': 'django.contrib.auth.password\_validation.NumericPasswordValidator',  
 },  
]  
*# Internationalization  
# https://docs.djangoproject.com/en/5.0/topics/i18n/*LANGUAGE\_CODE = 'en-us'  
  
TIME\_ZONE = 'UTC'  
  
USE\_I18N = True  
  
USE\_TZ = True  
  
  
*# Static files (CSS, JavaScript, Images)  
# https://docs.djangoproject.com/en/5.0/howto/static-files/*STATIC\_URL = 'static/'  
STATICFILES\_DIRS=[  
 STATIC\_DIR,  
]  
*# Default primary key field type  
# https://docs.djangoproject.com/en/5.0/ref/settings/#default-auto-field*DEFAULT\_AUTO\_FIELD = 'django.db.models.BigAutoField'

models.py

from django.db import models  
  
  
*# Create your models here.*class Project(models.Model):  
 startDate=models.DateField()  
 endDate=models.DateField()  
 projName=models.CharField(max\_length=50)  
 assignedTo=models.CharField(max\_length=25)  
 projPriority=models.IntegerField()

forms.py

from django import forms  
from modelFormsApp.models import Project  
  
  
class ProjectForm(forms.ModelForm):  
 class Meta:  
 model = Project  
 fields = '\_\_all\_\_'

views.py

from modelFormsApp.forms import ProjectForm  
from modelFormsApp.models import Project  
  
*# Create your views here.*def index(request):  
 return render(request, 'modelFormsApp/index.html')  
  
  
def listProjects(request):  
 projectList = Project.objects.all()  
 return render(request, 'modelFormsApp/listProjects.html', {'projects': projectList})  
  
def addProject(request):  
 form = ProjectForm()  
 if request.method == 'POST':  
 form = ProjectForm(request.POST)  
 if form.is\_valid():  
 form.save()  
 return index(request)  
 return render(request, 'modelFormsApp/addProject.html', {'form': form})

urls.py

from modelFormsApp import views  
  
urlpatterns = [  
 path('admin/', admin.site.urls),  
 path('', views.index),  
 path('listProjects/', views.listProjects),  
 path('addProject/',views.addProject)  
]

index.html

<!DOCTYPE html>  
{% load static %}  
<html lang="en">  
<head>  
 <meta charset="UTF-8">  
 <title>Project</title>  
 <link rel="stylesheet" href="{% static 'css/index.css' %}">  
</head>  
<body>  
 <div class="myDiv">  
 <h1> PROJECTS </h1>  
 <img src="{% static 'images/image1.jpg' %}" />  
 </div>  
 <div class="mycontainer">  
 <button type="button" class="button button1" onclick="window.location.href='/listProjects';">List Project</button>  
 <button type="button" class="button button1" onclick="window.location.href='/addProject';">Add Project</button>  
 </div>  
  
</body>  
</html>

listProject.html

<!DOCTYPE html>  
{% load static %}  
<html lang="en">  
<head>  
 <meta charset="UTF-8">  
 <title>Project</title>  
 <link rel="stylesheet" href="{% static 'css/index.css' %}">  
</head>  
<body>  
 <div class="myDiv">  
 <h1> LIST OF PROJECTS </h1>  
 <img src="{%static 'images/image2.jpg' %}" />  
 </div>  
 <div class="mycontainer">  
 <br>  
 {% if projects %}  
 <table>  
 <thead>  
 <tr>  
 <th> PROJECT NAME </th>  
 <th> START DATE </th>  
 <th> END DATE </th>  
 <th> ASSIGNED TO </th>  
 <th> PROJECT PRIORITY </th>  
 </tr>  
 </thead>  
 {% for proj in projects %}  
 <tr>  
 <td>{{proj.projName}}</td>  
 <td>{{proj.startDate}}</td>  
 <td>{{proj.endDate}}</td>  
 <td>{{proj.assignedTo}}</td>  
 <td>{{proj.projPriority}}</td>  
 </tr>  
 {% endfor %}  
 </table>  
 {% else %}  
 <p>  
 !!!!!!! No Projects Available in the Database !!!!!!!  
 </p>  
 {% endif %}  
 </div>  
</body>  
</html>

addProject.html

<!DOCTYPE html>  
{% load static %}  
<html lang="en">  
<head>  
 <meta charset="UTF-8">  
 <title>Project</title>  
 <link rel="stylesheet" href="{% static 'css/index.css' %}">  
</head>  
<body>  
 <div class="myDiv">  
 <h1> ADD PROJECTS </h1>  
 <img src="{%static 'images/image2.jpg' %}" />  
 </div>  
 <div class="mycontainer">  
 <br>  
 <form method="post">  
 <br>  
 {{form.as\_p}}  
 {% csrf\_token %}  
 <input type="submit" value="Add Project">  
 <br>  
 </form>  
 <br>  
 </div>  
</body>  
</html>

Check for database connection

PS C:\Users\kamal\django\_projects\modelFormsDemo> py -m manage shell

Python 3.12.3 (tags/v3.12.3:f6650f9, Apr 9 2024, 14:05:25) [MSC v.1938 64 bit (AMD64)] on win32

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

(InteractiveConsole)

>>> from django.db import connection

>>> c = connection.cursor()

>>>

Make Migration

PS C:\Users\kamal\django\_projects\modelFormsDemo> py -m manage makemigrations

Migrations for 'modelFormsApp':

modelFormsApp\migrations\0001\_initial.py

- Create model Project

PS C:\Users\kamal\django\_projects\modelFormsDemo>

Migrate

PS C:\Users\kamal\django\_projects\modelFormsDemo> py -m manage migrate

Operations to perform:

Apply all migrations: admin, auth, contenttypes, modelFormsApp, sessions

Running migrations:

Applying contenttypes.0001\_initial... OK

Applying auth.0001\_initial... OK

Applying admin.0001\_initial... OK

Applying admin.0002\_logentry\_remove\_auto\_add... OK

Applying admin.0003\_logentry\_add\_action\_flag\_choices... OK

Applying contenttypes.0002\_remove\_content\_type\_name... OK

Applying auth.0002\_alter\_permission\_name\_max\_length... OK

Applying auth.0003\_alter\_user\_email\_max\_length... OK

Applying auth.0004\_alter\_user\_username\_opts... OK

Applying auth.0005\_alter\_user\_last\_login\_null... OK

Applying auth.0006\_require\_contenttypes\_0002... OK

Applying auth.0007\_alter\_validators\_add\_error\_messages... OK

Applying auth.0008\_alter\_user\_username\_max\_length... OK

Applying auth.0009\_alter\_user\_last\_name\_max\_length... OK

Applying auth.0010\_alter\_group\_name\_max\_length... OK

Applying auth.0011\_update\_proxy\_permissions... OK

Applying auth.0012\_alter\_user\_first\_name\_max\_length... OK

Applying modelFormsApp.0001\_initial... OK

Applying sessions.0001\_initial... OK

PS C:\Users\kamal\django\_projects\modelFormsDemo>

Output

A group of people around a table

Description automatically generated

A screen shot of a computer

Description automatically generated

A blue rectangle with green border

Description automatically generated

A screenshot of a computer

Description automatically generated

QUIZ

A screenshot of a computer

Description automatically generated