**1. SOURCE CODE:**

**1.1. views.py**

from .forms import ConnectionForm, CustomNotificationForm, PlanForm

from .models import Plan, Subscription, CustomNotification, Connection

from user.models import User

from django.http.response import JsonResponse

from django.shortcuts import redirect, render

from django.views import View

from django.contrib.auth.mixins import LoginRequiredMixin

from django.db.models import F, Count

from channels.layers import get\_channel\_layer

from asgiref.sync import async\_to\_sync

import json

**# home page view**

class HomeView(LoginRequiredMixin, View):

template\_name = "main/home.html"

def get\_plan\_list(self):

return Plan.objects.all()

def get\_active\_user(self, active):

return User.objects.filter(is\_active=active).count()

def get\_subscription(self,active):

return Subscription.objects.filter(is\_active=active).count()

def get\_plans(self):

return Plan.objects.filter().count()

def get(self, request, \*args, \*\*kwargs):

if request.user.is\_superuser:

return render(

request,

self.template\_name,

{

"active\_user": self.get\_active\_user(True),

"non\_active\_user": self.get\_active\_user(False),

'subscription\_active': self.get\_subscription(True),

'subscription\_not\_active' : self.get\_subscription(True),

'number\_of\_plans':self.get\_plans()

},

)

return render(request, self.template\_name, {"plans": self.get\_plan\_list()})

**# designer view**

class DesignerView(LoginRequiredMixin, View):

template\_name = "main/designer.html"

def get\_list(self):

return User.objects.filter(user\_type="DS").exclude(is\_superuser=True)

def get(self, request, \*args, \*\*kwargs):

return render(request, self.template\_name, {"designers": self.get\_list()})

**# user view**

class UserView(LoginRequiredMixin, View):

template\_name = "main/user.html"

def get\_list(self):

return User.objects.filter(user\_type="NU").exclude(is\_superuser=True)

def get(self, request, \*args, \*\*kwargs):

return render(request, self.template\_name, {"users": self.get\_list()})

**# plan view**

class PlanView(LoginRequiredMixin, View):

template\_name = "main/plan.html"

def get\_list(self):

return Plan.objects.all()

def get(self, request, \*args, \*\*kwargs):

return render(request, self.template\_name, {"plans": self.get\_list()})

class PlanAddView(LoginRequiredMixin, View):

template\_name = "main/add\_plan.html"

def get(self, request, \*args, \*\*kwargs):

form = PlanForm()

return render(request, self.template\_name, {"form": form})

def post(self, request, \*args, \*\*kwargs):

try:

form = PlanForm(request.POST)

if form.is\_valid():

form.save()

return redirect("plan")

return render(request, self.template\_name, {"form": form})

except Exception as e:

return render(request, self.template\_name, {"form": form})

**#Subscription View**

class SubscriptionView(LoginRequiredMixin, View):

template\_name = "main/subscription.html"

def get\_list(self):

return Subscription.objects.all()

def get(self, request, \*args, \*\*kwargs):

return render(request, self.template\_name, {"subscriptions": self.get\_list()})

**Description:** Views are Python functions or classes that receive a web request and deliver a web response in the Django framework, as shown in the following source code from Django views.py files. The possible responses can be a plain HTTP response, an HTML template response, or an HTTP redirect response that sends the user to another page.

**1.2. Models.py**

from enum import unique

from django.db.models import BooleanField, DateTimeField, ImageField, TextField

from django.db.models.fields import TextField

from user.models import User

from django.db import models

from django.db.models import CASCADE

from common.models import BasicBaseModel

from django.db.models import CharField, IntegerField

**# importing DateTime module**

from datetime import datetime, timedelta

request\_status\_choices = [('Pending',"PD"),("Accepted","AD")]

class Plan(BasicBaseModel):

name = CharField(max\_length=30)

number\_of\_days = IntegerField(null=False, blank=False)

price = IntegerField(null=False, blank=False)

class Subscription(BasicBaseModel):

user = models.ForeignKey(User, on\_delete=CASCADE)

plan = models.ForeignKey(Plan, on\_delete=CASCADE)

start\_timestamp = models.DateTimeField(auto\_now\_add=True)

end\_timestamp = DateTimeField(blank=False, null=True)

payment\_method = CharField(max\_length=30)

is\_active = BooleanField(default=False, null=False, blank=False)

def save(self, \*args, \*\*kwargs):

self.end\_timestamp = datetime.now() + timedelta(days=self.plan.number\_of\_days)

super(Subscription, self).save(\*args, \*\*kwargs)

**Description**: Models are Python objects that Django web applications use to access and manage data. Models describe the structure of stored data, including field types and, in some cases, their maximum size, default values, selection list options, documentation help text, and form label text. Models.py has classes named plan and subscription in the following code, where the plan keeps information such as plan name, number of days, and price for each plan. In the case of the subscription class, it holds information such as the user, the type of plan selected, as well as the start and end dates of the subscription.