**Communication with 3rd party application**

**1.Create a file inside project withoutrest(project level) test.py**

**2.To send request from python application we need requests module.**

**To install-pip install requests**

**Cmd prompt1:Run django server**

**Cmd propt2:py test.py at project level**

**urls.py**

**from django.contrib import admin**

**from django.urls import path**

**from myApp.views import \***

**urlpatterns =[**

**path('admin/', admin.site.urls),**

**path('response1/',emp\_data\_view),**

**path('response2/',emp\_json\_data\_view1),**

**path('response3/',emp\_json\_data\_view2)**

**]**

**views.py**

**from django.shortcuts import render**

**from django.http import HttpResponse,JsonResponse**

**import json**

**def emp\_data\_view(request):**

**emp\_data={'eno':100,'ename':'Shreenath','esal':60000}**

**response='<h1>Employee Num:{}<br> Employee Name:{} <br> Employee Sal:{}</h1>'.format(emp\_data['eno'],emp\_data['ename'],emp\_data['esal'])**

**return HttpResponse(response)**

**def emp\_json\_data\_view1(request):**

**emp\_data={'eno':200,'ename':'Shreya','esal':70000}**

**json\_data=json.dumps(emp\_data)**

**return HttpResponse(json\_data,content\_type='application/json')**

**def emp\_json\_data\_view2(request):**

**emp\_data={'eno':300,'ename':'Shreeram','esal':80000}**

**return JsonResponse(emp\_data)**

**test.py[At project level]**

**import requests**

**BASE\_URL='http://127.0.0.1:8000/'**

**ENDPOINT='response3'**

**#BASE\_URL+ENDPOINT='http://127.0.0.1:8000/'+'response3'**

**#http://127.0.0.1:8000/response3**

**response=requests.get(BASE\_URL+ENDPOINT)**

**#respnose is indexable**

**print(response)**

**data=response.json()#data is indexable**

**print("Data given by Django application")**

**print('-'\*40)**

**print("Employee Number=",data['eno'])**

**print("Employee Name=",data['ename'])**

**print("Employee Salary=",data['esal'])**

**print(type(data))**

**Cmd prompt1:Run django server**

**Cmd propt2:py test.py at project level**

**<Response [200]>**

**Data given by Django application**

**----------------------------------------**

**Employee Number= 300**

**Employee Name= Shreeram**

**Employee Salary= 80000**

**<class 'dict'>**

**Class Based views for json response**

**test.py**

**import requests**

**BASE\_URL='http://127.0.0.1:8000/'**

**ENDPOINT='response1'**

**#BASE\_URL+ENDPOINT='http://127.0.0.1:8000/'+'response3'**

**#http://127.0.0.1:8000/response3**

**response=requests.get(BASE\_URL+ENDPOINT)**

**#respnose is indexable**

**print(response)**

**data=response.json()#data is indexable**

**print("Data given by Django application")**

**print('-'\*40)**

**print("Employee Number=",data['eno'])**

**print("Employee Name=",data['ename'])**

**print("Employee Salary=",data['esal'])**

**print(type(data))**

**views.py**

**from django.shortcuts import render**

**from django.views.generic import View**

**from django.http import JsonResponse**

**class CBV(View):**

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

**emp\_data={'eno':100,'ename':'Shreenath','esal':60000}**

**return JsonResponse(emp\_data)**

**urls.py**

**from django.contrib import admin**

**from django.urls import path**

**from myApp.views import \***

**urlpatterns =[**

**path('admin/', admin.site.urls),**

**path('response1/',CBV.as\_view())**

**]**

**Urls.py**

**from django.contrib import admin**

**from django.urls import path**

**from myApp.views import \***

**urlpatterns =[**

**path('admin/', admin.site.urls),**

**path('cbvresponse/',CBV.as\_view())**

**]**

**views.py**

**from django.shortcuts import render**

**from django.http import HttpResponse,JsonResponse**

**import json**

**from django.views.generic import View**

**class CBV(View):**

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

**json\_data=json.dumps({'msg':'get method'})**

**return HttpResponse(json\_data,content\_type="application/json")**

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

**json\_data=json.dumps({'msg':'post method'})**

**return HttpResponse(json\_data,content\_type="application/json")**

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

**json\_data=json.dumps({'msg':'put method'})**

**return HttpResponse(json\_data,content\_type="application/json")**

**test.py**

**import requests**

**BASE\_URL='http://127.0.0.1:8000/'**

**ENDPOINT='cbvresponse/'**

**response=requests.put(BASE\_URL+ENDPOINT) #get put post etc**

**print(response) #<Response [200]>**

**#response is not indexable**

**data=response.json()**

**print(data)**

**If we execute the above code we get the following error**

**(CSRF cookie not set.):**

**To avoid this error,Comment the following line from settings.py**

**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',**

**]**

**Note**

**#\*args==>variable length args**

**#\*\*kwargs==>key word args**

**def f(\*args):**

**print(args)**

**f()**

**f(10,20)#These data gets converted into tuple**

**f(10,20,30)**

**o/p**

**()**

**(10, 20)**

**(10, 20, 30)**

**#\*args==>variable length args**

**#\*\*kwargs==>key word args**

**def f(\*\*kwargs):**

**print(kwargs)**

**f(name="shrinath",id=100)**

**#All the values would be converted into dict**

**{'name': 'shrinath', 'id': 100}**

**MIXINS**

* **A special kind of inheritance that allows classes to share methods b/w any class that inherits from that mixin.**
* **Provides discrete functionality**
* **Parent class provides functionality to child class.Used only for child class not for parent class.**
* **We are not supposed to create objects for mixins**
* **Supports reusability of the code**
* **Mixins should be inherited from object class**

**views.py**

**from django.shortcuts import render**

**from django.http import HttpResponse,JsonResponse**

**import json**

**from django.views.generic import View**

**from myApp.mixins import HttpResponseMixin**

**class CBV(View,HttpResponseMixin):**

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

**json\_data=json.dumps({'msg':'get method'})**

**return self.render\_to\_http\_response(json\_data)**

**myApp/mixins.py**

**from django.http import HttpResponse**

**class HttpResponseMixin(object):**

**def render\_to\_http\_response(self,json\_data):**

**#.....**

**return HttpResponse(json\_data,content\_type='application/json')**

**test.py**

**import requests**

**BASE\_URL='http://127.0.0.1:8000/'**

**ENDPOINT='cbvresponse/'**

**response=requests.get(BASE\_URL+ENDPOINT)**

**print(response) #<Response [200]>**

**#response is not indexable**

**data=response.json()**

**print(data)**

|  |  |
| --- | --- |
| **Mixins** | **Multiple Inheritance** |
| **Parent class instantiation is not possible** | **Parent class instantiation is possible** |
| **Parent class contains only instance method** | **Parent class contains oinstance methods and instance variables** |
| **Methods are useful only for child classes** | **Parent class can extend any other class need not be an object class.** |