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Master of Applied Computing
COMP-8347 – Winter 2023
Internet Applications and Distributed Systems

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LAB 5 – Creating Views and URLs

Part 1:

a. Edit your ***views.py*** file as follows:

```
# Import necessary classes

from django.http import HttpResponse
from .models import CarType, Vehicle

# Create your views here.

def homepage(request):
    cartype_list = CarType.objects.all().order_by('id')
    response = HttpResponse()
    heading1 = '<p>' + Different Types of Cars:' + '</p>'
    response.write(heading1)
    for cartype in cartype_list:
            para = '<p>' + str(cartype.id) + ': ' + str(cartype) + '</p>'
            response.write(para)

    return response
```

b. Edit your ***urls.py*** file under your ***carapp*** as follows:

```
from django.urls import path
from . import views

app_name = 'carapp'
urlpatterns = [
    path('', views.homepage, name='homepage'),
]
```

c. In your project's "carsite" ***urls.py*** import **include** and **path** from **django.urls** and add the *path* as follows:

```
path('', include('carapp.urls')),
```

d. Start your server and visit the URL. You should see different car types.

e. Update the ***homepage*** function in ***views.py***, so it displays a list of up to 10 vehicles. The vehicles should be sorted in descending order of price (i.e., most expensive first).

f. In ***views.py***, define another function aboutus(request). When a user visits the URL **carapp/aboutus,** the

function should display the following text: "**This is a Car Showroom**". You should also update ***carapp/urls.py*** with the suitable path.

g. In ***views.py***, define another function cardetail(request, cartype_no). When a user visits the URL **carapp/cartype_no** (Ex. http://127.0.0.1:8000/1), he/she should see the list of vehicles associated with the selected cartype. For example, if the cartype_no is 1, then the list of displayed vehicles should contain Toyota vehicles. You should also update ***carapp/urls.py*** with the suitable path.

h. If a user writes a cartype_no which does not exist (e.g., 7), then the user should get a **Page not found (404)** error. Here you must import and use **get_object_or_404()** from django.shortcuts.

Part 2:

In ***models.py***, create a model with the names of your lab group members. This model should have the first name, last name, semester (Ex. 3), and a link to each member's personal page (ex. Linkedin or anything similar). This model should also have a dunder method which sorts the data on admin page by first name. In ***views.py***, create a view that arranges the team members by their first name and prints their details that you added in ***models.py***. Update the ***urls.py*** file accordingly.

Part 3:

The following link explains the difference between a Function-Based View (FBV) and a Class-Based View (CBV). https://testdriven.io/blog/django-class-based-vs-function-based-views/

- Read and understand the differences between these views.
- Choose any of your views as an FBV.
- Convert the chosen FBV into a CBV. Change the URL accordingly.
- Explain the differences you noticed while converting your FBV to CBV. You may answer this part by writing comments in your 'views.py' file.