



University of Windsor

COMP 8347

Internet Applications and Distributed Systems

Lab 3

Submitted to:

Dr. Adel Abusitta

May 29, 2023

Submitted By:

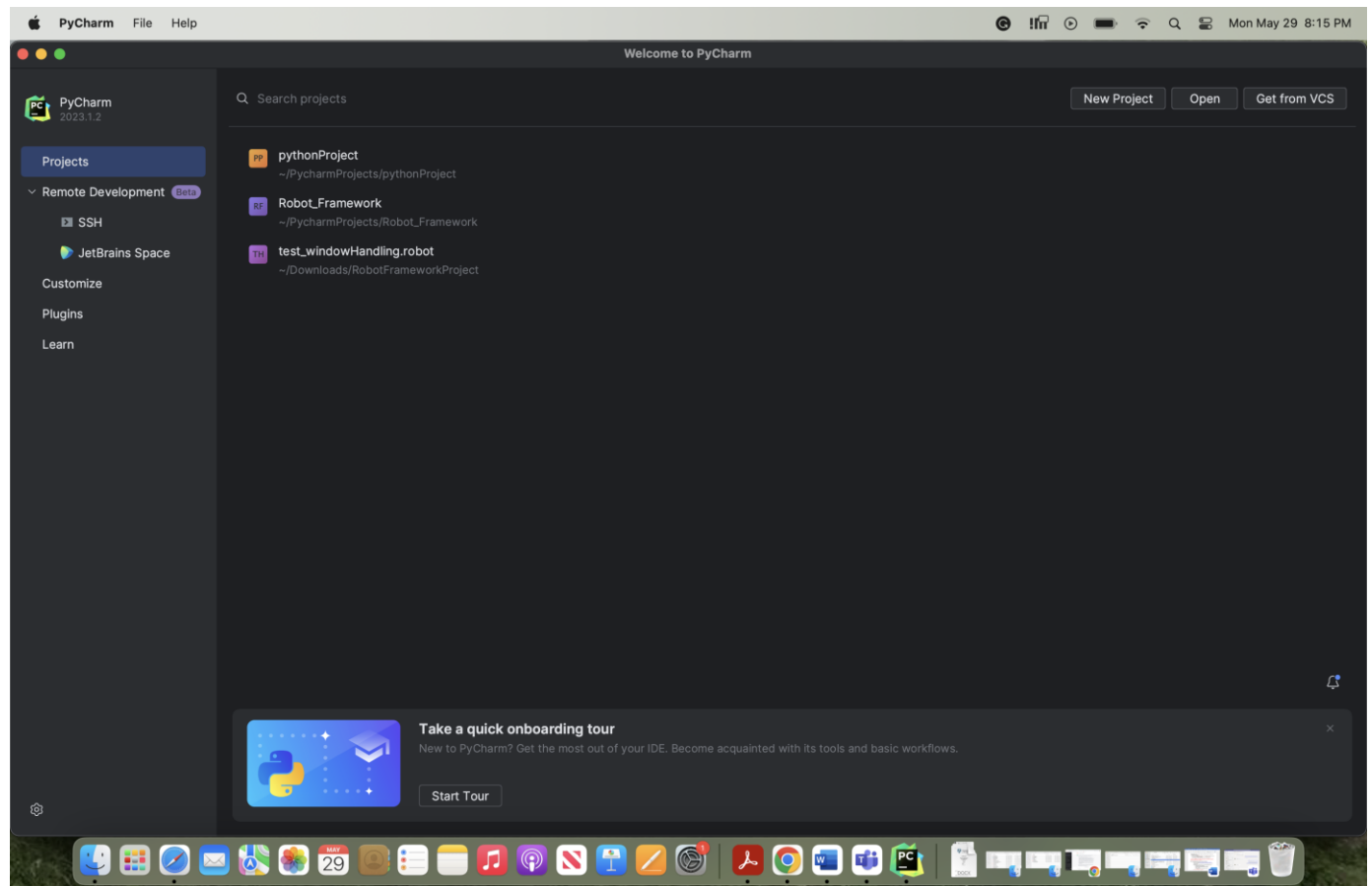
Hamza Baig 110089314

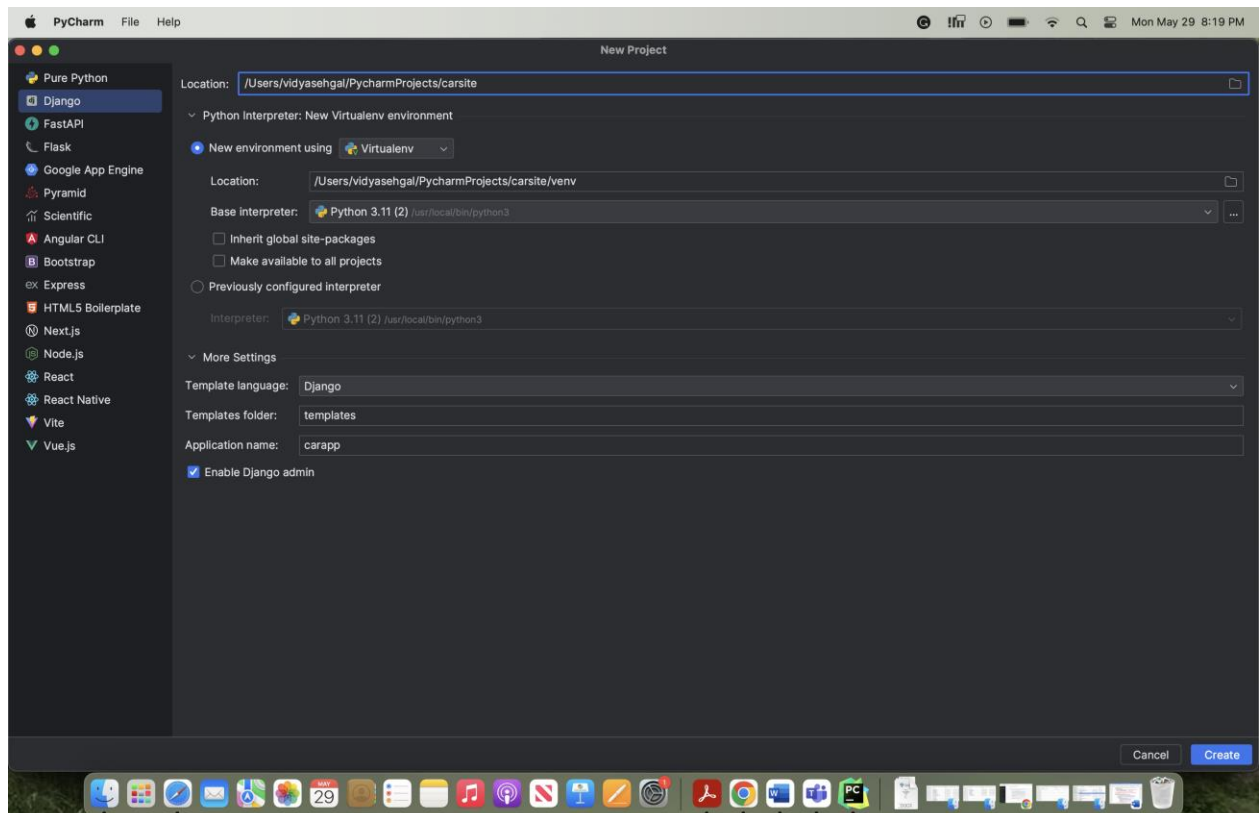
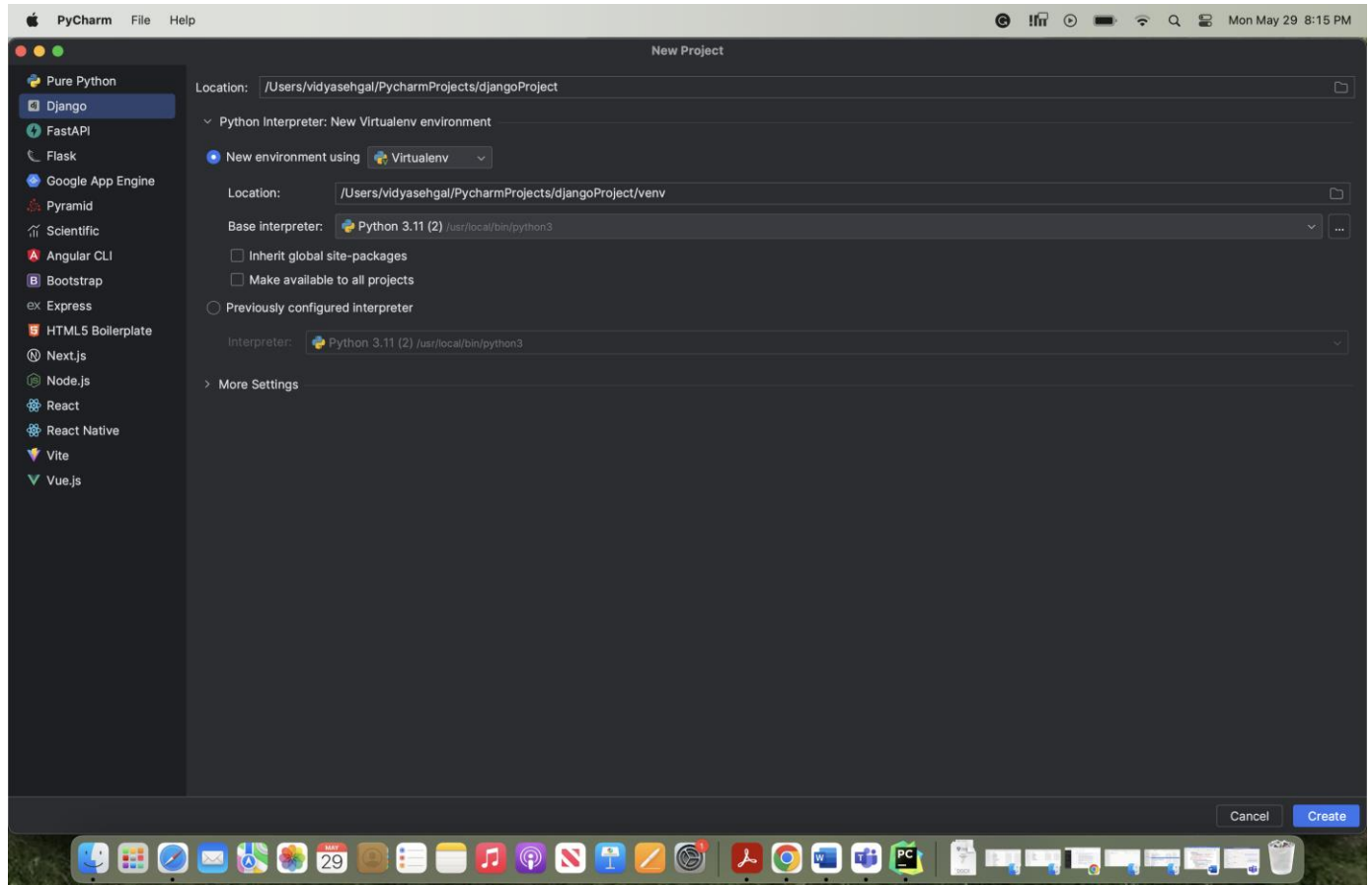
Part1

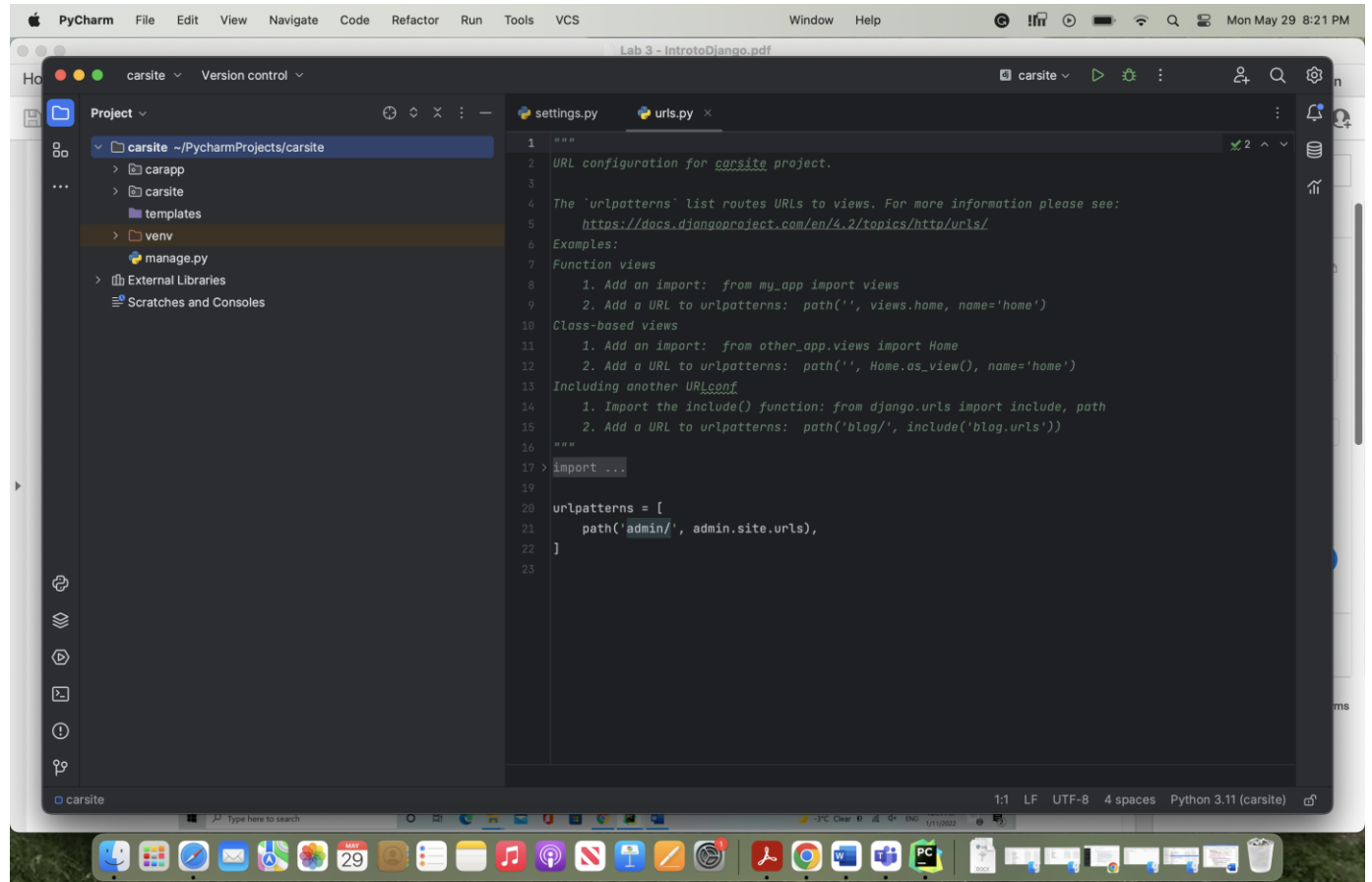
Install necessary software, Python, Django, and PyCharm

Follow the setup instructions given in the installation guide for Python, Django, and PyCharm for Windows/MAC OS X. The guides are available on Brightspace.

PART 1: Run Django from PyCharm







PyCharm File Edit View Navigate Code Refactor Run Tools VCS Window Help

Lab 3 - IntrotoDjango.pdf

carsite ~ /PycharmProjects/carsite

Project

- carsite
 - carapp
 - carsite
 - templates
 - venv
 - manage.py
- External Libraries
- Scratches and Consoles

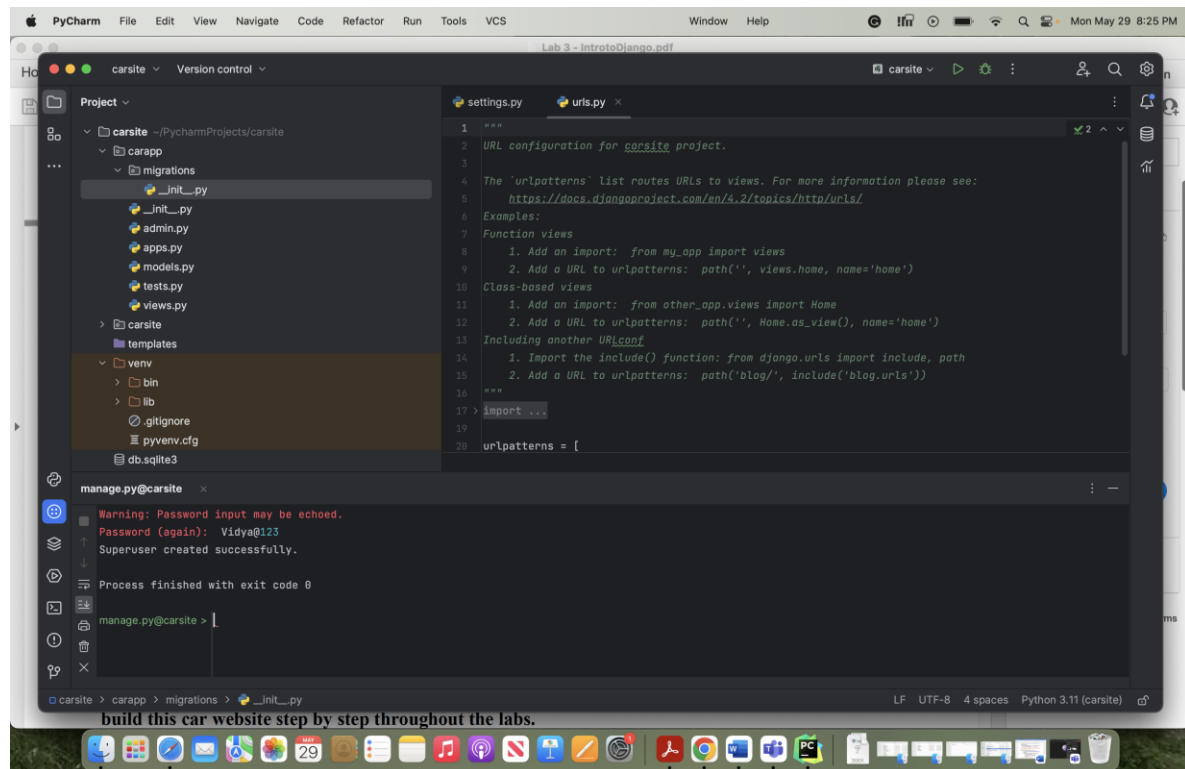
urls.py

```

1 """
2 URL configuration for carsite project.
3
4 The 'urlpatterns' list routes URLs to views. For more information please see:
5     https://docs.djangoproject.com/en/4.2/topics/http/urls/
6 Examples:
7 Function views
8     1. Add an import: from my_app import views
9     2. Add a URL to urlpatterns: path('', views.home, name='home')
10 Class-based views
11     1. Add an import: from other_app.views import Home
12     2. Add a URL to urlpatterns: path('', Home.as_view(), name='home')
13 Including another URLconf
14     1. Import the include() function: from django.urls import include, path
15     2. Add a URL to urlpatterns: path('blog/', include('blog.urls'))
16 """
17 import ...
18
19 urlpatterns = [
20     path('admin/', admin.site.urls),
21 ]
22
23

```

1:1 LF UTF-8 4 spaces Python 3.11 (carsite)



PyCharm File Edit View Navigate Code Refactor Run Tools VCS Window Help

Lab 3 - IntrotoDjango.pdf

carsite ~ /PycharmProjects/carsite

Project

- carsite
 - carapp
 - migrations
 - _init_.py
 - admin.py
 - apps.py
 - models.py
 - tests.py
 - views.py
 - templates
 - venv
 - bin
 - lib
 - gitignore
 - pyenv.cfg
 - db.sqlite3

manage.py@carsite

```

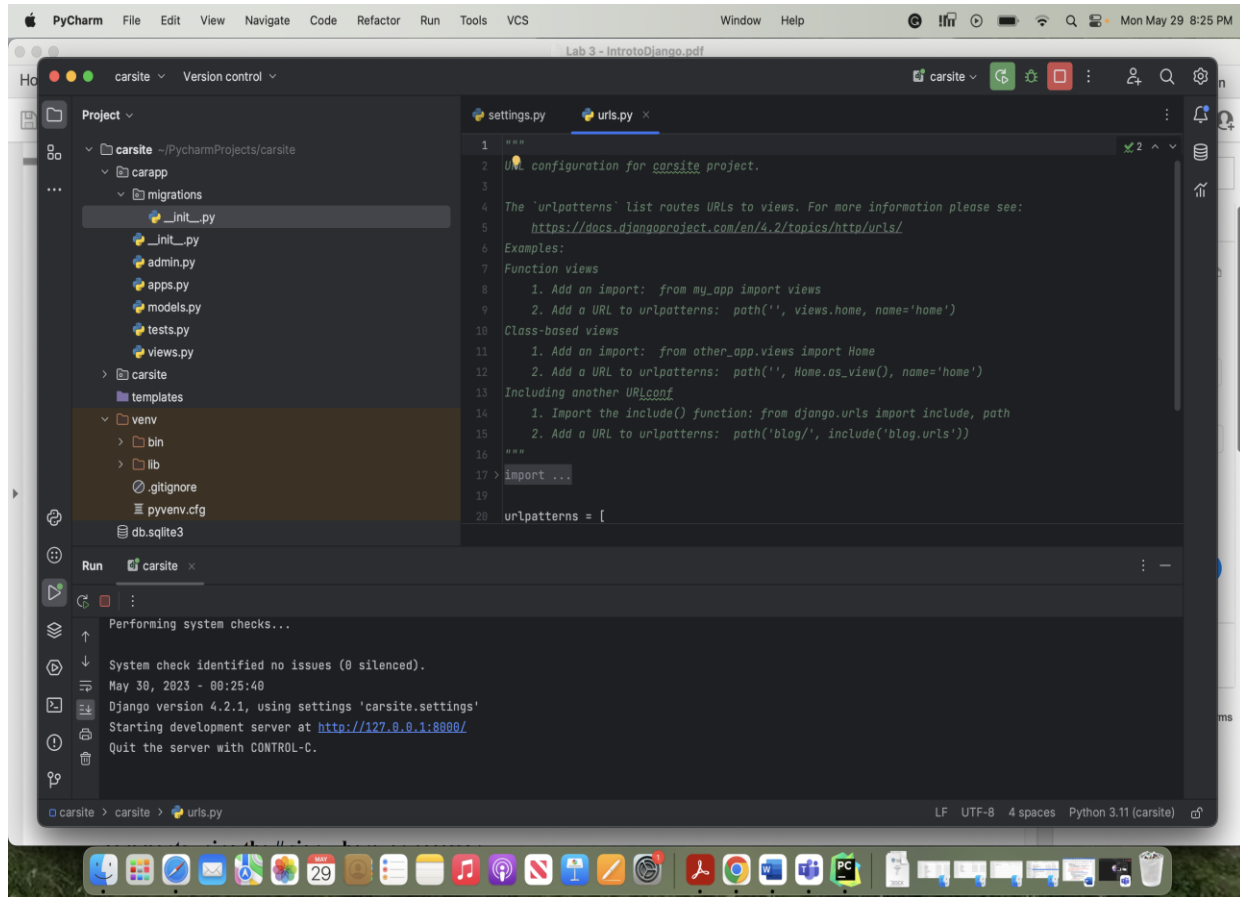
Warning: Password input may be echoed.
Password (again): Vidya@123
Superuser created successfully.
Process finished with exit code 0
manage.py@carsite >

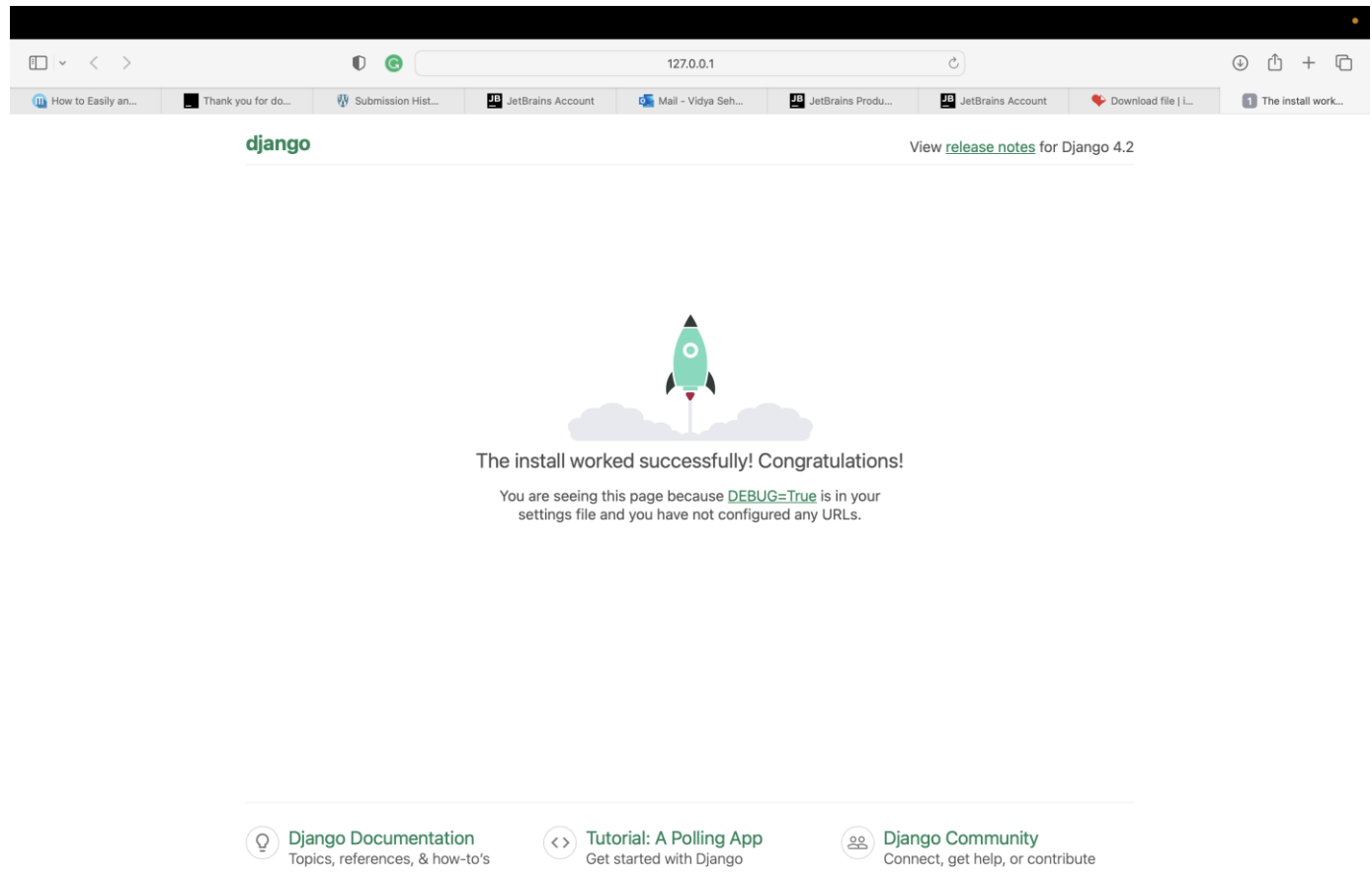
```

carsite > carapp > migrations > _init_.py

build this car website step by step throughout the labs.

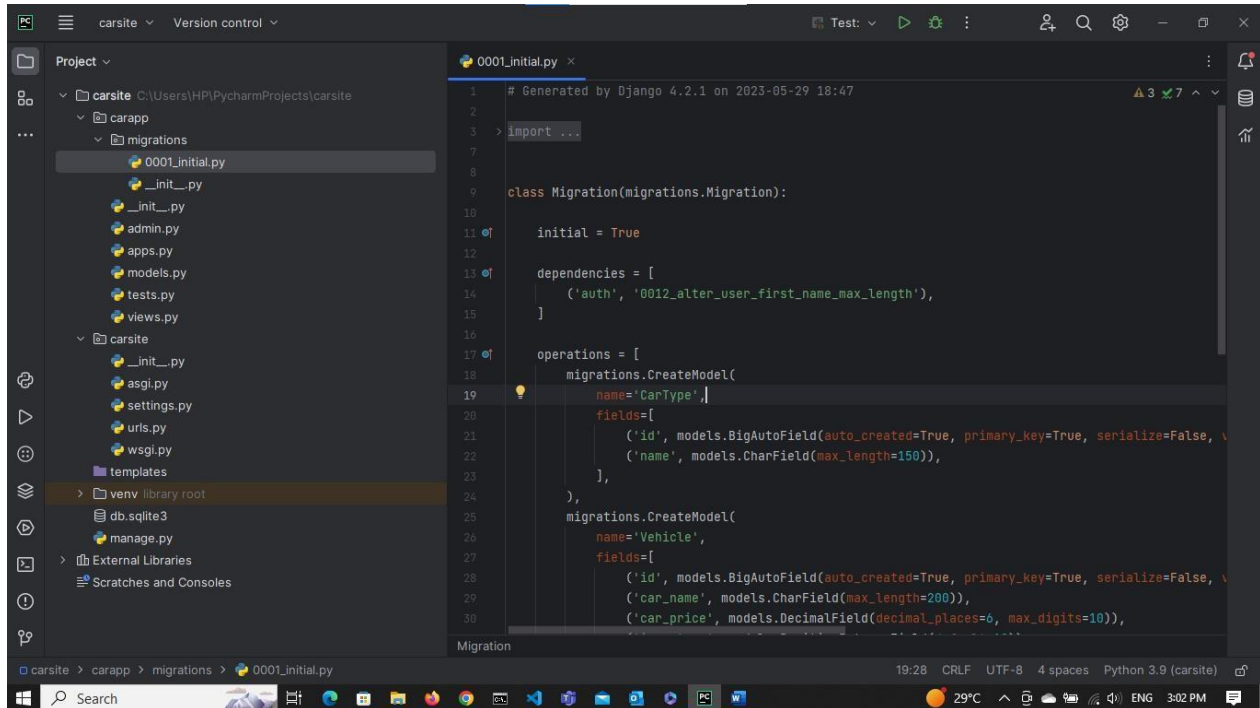
LF UTF-8 4 spaces Python 3.11 (carsite)





Part 2

3. Below screenshot shows the 0001_initial.py and database fields. Attached model1.py with this submission contains code for carsite app.



```
1 # Generated by Django 4.2.1 on 2023-05-29 18:47
2
3 > import ...
4
5
6
7
8
9 class Migration(migrations.Migration):
10
11     initial = True
12
13     dependencies = [
14         ('auth', '0012_alter_user_first_name_max_length'),
15     ]
16
17     operations = [
18         migrations.CreateModel(
19             name='CarType',
20             fields=[
21                 ('id', models.BigAutoField(auto_created=True, primary_key=True, serialize=False, \
22                 ('name', models.CharField(max_length=150))),
23             ],
24         ),
25         migrations.CreateModel(
26             name='Vehicle',
27             fields=[
28                 ('id', models.BigAutoField(auto_created=True, primary_key=True, serialize=False, \
29                 ('car_name', models.CharField(max_length=200))),
30                 ('car_price', models.DecimalField(decimal_places=6, max_digits=10)),
31                 ('car_type', models.ForeignKey(to='CarType', on_delete=models.CASCADE)),
32             ],
33         ),
34     ]
```

Below fields are primary key in the file :

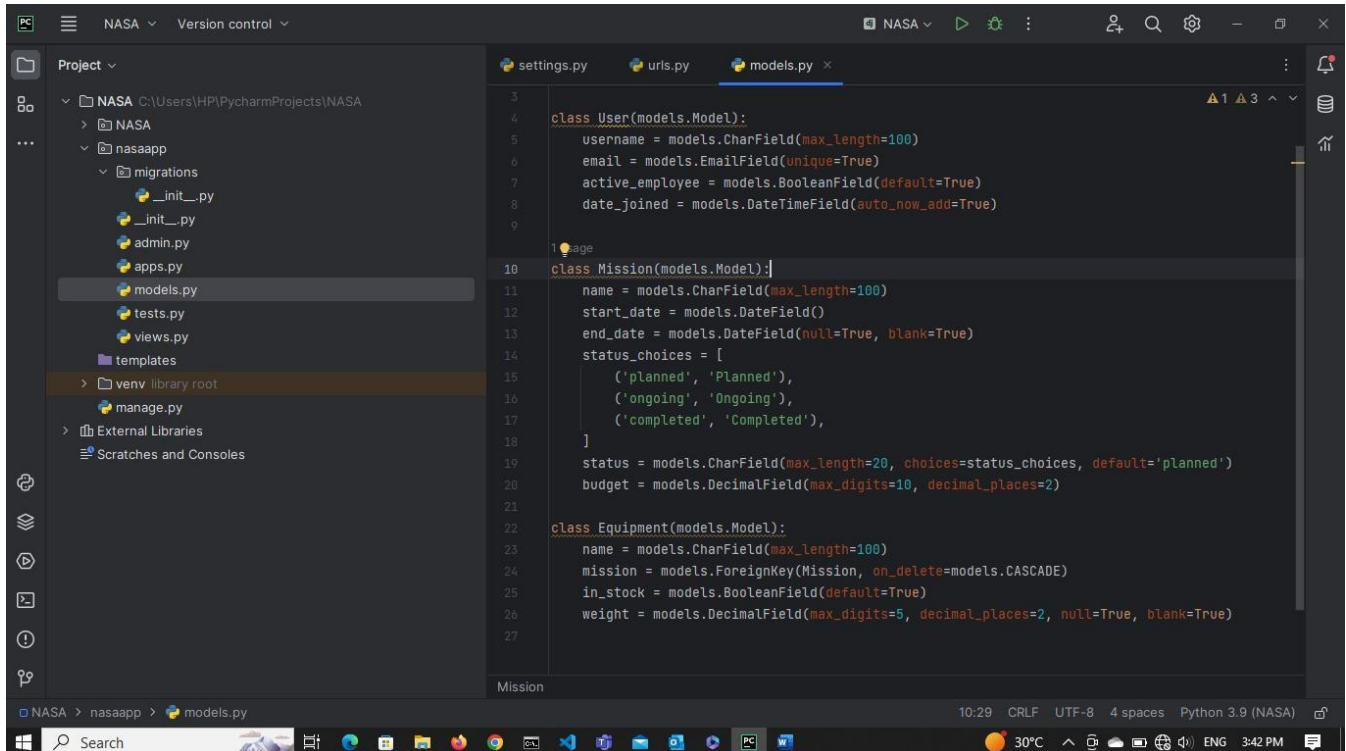
- In Class “CarType” field “id”
- In Class “Vehicle” field “id”
- In Class “Buyer” field “user_ptr”

Below field is the foreign key :

- In class “Vehicle” field “car_type”. This field in class Vehicle is made foreign key and related to CarType class.

Part 3

- Attached file model2.py contains classes for NASA application.
- It contains 3 classes:
 - “User” containing information of employee with fields “username”, “email”, “active_employee”, “date_joined”
 - “Mission” containing information regarding the projects with field “name”, “start_date”, “end_date”, “status”, “budget”
 - “Equipment” containing information about tools used in the Mission. This also contains foreign key “mission” which related to “Mission” class. Other fields include “name”, “in_stock”, “weight”.

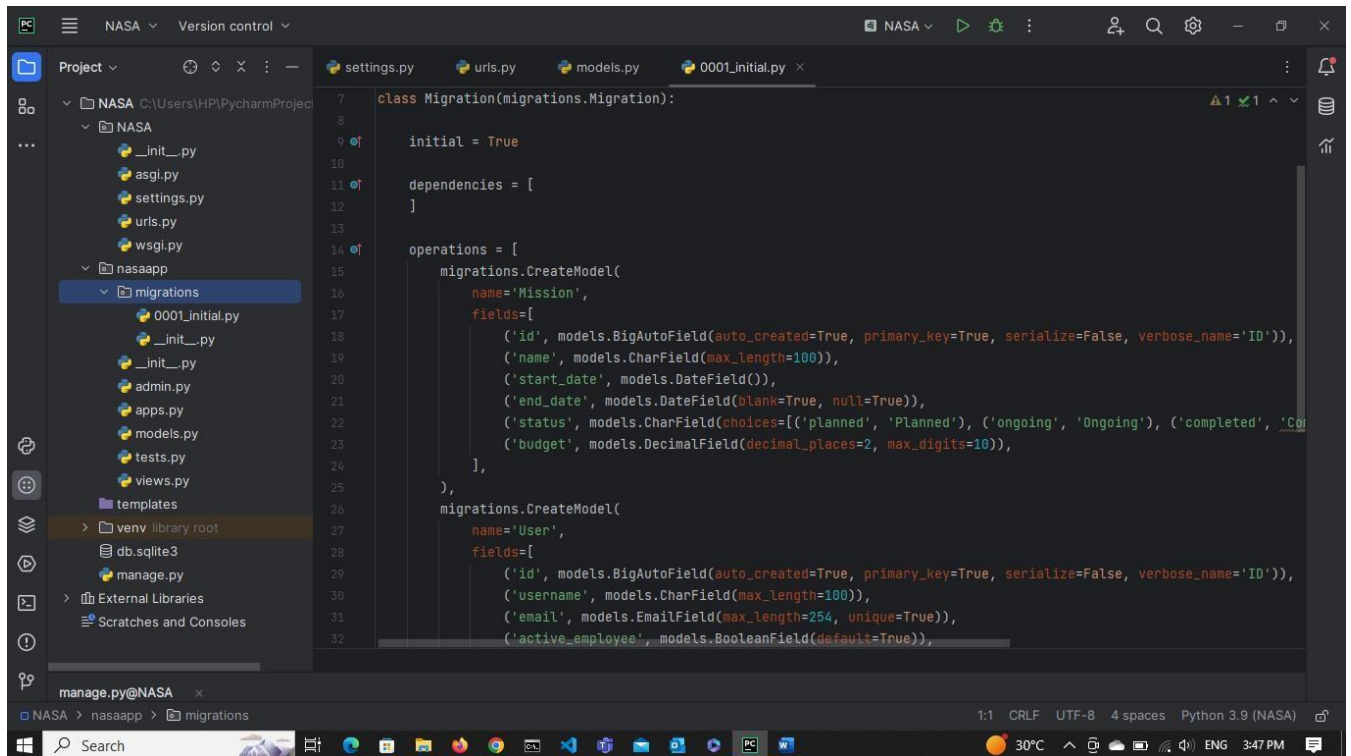


```

3
4 class User(models.Model):
5     username = models.CharField(max_length=100)
6     email = models.EmailField(unique=True)
7     active_employee = models.BooleanField(default=True)
8     date_joined = models.DateTimeField(auto_now_add=True)
9
10 class Mission(models.Model):
11     name = models.CharField(max_length=100)
12     start_date = models.DateField()
13     end_date = models.DateField(null=True, blank=True)
14     status_choices = [
15         ('planned', 'Planned'),
16         ('ongoing', 'Ongoing'),
17         ('completed', 'Completed'),
18     ]
19     status = models.CharField(max_length=20, choices=status_choices, default='planned')
20     budget = models.DecimalField(max_digits=10, decimal_places=2)
21
22 class Equipment(models.Model):
23     name = models.CharField(max_length=100)
24     mission = models.ForeignKey(Mission, on_delete=models.CASCADE)
25     in_stock = models.BooleanField(default=True)
26     weight = models.DecimalField(max_digits=5, decimal_places=2, null=True, blank=True)
27

```


- All the fields “id” in classes are primary key and “mission” field in “Equipment” class is foreign key which related to “Mission” class.



```

class Migration(migrations.Migration):

    initial = True

    dependencies = [
    ]

    operations = [
        migrations.CreateModel(
            name='Mission',
            fields=[
                ('id', models.BigAutoField(auto_created=True, primary_key=True, serialize=False, verbose_name='ID')),
                ('name', models.CharField(max_length=100)),
                ('start_date', models.DateField()),
                ('end_date', models.DateField(blank=True, null=True)),
                ('status', models.CharField(choices=[('Planned', 'Planned'), ('ongoing', 'Ongoing'), ('completed', 'Completed'), ('cancelled', 'Cancelled')], max_length=20)),
                ('budget', models.DecimalField(decimal_places=2, max_digits=10)),
            ],
        ),
        migrations.CreateModel(
            name='User',
            fields=[
                ('id', models.BigAutoField(auto_created=True, primary_key=True, serialize=False, verbose_name='ID')),
                ('username', models.CharField(max_length=100)),
                ('email', models.EmailField(max_length=254, unique=True)),
                ('active_employee', models.BooleanField(default=True)),
            ],
        ),
    ]

```