

A Summer Internship Report On

Web Development using Python (Django framework)

Submitted In Partial Fulfillment for the course of

Summer Internship (3170001)

Bachelor of Engineering

In

Computer Engineering



Prepared By

Dhrumil Desai (191200107008)

Industry Guide

Chintan Nagrecha

Faculty Guide

Janki Barot

ADITYA SILVER OAK INSTITUTE OF TECHNOLOGY

Gujarat Technological University

2022-2023

INTERNSHIP COMPLETION CERTIFICATE FROM INDUSTRY



INFOLABZ IT SERVICES PVT. LTD.

WEB DEVELOPMENT | APP DEVELOPMENT | DATA SCIENCE | IOT

COMPLETION CERTIFICATE OF SUMMER INTERNSHIP

Date: 05-07-2022

Enrollment: 191200107008

Semester: 7th, Computer Engineering

Aditya Silver Oak Institute Of Technology

To whom it may concern,

We are delighted to provide this certificate for the successful completion of the requirements and work performed during the two-week free internship (20 June 2022 to 4 July 2022) by Dhruvil Desai.

In this internship tenure, we have covered the fundamentals of the Django framework along with an understanding of MVC architecture. We have also worked on JSON structures as well as different API(s) and API fetching in web pages using the Django framework.

We wish Dhruvil Desai all the best for future endeavors.



Ms. Twinkle Shah

Internship Coordinator

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**GTU PMMS PORTAL
GENERATED COMPLETION
CERTIFICATE**

CERTIFICATE

Date: 13/07/2022

This is to certify that the Internship at “**Infolabz IT Service**” has been satisfactorily completed by **Dhrumil Desai**(191200107008) under my guidance in the fulfillment for the course of Summer Internship (3170001) in Computer Engineering during the academic year 2022-23.



Prof. Janki Barot
Internal Guide

Prof. Jalpa Shah
HOD (CE Dept)

ADITYA SILVER OAK INSTITUTE OF TECHNOLOGY
Gujarat Technological University
2022-2023

Acknowledgement

I/We wish to express our sincere gratitude to our External guide Chintan Nagrecha for continuously guiding me at the company and answering all my doubts with patience.

We also thank our parents, friends and all the members of the family for their precious support and encouragement which they had provided in completion of our work. In addition to that, we would also like to mention the company personals who gave us the permission to use and experience the valuable resources required for the internship.

Thus, In conclusion to the above said, we once again thank the staff members of **Infolabz IT Service** for their valuable support in completion of the project.

Thank You

Dhrumil Desai

Content

Certificate	i
Completion Certificate	ii
Acknowledgement	iii

Chapter 1: Introduction

About the Company.....	7
Aim and Objectives of the Internship.	7

Chapter 2: Roles and Responsibilities during internship.....8

Daily Tasks and Activites.....	8
My roles and responsibilities.....	9

Chapter 3: Skills Learned26

About the Skill/s	
How do I learnt the skill/s	26

Chapter 4: Overall Experience.....28

4.1 Technical Experience	28
4.1 Personal Experience.	28

Conclusion.....29

Introduction

About the company

Internship done at Infolabz IT Service in web development using Python(Django Framework). Duration of internship is 20th June to 4th July. During this internship they gave us many tasks and problems to solve and improve our skills. In this internship we learnt about fundamentals of Django Framework, MVC Architecture, JSON Structures as well as different API(s) and API fetching in web pages using the Django framework.

Aim and Objective about the internship

The internship program is designed to provide students engaged in a field experience with an opportunity to share their insights to explore the links between students' academic preparation and their field work and to assist participants in developing and carrying out the major research project which will serve to culminate their internship experience.

During this internship, the knowledge, skills, and attitudes learned in the program can be applied. The aim of the internship provides a direction to the activities and helps to focus on a result.

Roles and responsibilities during internship

Daily tasks and activities

<u>DATE</u>	<u>ACTIVITIES</u>
20/06/2022	Basic knowledge about Python & Django Framework
21/06/2022	How to install Django Framework in PyCharm
22/06/2022	Database connectivity
23/06/2022	Assignment work
24/06/2022	API use to print some data print
27/06/2022	Creating an Application
28/06/2022	Uses of HTML,CSS,JS on Django
29/06/2022	Make a normal html page using html , css , and js
30/06/2022	API use to how to make news site
01/07/2022	Assignment Work
04/07/2022	Assignment work submission

My Roles and Responsibilities

- Fulfill the tasks set out by supervisors from several departments.
- Learn and gain experience.
- Conduct on self in a responsible and professional manner.
- Perform clerical duties, take notes, maintain files and organize documents.
- Familiar with java, .NET, javascript or HTML, CSS.
- Excellent analytical and problem solving skills.
- Ability to work well in team.
- Strong work ethic and attention to detail.

INTRODUCTION OF TRAINING

The purpose of industrial Training is to provide exposure for the students on practical engineering fields. Through this exposure, students will have better understanding of engineering practical in general and sense of frequent and possible problems. This training is part of learning process. So the exposure that uplifts the knowledge and experience of a student needs to be properly documented in the form of a report. Through this report, the experience gained can be delivered to their peers. A properly prepared report can facilitate the presentation of the practical experience in an orderly, precise and interesting manner.

I have chosen Python Django as my training because it will help me in several ways. I have chosen my languages course in web development and by having little bit knowledge in this Subject will help me in carrier growth. During learning this I came to understand much more concepts of other language.

Learning Outcomes from Training

General learning outcomes:

- An understanding of the principles and practice of python in the construction of software's.
- An awareness of the need for a professional approach to design and the importance of good documentation to the finished programs.
- A competence to design, write , compile , test and execute straightforward programs using a high level language.

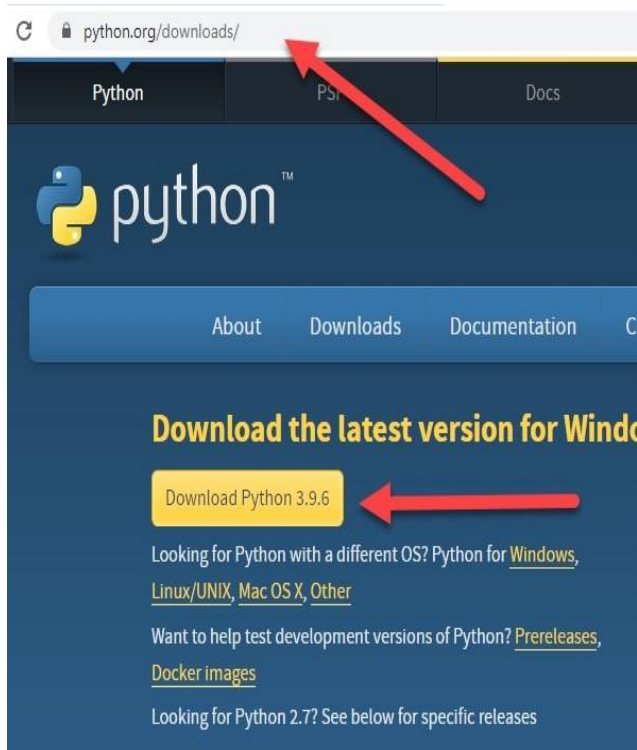
Specific learning outcomes:

- Be able to implement, compile, test and run programs.
- Understand how to include our logic in a program.

Task 1

Python install

<https://www.python.org/downloads/>



PyCharm install

<https://www.jetbrains.com/pycharm>



Prerequisites

Before you continue you should have a basic understanding of the following:

- HTML
- CSS
- JavaScript

Django Introduction

Django is a web application framework written in Python programming language. The Django is very demanding due to its rapid development feature. It takes less time to build application after collecting client requirement.

This framework uses a famous tag line: The web framework for perfectionists with deadlines.

By using Django, we can build web applications in very less time. Django is designed in such a manner that it handles much of configure things automatically, so we can focus on application development only

History

Django was design and developed by Lawrence journal world in 2003 and publicly released under BSDlicense in July 2005. Currently, DSF (Django Software Foundation) maintains its development and release cycle.

Django was released on 21, July 2005.

Popularity

Django is widely accepted and used by various well-known sites such as:

- Instagram
- Mozilla
- Disqus
- Pinterest
- Bitbucket
- The Washington Times

Features of Django

- Rapid Development
- Secure
- Scalable
- Fully loaded
- Versatile
- Open Source
- Vast and Supported Community

Task 2

Django Installation

To install Django, first visit to django official site (<https://www.djangoproject.com>) and download django by clicking on the download section. Here, we will see various options to download The Django.

Django requires pip to start installation. Pip is a package manager system which is used to install and manage packages written in python. For Python 3.4 and higher versions pip3 is used to manage packages.

the installation command is given below.

pip install Django

```
PS C:\Users\HARIOHM> workon myproject
PS C:\Users\HARIOHM> pip install Django
>>
Collecting Django
  Downloading https://files.pythonhosted.org/packages/c7/87/fbd666c4f87591ae25b7bb374298e8629816e87193c4099d3608ef11fab9/Django-2.1.7-py3-none-any.whl (7.3MB)
    100% |#####| 7.3MB 1.0MB/s
Collecting pytz (from Django)
  Downloading https://files.pythonhosted.org/packages/61/28/1d3920e4d1d50b19bc5d24398a7cd85cc7b9a75a490570d5a30c57622d34/pytz-2018.9-py2.py3-none-any.whl (510kB)
    100% |#####| 512kB 1.2MB/s
Installing collected packages: pytz, Django
Successfully installed Django-2.1.7 pytz-2018.9
You are using pip version 18.1, however version 19.0.3 is available.
You should consider upgrading via the 'python -m pip install --upgrade pip' command.
PS C:\Users\HARIOHM>
```

Step 2) Check the Django properly installed or not:

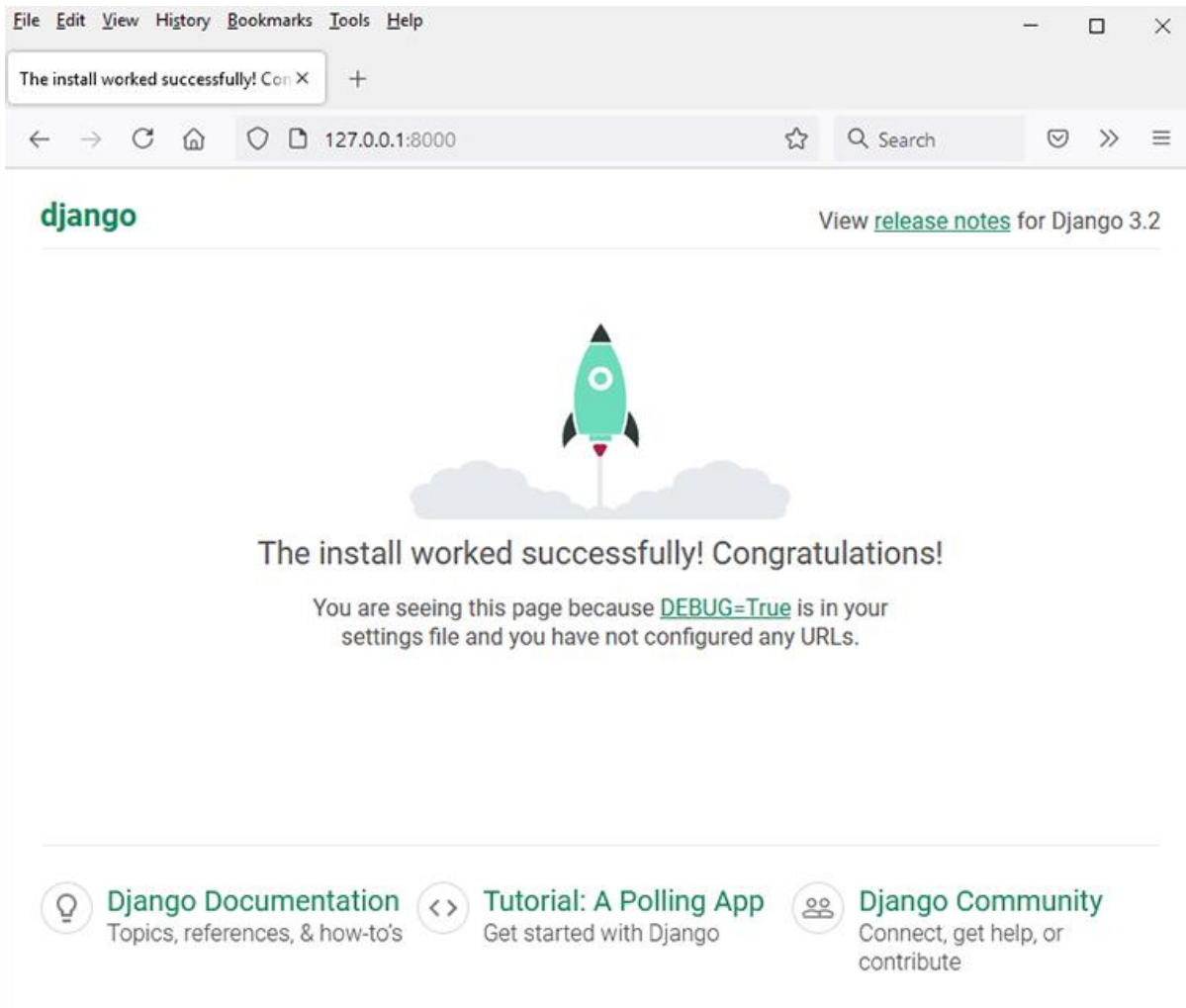
Code : Django-admin

Step 3) Create Django project

Code: Django-admin startproject Infolabz .

Step 4) Run Django website project

Code : Python manage.py runserver



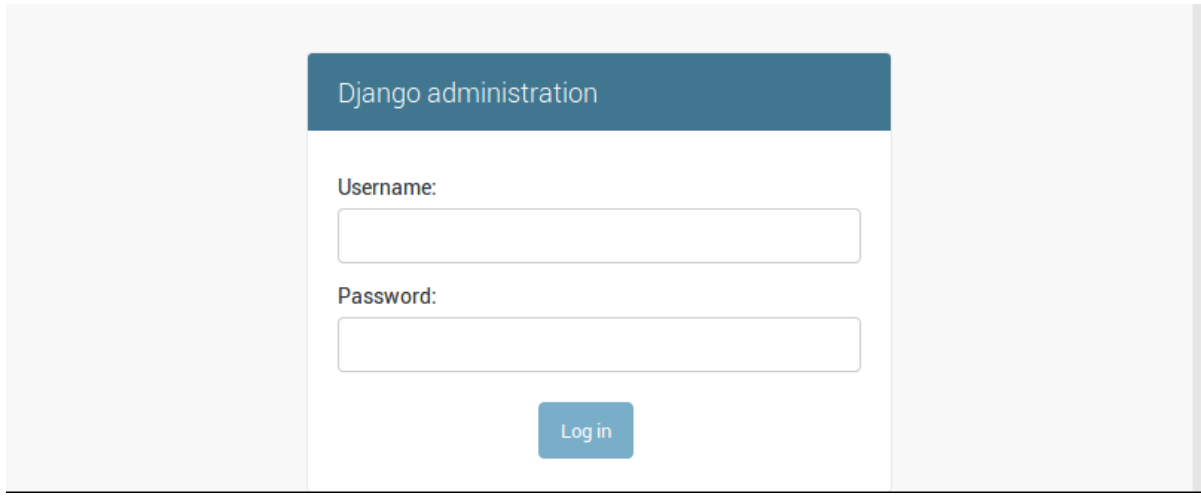
Step 5) New db/table/backend
Code : `python manage.py migrate`

Step 6) Update/change/link
Code: `python manage.py makemigrations`

Task 3

Deployment of Server and Creating Superuser on Admin Site

After run server in 127.0.1.8000/admin write to open admin panel



Create an Admin User

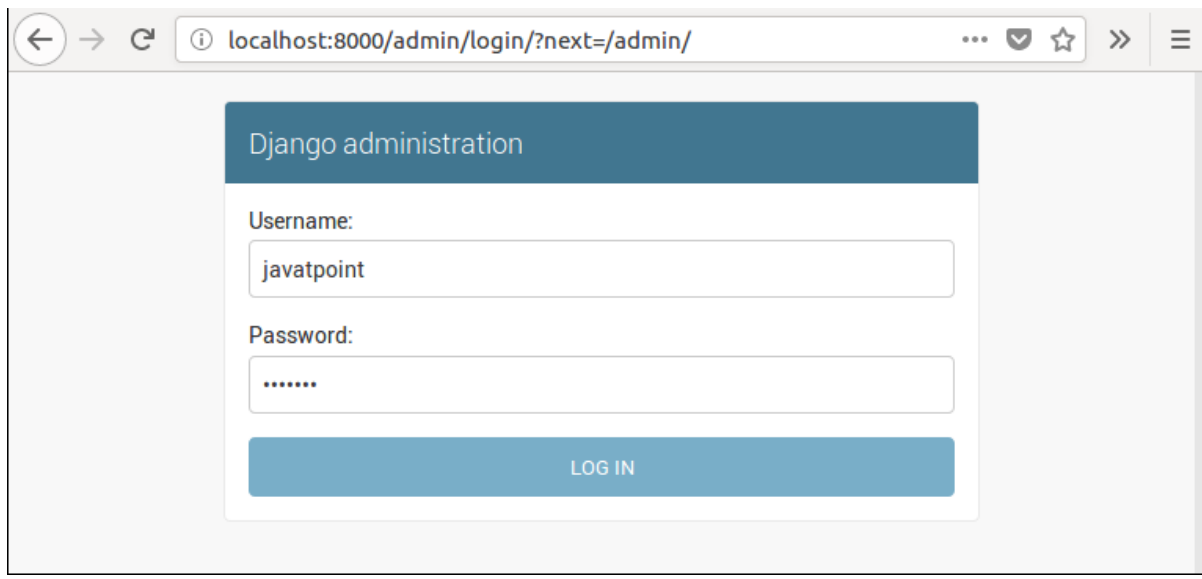
Code: `python manage.py createsuperuser`

```
root@sssit-Inspiron-15-3567:/home/sssit/djangpapp# python manage.py createsuperuser
Username (leave blank to use 'root'): javatpoint
Email address: admin@javatpoint.com
Password:
Password (again):
Superuser created successfully.
root@sssit-Inspiron-15-3567:/home/sssit/djangpapp#
```

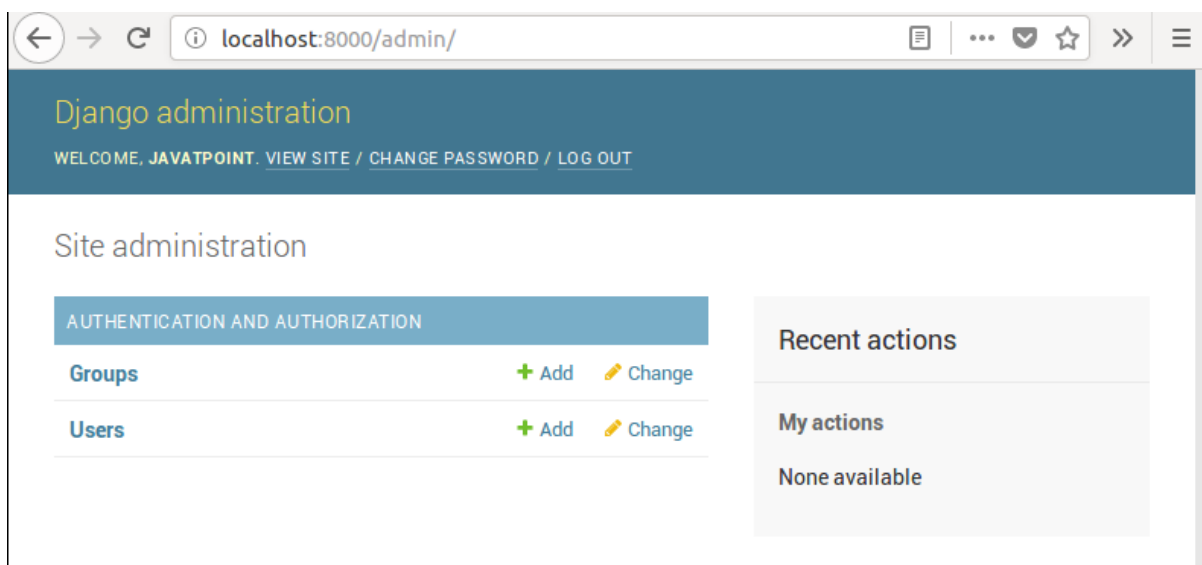
Now start development server and access admin login.

\$ `python3 manage.py runserver`

Provide created username and password and login.



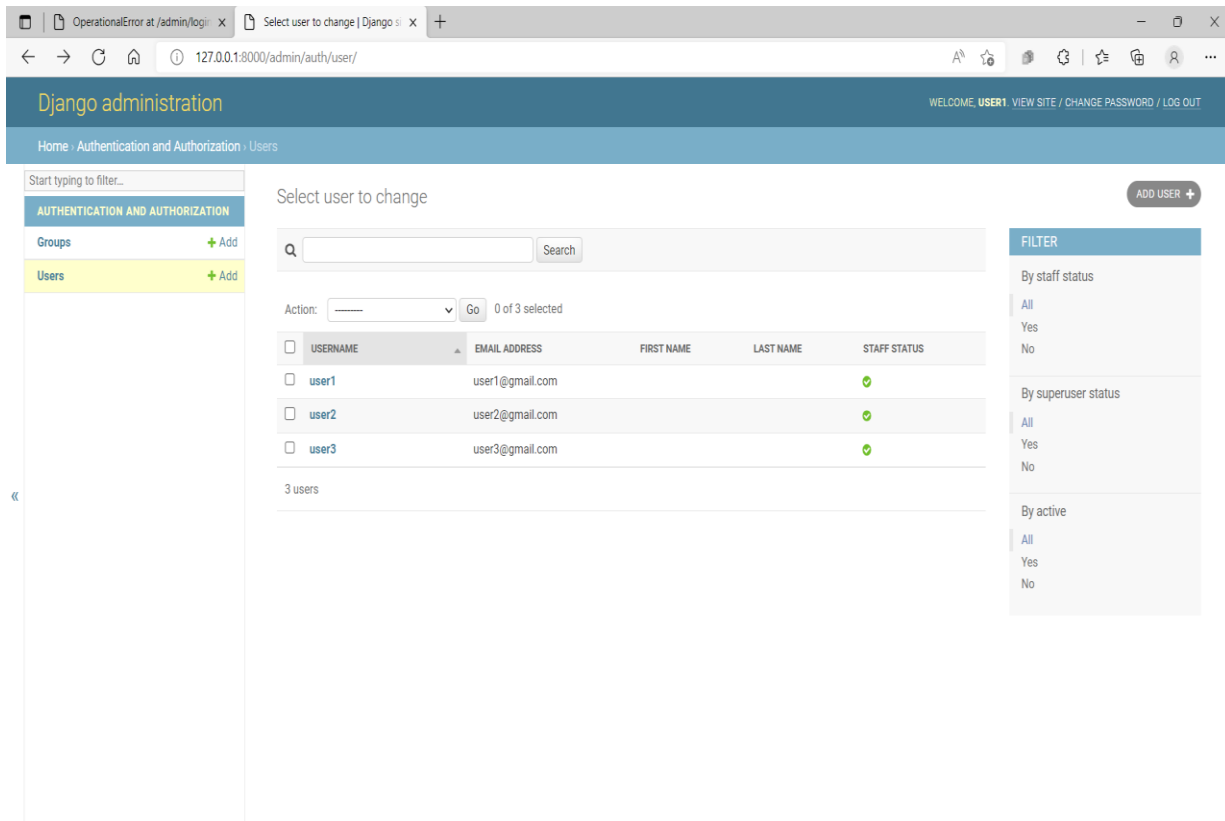
After login successfully, it shows the following interface.



Task 4

Assignment Work

Create 3 super users(admin), 2 admins must not be able to add or delete other admins



Create an Index.html page and load it as default page when we run the project

- For this we will have to create the folder named 'templates' which will contain all html files.
- In that folder we will create our 'index.html'
- Our project name is 'gtu' and app name is 'internship'
- We will make following changes in gtu/urls.py :

```
from django.contrib import admin
from django.urls import path, include

urlpatterns = [
    path('admin/', admin.site.urls),
    path('', include('internship.urls')),
]
```

- For Internship/urls.py:

```
from django.contrib import admin
from django.urls import path
from internship import views

urlpatterns = [
```

```
path("", views.index, name='internship')
]
```

- For Internship/views.py:

```
from django.shortcuts import render, HttpResponseRedirect

# Create your views here.
def index(request):
    return render(request, 'index.html')
```

Output:



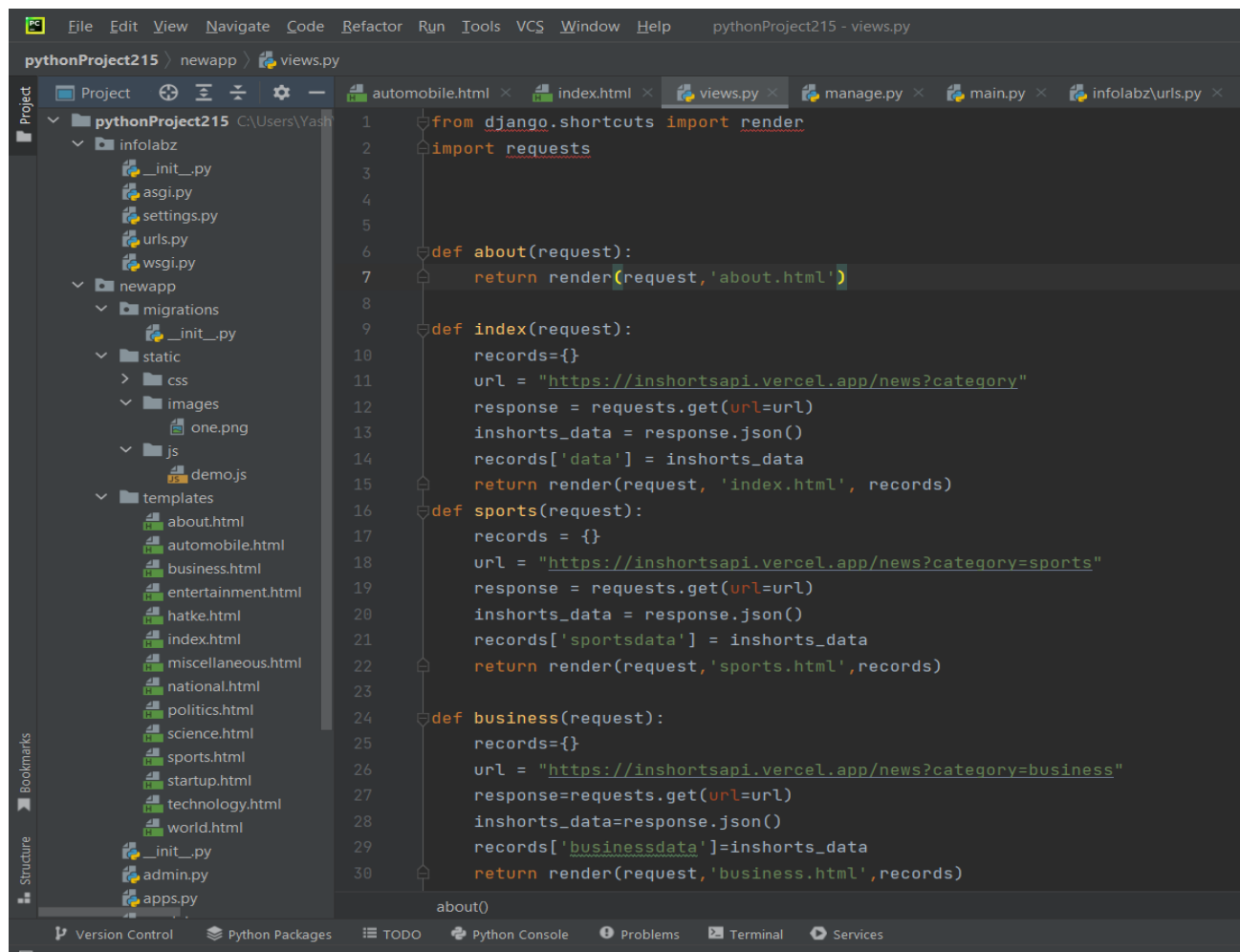
Hello, thanks for visiting

Task 5

Develop one master news website with different pages of news categories (2-3 pages site and add navigation as well)

- We are going to use the <https://inshortsapi.vercel.app/news?category=all> API for our website
- This API contains different categories of news which eases our work and we can fetch different news from these categories
- In our website we are going to use these categories: Business, Entertainment, Sports and All which contains all category news.
- We will first configure 'views.py' in our app as given below:

Views.py:

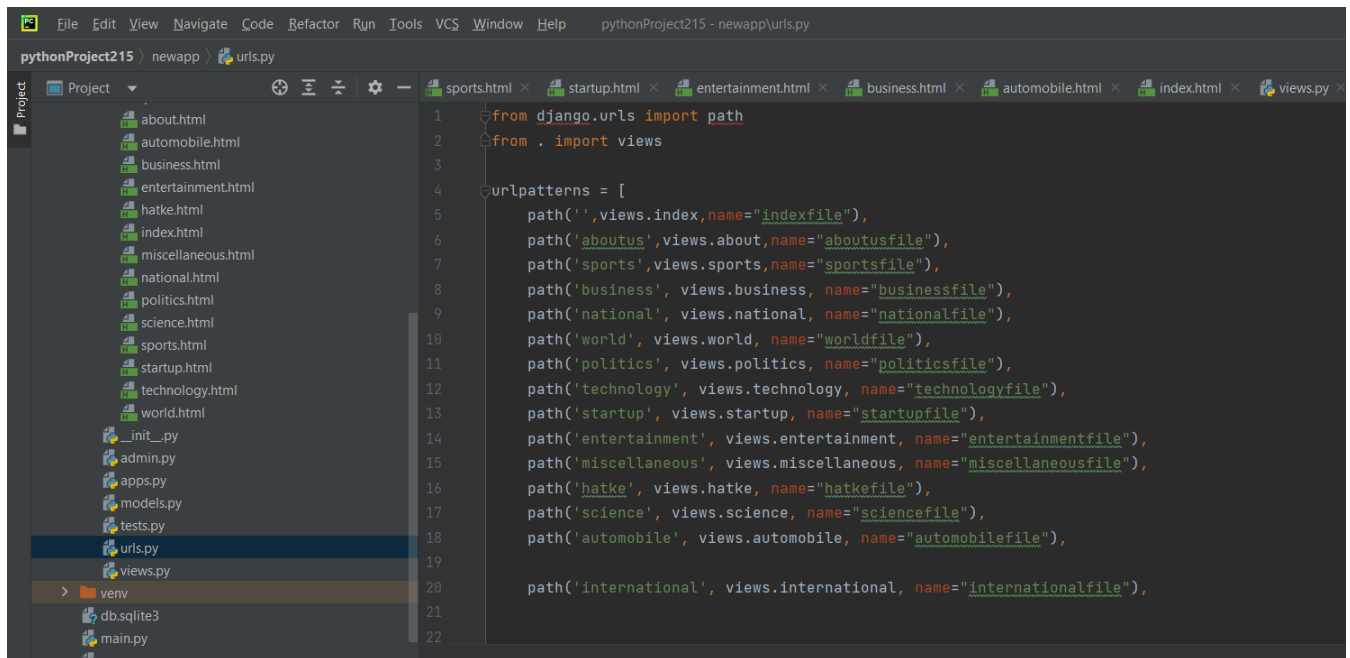


```
1 from django.shortcuts import render
2 import requests
3
4
5
6 def about(request):
7     return render(request, 'about.html')
8
9 def index(request):
10     records={}
11     url = "https://inshortsapi.vercel.app/news?category="
12     response = requests.get(url=url)
13     inshorts_data = response.json()
14     records['data'] = inshorts_data
15     return render(request, 'index.html', records)
16
17 def sports(request):
18     records = {}
19     url = "https://inshortsapi.vercel.app/news?category=sports"
20     response = requests.get(url=url)
21     inshorts_data = response.json()
22     records['sportsdata'] = inshorts_data
23     return render(request, 'sports.html', records)
24
25 def business(request):
26     records={}
27     url = "https://inshortsapi.vercel.app/news?category=business"
28     response=requests.get(url=url)
29     inshorts_data=response.json()
30     records['businessdata']=inshorts_data
31     return render(request, 'business.html', records)
```

Here we have installed the requests feature by using command ‘pip install requests’
By using requests, we will request data from the API.

- For navigation from one page to another in the website we will configure the ‘urls.py’ of our Django application as below:

Urls.py:



```
1 from django.urls import path
2 from . import views
3
4 urlpatterns = [
5     path('', views.index, name="indexfile"),
6     path('aboutus', views.about, name="aboutusfile"),
7     path('sports', views.sports, name="sportsfile"),
8     path('business', views.business, name="businessfile"),
9     path('national', views.national, name="nationalfile"),
10    path('world', views.world, name="worldfile"),
11    path('politics', views.politics, name="politicsfile"),
12    path('technology', views.technology, name="technologyfile"),
13    path('startup', views.startup, name="startupfile"),
14    path('entertainment', views.entertainment, name="entertainmentfile"),
15    path('miscellaneous', views.miscellaneous, name="miscellaneousfile"),
16    path('hatke', views.hatke, name="hatkefile"),
17    path('science', views.science, name="sciencefile"),
18    path('automobile', views.automobile, name="automobilefile"),
19
20    path('international', views.international, name="internationalfile"),
21
22
```

Index.html

```
<!DOCTYPE html>
<html lang="en">
{% load static %}
<link rel="stylesheet" href="{% static 'css/style.css' %}">
<script src="{% static 'js/demo.js' %}"></script>
<head>
    <meta charset="UTF-8">

    <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
1BmE4kWBq78iYhFldvKuhfTAU6auU8tT94WrHftjDbrCEXSU1oBoqyl2QvZ6jIW3"
crossorigin="anonymous">
    <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.bundle.min.js"
integrity="sha384-ka7Sk0Gln4gmtz2MlQnikTlwxgYsOg+OMhuP+IlRH9sENBO0LRn5q+8nbTov4+lp"
```

```

crossorigin="anonymous"></script>
    <title>Title</title>
</head>
<body>

<nav class="navbar navbar-expand-lg navbar-dark bg-primary">
    <div class="container-fluid">
        <a class="navbar-brand" href="{% url 'indexfile' %}">Newsinfo</a>
        <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-
target="#navbarNav" aria-controls="navbarNav" aria-expanded="false" aria-
label="Toggle navigation">
            <span class="navbar-toggler-icon"></span>
        </button>
    <div class="collapse navbar-collapse" id="navbarNav">
        <ul class="navbar-nav">
            <li class="nav-item">
                <a class="nav-link" href="{% url 'indexfile' %}">Home</a>
            </li>
            <li class="nav-item">
                <a class="nav-link" href="{% url 'sportsfile' %}">Sports</a>
            </li>
            <li class="nav-item">
                <a class="nav-link" href="{% url 'businessfile' %}">Business</a>
            </li>
            <li class="nav-item">
                <a class="nav-link" href="{% url 'nationalfile' %}">National</a>
            </li>
            <li class="nav-item">
                <a class="nav-link" href="{% url 'worldfile' %}">World</a>
            </li>
            <li class="nav-item">
                <a class="nav-link" href="{% url 'politicsfile' %}">Politics</a>
            </li>
            <li class="nav-item">
                <a class="nav-link" href="{% url 'technologyfile' %}">Technology</a>
            </li>
            <li class="nav-item">
                <a class="nav-link" href="{% url 'startupfile' %}">Sraturp</a>
            </li>
            <li class="nav-item">
                <a class="nav-link" href="{% url 'entertainmentfile' %}">Entertainment</a>
            </li>
            <li class="nav-item">
                <a class="nav-link" href="{% url 'miscellaneousfile' %}">Miscellaneous</a>
            </li>
            <li class="nav-item">
                <a class="nav-link" href="{% url 'hatkefile' %}">Hatke</a>
            </li>
            <li class="nav-item">
                <a class="nav-link" href="{% url 'sciencefile' %}">Science</a>
            </li>
            <li class="nav-item">
                <a class="nav-link" href="{% url 'automobilefile' %}">Automobile</a>
            </li>

        </ul>
    </div>
</nav>

<div class="container-fluid">
    <div class="card-group">

```

```

        {% for value in data.data %}
        <div class="col-md-4">
        <div>
            
            <div class="card-body">
                <h5 class="card-title">{{ value.title }}</h5>
                <p class="card-text">{{ value.content }}</p>
                <a href="{{value.readMoreUrl}}" class="card-
link">Read More</a>
                <a href="{{value.url}}" class="card-
link">Url</a>
            </div><br>
        </div>
        </div>
        </div>
        {% endfor %}
    </div>
</div>
</div>
</div>
</div>
</body>
</html>





```

Output:

The screenshot shows a web browser window with a news website. The browser's address bar displays "127.0.0.1:8000". The website has a blue header with navigation links: Newsinfo, Home, Sports, Business, National, World, Politics, Technology, Sratrup, Entertainment, Miscellaneous, Hatke, Science, and Automobile. The main content area is divided into three columns:

- Left Column:** Features a large image of a massive fire. Below it, the headline reads "Massive fire breaks out at restaurant in Delhi's Connaught Place". The text states: "A massive fire broke out at a restaurant 'Cafe High5' in Connaught Place's Outer Circle in Delhi. 'Total of six fire tenders were rushed to the site. Fire is brought under control and so far no one is injured,' Delhi Fire Service officials said. Reportedly, the fire occurred in a piece of furniture in the restaurant on the first floor." Below the text are links for "Read More" and "Url".
- Middle Column:** Features a video thumbnail of actress Constance Wu. The headline reads "Actress Constance Wu reveals she attempted suicide after 'internet shaming' in 2019". The text states: "Actress Constance Wu, best known for her role in 'Crazy Rich Asians', has revealed that she attempted suicide after facing social media backlash over her 'careless' tweets in 2019. She said that the tweets 'ignited outrage and internet shaming that got pretty severe'. 'Luckily, a friend found me and rushed me to the ER,' she further said." Below the text are links for "Read More" and "Url".
- Right Column:** Features a tweet from Sushmita Sen (@thesushmitasen) dated 1:51 AM - 25/01/11. The tweet reads: "Yippppeeeee!!! Finally my twitter acc is verified!! Thank you Lalit(Modi:) for all your help! Soooooo much for a tick mark:) party time:))". Below the tweet is the headline "Sushmita Sen's 11-yr-old tweet thanking Lalit Modi for 'blue tick' on Twitter goes viral". The text states: "Actress Sushmita Sen's 11-year-old tweet thanking former IPL Chairman Lalit Modi for helping her get blue verification tick on Twitter is going viral. 'Yippppeeeee!!! Finally my twitter acc is verified!! Thank you Lalit(Modi:) for all your help! Soooooo much for a tick mark;) party time,' she had tweeted. Earlier, Lalit Modi confirmed that they are in a relationship." Below the text are links for "Read More" and "Url".


Newsinfo Home Sports Business National World Politics Technology Startup Entertainment Miscellaneous Hatke Science Automobile

Former IPL Chairman Lalit Modi confirms he is dating Sushmita Sen, shares pics

Ex-IPL Chairman Lalit Modi has revealed he's dating actress Sushmita Sen. Sharing pictures, he tweeted, "Just back in London after a whirlwind global tour...with the families...not to mention my better half Sushmita Sen...a new beginning a new life finally. Over the moon." He further tweeted, "Just for clarity. Not married...just dating each other. That too...will happen one day."

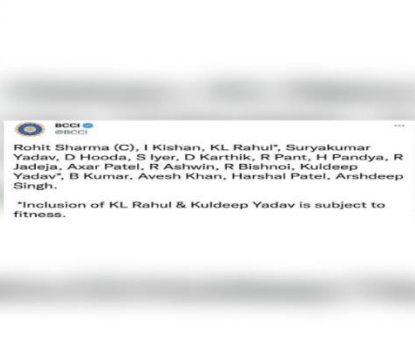
14 Jul 2022, Thursday



India lose an ODI under Rohit's captaincy for 1st time in 2022, England level series

England defeated India by 100 runs in the second ODI at Lord's to level the three-match series 1-1. This is the first time in 2022 that India have lost an ODI match under the captaincy of Rohit Sharma. Bowling first, India bowled England out for 246 runs in 49 overs. India were bowled out for 146 in 38.5 overs.

15 Jul 2022, Friday




India announce their squad for T20I series against West Indies, Kohli not included

India have announced their squad for the T20I series against West Indies. Virat Kohli and Jasprit Bumrah have not been included in the squad, while KL Rahul and Kuldeep Yadav have been included subject to fitness. The squad also includes Ravichandran Ashwin, Ravi Bishnoi, Harshal Patel, Arshdeep Singh and Avesh Khan.

14 Jul 2022, Thursday

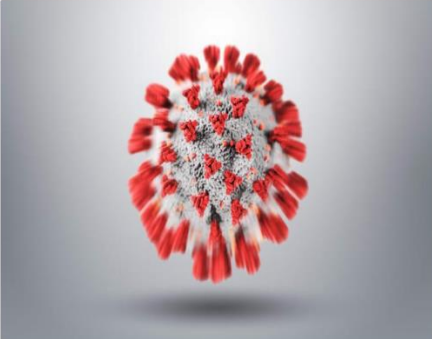
Newsinfo Home Sports Business National World Politics Technology Startup Entertainment Miscellaneous Hatke Science Automobile



Deepest image of the early universe ever taken released by NASA

NASA has said that the first image from its James Webb Space Telescope is the deepest and sharpest infrared image of the distant universe to date. "Known as Webb's First Deep Field, this image of galaxy cluster SMACS 0723 is overflowing with detail. Thousands of galaxies have appeared in Webb's view for the first time," NASA added.

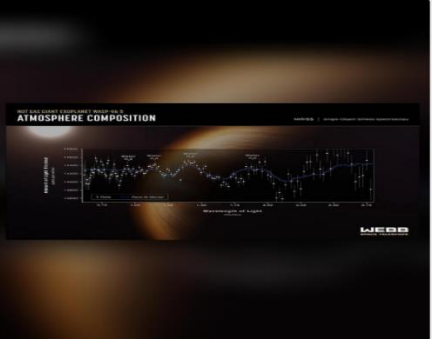
12 Jul 2022, Tuesday



Potential Omicron sub-variant of COVID-19 reported from India & 10 countries: WHO

There has been an emergence of a potential Omicron sub-variant referred to as BA.2.75, first reported from India and then from 10 other countries, said the WHO. This sub-variant seems to have a few mutations on the receptor-binding domain of the spike protein, the WHO added. It's too early to know if this sub-variant is clinically more severe, it added.

06 Jul 2022, Wednesday




World's most powerful telescope captures 'water signature' on distant planet

NASA's James Webb Space Telescope has captured the distinct signature of water in the atmosphere of a distant planet orbiting a Sun-like star 1,150 light-years away. It has been captured on the giant gas planet WASP 96-b located in the Milky Way. NASA made the revelation while releasing a batch of photos taken by the world's most powerful telescope.

12 Jul 2022, Tuesday

Newsinfo


HomeSportsBusinessNationalWorldPoliticsTechnologySratrupEntertainmentMiscellaneousHatkeScienceAutomobile



After expelling O Panneerselvam, AIADMK sacks his sons & 16 supporters

AIADMK interim chief Edappadi K Palaniswami (EPS) on Thursday expelled O Panneerselvam's sons and 16 other supporters of the ousted leader from the party. This comes days after the AIADMK expelled Panneerselvam. AIADMK on Monday elected Palaniswami as its Interim General Secretary and vested in him full powers to head the organisation.


14 Jul 2022,Thursday



Shah Jahan didn't invite quotations for Taj: Goa Minister on not floating tender for work

Goa Minister for Art and Culture Govind Gaudet cited the example of Taj Mahal to defend the government's decision to not seek tenders for the renovation work of Kala Academy. He said, "How is Taj Mahal beautiful and everlasting even today? Because Shah Jahan never invited any quotations. Now it's almost 390 years and Taj Mahal stands as it is."

14 Jul 2022,Thursday



BJP shares alleged pic showing ex-VP Ansari with Pak journalist, Ansari denies

Former Vice-President Hamid Ansari has reiterated that he never knew Pakistani journalist Nusrat Mirza after BJP shared a picture purportedly showing him sharing a stage with Mirza. BJP spokesperson Gaurav Bhatia alleged that the picture showed Ansari and Mirza at an Indian conference in 2009. Mirza, who's claimed to have spied for ISI, alleged Ansari shared "classified" information with him.

15 Jul 2022,Friday

Skills learned

About the skills

Planning:

The ability to think about and successfully manage activities, with the help of any available resources to achieve specific goals.

Problem solving skills:

No employer wants a worker who continually hits brick walls in the course of their daily work; Instead they want somebody capable of using their initiative and seeking out their own solutions.

Practical skills:

Of course, each job role is different and you will encounter different software system and tools depending on your chosen profession.

Python

Python is a computer programming language often used to build websites and software, automate tasks, and conduct data analysis. Python is a general-purpose language, meaning it can be used to create a variety of different programs and isn't specialized for any specific problems. This versatility, along with its beginner-friendliness, has made it one of the most-used programming languages today.

Django framework

Django is a web application framework written in Python programming language. The Django is very demanding due to its rapid development feature. It takes less time to build application after collecting client requirement.

This framework uses a famous tag line: The web framework for perfectionists with deadlines

API

An API (Application Programming Interface) is a set of functions that allows applications to access data and interact with external software components, operating systems, or microservices. To simplify, an API delivers a user response to a system and sends the system's response back to a user

Overall experience

Technical experience:

In this internship I learnt about Django framework along with an understanding of MVC architecture. I have also worked on JSON structures as well as different API(s) and API fetching in web pages using the Django framework

Personal experience:

It was very good experience for me to work with infolabz, The management was very responsive and supportive. I have gained new knowledge and skills.

Conclusion

I can honestly say that my time spent interning with Infolabz IT Service resulted in one of the best summers of my life. Not only did I gain practical skills but I also had the opportunity to meet many fantastic people.