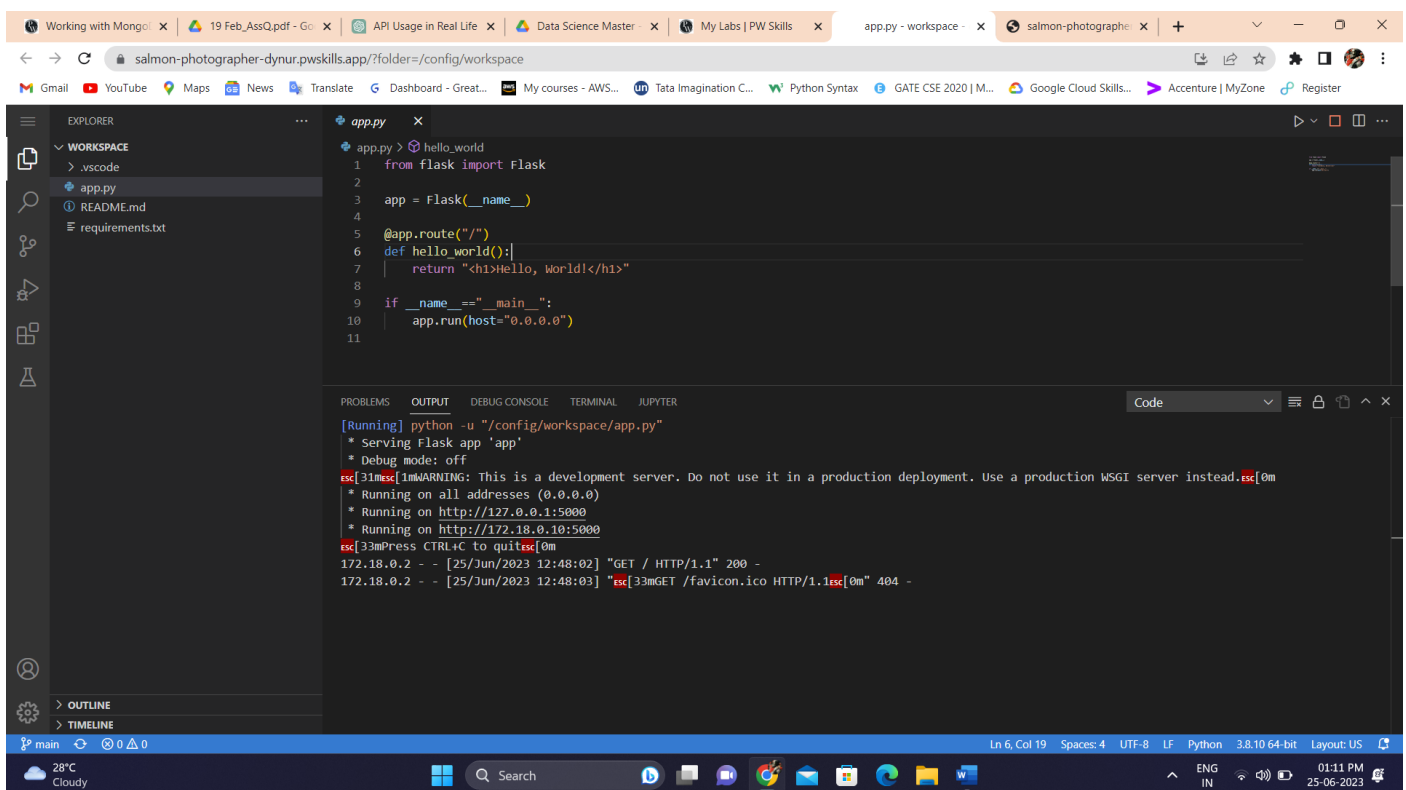Q1. What is Flask Framework? What are the advantages of Flask Framework?

Ans - Flask is a micro web framework written in Python. It is designed to be lightweight, flexible, and easy to use, making it a popular choice for developing web applications and APIs.

- Simplicity: Flask follows a minimalistic approach, keeping the core framework simple and easy to understand. It's straightforward API and intuitive design make it beginner-friendly and allow developers to quickly start building web applications.

- Lightweight and Flexible: Flask is a micro framework, which means it does not impose rigid structures or dependencies. It allows developers to choose and integrate the components they need, making it highly flexible and adaptable to different project requirements.

- Extensibility: Flask provides a modular design that allows developers to easily extend and customize its functionality. It supports the use of various Flask extensions, which are third-party libraries that add extra features such as database integration, authentication, and more.

- Built-in Development Server: Flask comes with a built-in development server, enabling developers to test and run their applications locally without the need for additional server setup. This feature is convenient for rapid development and debugging.

-

Q2. Create a simple Flask application to display 'Hello World!!'. Attach the screenshot of the output in Jupyter Notebook.
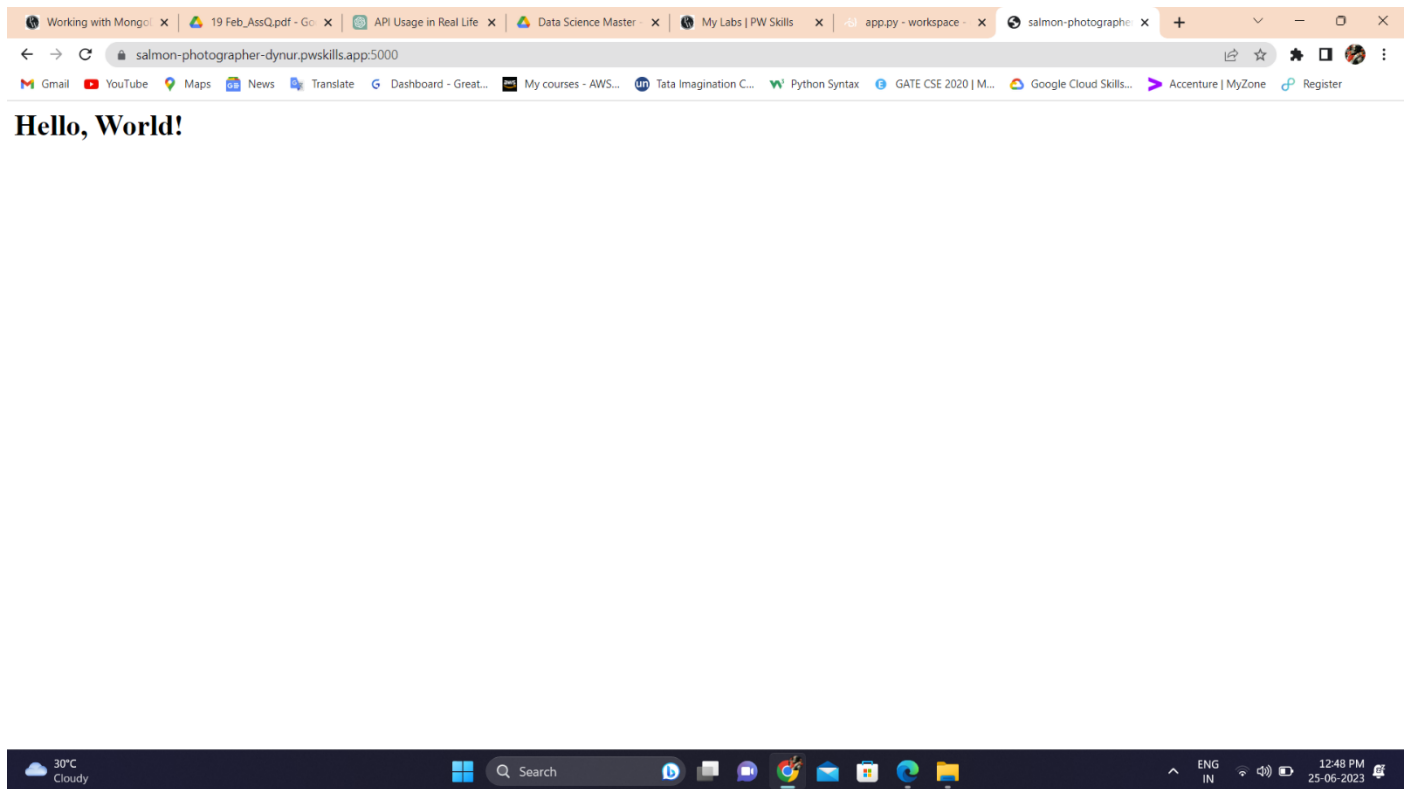
Ans -

Q3. What is App routing in Flask? Why do we use app routes?

Ans -

-In Flask, app routing refers to the process of associating URL routes with specific functions or views within a web application. It allows you to map different URLs to different functions, enabling the application to respond to different requests and display appropriate content.

The app.route() decorator is used to define routes in Flask. It binds a URL pattern to a function, specifying which function should be executed when a particular URL is accessed.

- Request Handling: App routes allow you to handle different types of requests, such as GET, POST, PUT, or DELETE, for specific URLs. This allows you to define different functions or methods for processing each type of request, enabling different actions to be taken based on the requested URL.
- URL Mapping: By defining app routes, you can map different URLs to specific functions within your application. This helps in creating a logical structure for your web application, ensuring that each URL is associated with the appropriate functionality.
-

Q4. Create a "/welcome" route to display the welcome message "Welcome to ABC Corporation" and a "/"

route to show the following details:

Company Name: ABC Corporation

Location: India

Contact Detail: 999-999-9999

Ans -

```python
from flask import Flask

app = Flask(__name__)

@app.route('/welcome')
def welcome():
    return 'Welcome to ABC Corporation'

@app.route('/')
def details():
    return '''Company Name: ABC Corporation
    Location: India
    Contact Detail: 999-999-9999'''

if __name__=="__main__":
    app.run(host="0.0.0.0")
```
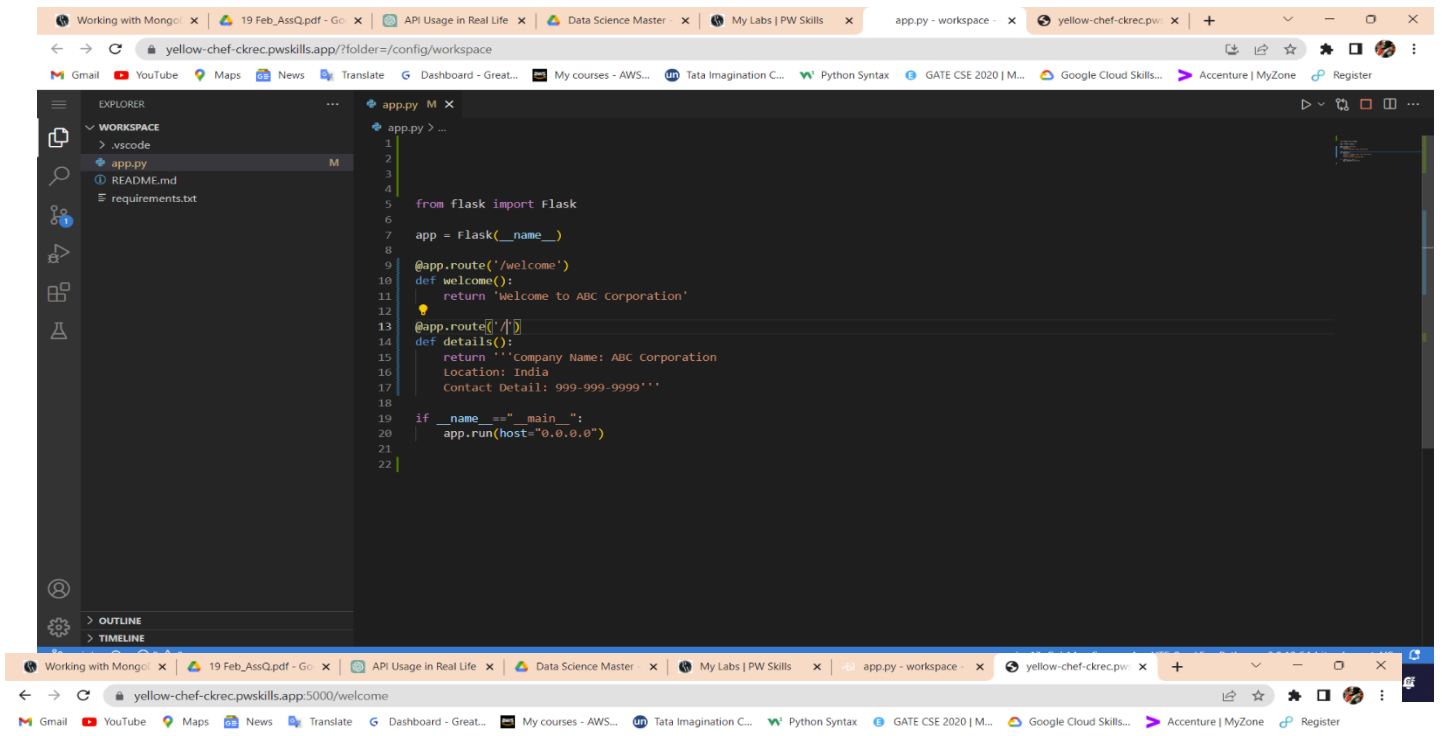
Welcome to ABC Corporation

Company Name: ABC Corporation Location: India Contact Detail: 999-999-9999

Q5. What function is used in Flask for URL Building? Write a Python code to demonstrate the working of the url_for() function.

Ans -


```python
app = Flask(__name__)

@app.route('/welcome')
def welcome():
    return 'Welcome to ABC Corporation'

@app.route('/')
def home():
    # Generate a URL for the 'welcome' endpoint
    welcome_url = url_for('welcome')

    # Generate a URL for the 'company_details' endpoint
    details_url = url_for('company_details')

    # Display the generated URLs
    return f'''
    Welcome to the Home Page!<br>
    <a href="{welcome_url}">Go to Welcome Page</a><br>
    <a href="{details_url}">Go to Company Details Page</a>
    '''

@app.route('/company')
def company_details():
    return '''
    Company Name: ABC Corporation<br>
    Location: India<br>
    Contact Detail: 999-999-9999
    '''

if __name__ == "__main__":
    app.run(host="0.0.0.0")
```

Welcome to the Home Page!
Go to Welcome Page
Go to Company Details Page

Company Name: ABC Corporation
Location: India
Contact Detail: 999-999-9999