

In [ ]: Q1. What is Flask Framework? What are the advantages of Flask Framework?

Flask Framework:

Flask is a micro web framework for Python, designed to be lightweight and modular. It provides tools, libraries, and templates to build web applications. Flask is often used for small to medium-sized projects due to its simplicity and ease of use.

Advantages of Flask Framework:

Lightweight: Flask is a micro-framework, keeping it simple and easy to use.

Modular: Flask is modular, allowing developers to choose the components they need.

Flexibility: Flask gives developers the flexibility to choose libraries and tools for their projects.

Easy to Learn: Flask has a simple syntax and is easy for beginners to pick up quickly.

Extensibility: Flask can be extended with various plugins to add functionalities.

Jinja2 Templating: Flask uses Jinja2 templating, making it easy to create dynamic content.

Built-in Development Server: Flask comes with a built-in development server for quick testing

In [ ]: Q2. Create a simple Flask application to display 'Hello World!!'. Attach the screenshot of the output in Jupyter Notebook

In [ ]: *# Flask Hello World Example*

```
from flask import Flask

app = Flask(__name__)

@app.route('/')
def hello_world():
    return 'Hello World!!'

if __name__ == '__main__':
    app.run(debug=True)
```

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

App Routing in Flask:

App routing in Flask refers to defining routes (URL patterns) that map to specific functions in the application. These routes are defined using the @app.route decorator. Each route corresponds to a different URL, and when a user accesses that URL, the associated function is called to handle the request.

Purpose of App Routes:

URL Mapping: App routes define how different URLs will be mapped to functions.

Request Handling: Each route handles a specific type of request (GET, POST, etc.) and defines what content should be returned.

Organizing Code: App routes help in organizing code by grouping related functionalities together.

Creating Endpoints: Routes define the various endpoints of the web application, determining what the user can access.

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

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

The url\_for() function in Flask is used for URL building. It generates a URL for a specified endpoint, and it can also include arguments. It is particularly useful when you need to build a URL dynamically, and it helps in avoiding hardcoding URLs.

```
In [ ]: # Flask URL Building Example

from flask import Flask, url_for

app = Flask(__name__)

@app.route('/')
def home():
    return 'Home Page'

@app.route('/user/<username>')
def user_profile(username):
    return f'User Profile: {username}'

if __name__ == '__main__':
    with app.test_request_context():
        print(url_for('home')) # Output: /
        print(url_for('user_profile', username='john')) # Output: /user/john
```