**1.Create a Flask application that displays "Hello, World!" on the homepage.**

from flask import Flask

app = Flask(\_*name*\_)

@app.route("/")

def hello():

    return "Hello, World!"

if \_*name*\_ == "\_*main*\_":

    app.run()

2. **Write a Flask route that takes a name parameter and returns "Hello, [name]!" as plain text.**

from flask import Flask

app = Flask(\_\_name\_\_)

@app.route("/hello/<name>")

def hello(name):

    return f"Hello, {name}!"

if \_\_name\_\_ == "\_\_main\_\_":

    app.run()

3.  **Write a Flask route that takes a number parameter and returns the square of that number as plain text.**

from flask import Flask

app = Flask(\_\_name\_\_)

@app.route("/square/<int:num>")

def square(num):

    return str(num\*\*2)

if \_\_name\_\_ == "\_\_main\_\_":

    app.run()

4.  **Write a Flask route that displays a simple HTML form that asks for a name and returns "Hello, [name]!" when submitted.**

from flask import Flask, request, render\_template

app = Flask(\_\_name\_\_)

@app.route("/", methods=["GET", "POST"])

def hello():

    if request.method == "POST":

        name = request.form["name"]

        return f"Hello, {name}!"

    else:

        return render\_template("index.html")

if \_\_name\_\_ == "\_\_main\_\_":

    app.run()

The corresponding index.html file should contain the following:

<!doctype html>

<html>

  <body>

    <form method="POST">

      <label for="name">Name:</label>

      <input type="text" id="name" name="name">

      <input type="submit" value="Submit">

    </form>

  </body>

</html>

5.  **Write a Flask route that displays a list of names in an HTML unordered list.**

from flask import Flask, render\_template

app = Flask(\_\_name\_\_)

@app.route("/names")

def names():

    names = [("Alice", 25), ("Bob", 30), ("Charlie", 35)]

    return render\_template("names.html", names=names)

if \_\_name\_\_ == "\_\_main\_\_":

    app.run()

The corresponding names.html file should contain the following:

<!doctype html>

<html>

  <body>

    <table>

      <thead>

        <tr>

          <th>Name</th>

          <th>Age</th>

        </tr>

      </thead>

      <tbody>

        {% for name in names %}

          <tr>

            <td>{{ name[0] }}</td>

            <td>{{ name[1] }}</td>

          </tr>

        {% endfor %}

      </tbody>

    </table>

  </body>

</html>

6.  **Write a Flask route that displays a list of names in a table.**

from flask import Flask, render\_template

app = Flask(\_\_name\_\_)

@app.route("/names")

def names():

    names = ["Alice", "Bob", "Charlie"]

    return render\_template("names.html", names=names)

if \_\_name\_\_ == "\_\_main\_\_":

    app.run()

The corresponding names.html file should contain the following:

<!doctype html>

<html>

  <body>

    <form method="POST">

      <label for="name">Name:</label>

      <select id="name" name="name">

        {% for name in names %}

          <option value="{{ name }}">{{ name }}</option>

        {% endfor %}

      </select>

      <input type="submit" value="Submit">

    </form>

  </body>

</html>

7.  **Write a Flask route that displays a list of names in a dropdown menu.**

from flask import Flask, render\_template

app = Flask(\_\_name\_\_)

@app.route("/names")

def names():

    names = ["Alice", "Bob", "Charlie"]

    return render\_template("names.html", names=names)

if \_\_name\_\_ == "\_\_main\_\_":

    app.run()

The corresponding names.html file should contain the following:

<!doctype html>

<html>

  <body>

    <form method="POST">

      <label for="name">Name:</label>

      <select id="name" name="name">

        {% for name in names %}

          <option value="{{ name }}">{{ name }}</option>

        {% endfor %}

      </select>

      <input type="submit" value="Submit">

    </form>

  </body>

</html>

8.  **Write a Flask route that receives data through a POST request and returns the data in JSON format.**

from flask import Flask, request, jsonify

app = Flask(\_\_name\_\_)

@app.route("/data", methods=["POST"])

def data():

    data = request.get\_json()

    return jsonify(data)

if \_\_name\_\_ == "\_\_main\_\_":

    app.run()

9.  **Write a Flask route that receives data through a POST request and returns the data in JSON format.**

from flask import Flask, send\_from\_directory

app = Flask(\_\_name\_\_)

@app.route("/static/<path:filename>")

def static\_file(filename):

    return send\_from\_directory("static", filename)

if \_\_name\_\_ == "\_\_main\_\_":

    app.run()

10.  **Write a Flask route that redirects the user to a different URL.**

from flask import Flask, redirect

app = Flask(\_\_name\_\_)

@app.route("/")

def index():

    return redirect("/hello")

@app.route("/hello")

def hello():

    return "Hello, World!"

if \_\_name\_\_ == "\_\_main\_\_":

    app.run()