1. Write a Python script to set up a basic web server using the `http.server` module. Also explain the limitations of using the `http.server` module for production applications.

2. Explain the role of Python in web development. Name three popular Python frameworks for web development and explain their differences.

3. What is the difference between static and dynamic web pages? Create a Python script to serve a static HTML page using Flask.

4. Create a Flask application with the following routes:
   - `/`: Displays "Welcome to My Website".
   - `/about`: Displays information about yourself.
   - `/contact`: Displays a contact form.

   Also implement templates in the Flask app to render these pages.

5. What is a REST API with Flask? Create a Flask application that provides a REST API for managing a "Books" collection. Implement endpoints for:
   - Getting all books
   - Adding a book
   - Updating a book
   - Deleting a book
6. What are the common ways to deploy a Flask application?

7. What is data visualization, and why is it important? Write a Python script to create a simple line plot using Matplotlib with custom labels for the axes and a title.

8. Load COVID-19 case data from an open-source repository. Plot a line graph showing the trend of cases over time for a specific country. Also add vertical lines to indicate significant events (e.g., lockdowns).

9. What are HTTP methods, and how are they used in web development? Explain the differences between the `GET` and `POST` methods with examples.

10. Write a Flask application with a route `/hello` that responds with "Hello, World!" using the `GET` method. Then modify the route to accept a query parameter `name` (e.g., `/hello?name=John`) and display "Hello, John!".

11. Create a Flask API that accepts JSON data via a POST request, processes it, and sends back a transformed JSON response.

12. Build a mock e-commerce application where users can add items to a cart using POST requests and view the cart using GET requests.