HOMEWORK

NODE JS L4 SOD ALL

Section A: Basic Concepts (Short Answers)

1. Define the following terms:
   a) Node.js
   b) NPM
   c) Dependencies
2. Explain what is meant by a **backend application** and describe its main responsibilities.
3. What are **routes** in web development? Give an example of how they are used in Node.js.
4. Describe the purpose of **Express.js** and explain why developers use it.
5. What is **Nodemon**, and how does it help during Node.js development?
6. Explain the role of **Postman** in backend application development.
7. Define the following object-oriented programming terms:
   a) Class
   b) Object
   c) Method
   d) Properties

Section B: API Concepts

8. What is an **API (Application Programming Interface)**, and what purpose does it serve in backend systems?
9. List and explain **three common use cases** of APIs in real-world applications.
10. Describe **how APIs work**, starting from the client request to the server response.
11. What is an **API endpoint**, and how does it relate to routes in a Node.js application?
12. Explain the following components of an **API request**:
    a) Method
    b) Parameters
    c) Request headers
    d) Request body

Section C: HTTP Status Codes and Practical Understanding

13. Match the following HTTP status codes with their meanings:

- 200
- 201
- 400
- 401
- 404

- 500

14. Give **two examples** of how **Postman** can be used to test an API built with Node.js and Express.js.
15. Briefly explain the **difference between 2xx, 3xx, 4xx, and 5xx HTTP status code categories**, and give one example of each.