MERN Stack Assignment 5

1. **Apart from MERN Stack, what other stacks are you familiar with?**

   Popular Stacks
   LAMP stack: JavaScript - Linux - Apache - MySQL - PHP
   LEMP stack: JavaScript - Linux - Nginx - MySQL - PHP
   MEAN stack: JavaScript - MongoDB - Express - AngularJS - Node.js
   Django stack: JavaScript - Python - Django - MySQL
   Ruby on Rails: JavaScript - Ruby - SQLite – Rails

2. **In ExpressJs, what do you mean by middleware?**

   Middleware literally means anything you put in the middle of one layer of the software and another. Express middleware are functions that execute during the lifecycle of a request to the Express server. Each middleware has access to the HTTP request and response for each route (or path) it's attached to. In fact, Express itself is compromised wholly of middleware functions. Additionally, middleware can either terminate the HTTP request or pass it on to another middleware function using next (more on that soon). This "chaining" of middleware allows you to compartmentalize your code and create reusable middleware.

3. **What exactly do you mean when you say "sharding"?**

   Sharding is a very important concept which helps the system to keep data into different resources according to the sharding process.

   The word "Shard" means "a small part of a whole". Hence Sharding means dividing a larger part into smaller parts.

   In DBMS, Sharding is a type of DataBase partitioning in which a large DataBase is divided or partitioned into smaller data, also known as shards. These shards are not only smaller, but also faster and hence easily manageable.

4. **Describe a few examples Where can the MERN Stack be used?**

   A few examples of purposes where MERN is used are:

   Calendars and To-do Apps

   A calendar or a to-do app is a rudimentary project that can tell you a lot about the mechanics of the MERN stack. You can design the frontend, i.e., the interface of the calendar or to-do app using ReactJS. The data to be stored, accessed, modified, shown in the to-do app is made possible using MongoDB.

   Interactive Forums

Another suitable use case for MERN is an interactive forum, which can be a social media platform or a website that allows users to share messages and communicate. The topic of the interactive forum may or may not be predefined.

Social Media Product

An interactive forum is just one use of the MERN stack for social media. These include ads, posts, a mini web app embedded in the social media page, etc.

5. **What do you mean when you say "threads"?**

Thread is similar to the sequential programs described previously. A single thread also has a beginning, a sequence, and an end. At any given time during the runtime of the thread, there is a single point of execution. However, a thread itself is not a program; a thread cannot run on its own. Rather, it runs within a program.