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Module #2 - So You Wanna Be A Developer...

Assignment #2 - paste in your description for each of the technologies you researched

1. **Angular** -a structural framework for dynamic web apps. It lets you use HTML as your template language and lets you extend HTML's syntax to express your application's components clearly and succinctly. AngularJS's data binding and dependency injection eliminate much of the code you would otherwise have to write. And it all happens within the browser, making it an ideal partner with any server technology.
2. **Postgres** - a powerful, open source object-relational database system. It has more than 15 years of active development and a proven architecture that has earned it a strong reputation for reliability, data integrity, and correctness. It is fully ACID compliant, has full support for foreign keys, joins, views, triggers, and stored procedures (in multiple languages)
   1. **ACID** - an acronym that describes four properties of a robust database system: atomicity, consistency, isolation, and durability. These features are scoped to a transaction, which is a unit of work that the programmer can define.
3. **Source Control Management** - the management of changes to documents, computer programs, large web sites, and other collections of information. Changes are usually identified by a number or letter code, termed the "revision number", "revision level", or simply "revision".
4. **AWS Certified Solutions Architect** - Associate (Released February 2018) examination is intended for individuals who perform a solutions architect role. This exam validates an examinee's ability to effectively demonstrate knowledge of how to architect and deploy secure and robust applications on AWS technologies.
5. **Spring Framework** - an application framework and inversion of control container for the Java platform. The framework's core features can be used by any Java application, but there are extensions for building web applications on top of the Java EE (Enterprise Edition) platform. Although the framework does not impose any specific programming model, it has become popular in the Java community as an addition to, or even replacement for the Enterprise JavaBeans (EJB) model. The Spring Framework is open source.
   1. **Java EE (J2EE)** - a set of specifications, extending Java SE with specifications for enterprise features such as distributed computing and web services. Java EE applications are run on reference runtimes, that can be microservices or application servers, which handle transactions, security, scalability, concurrency and management of the components it is deploying
   2. **Enterprise JavaBeans** - one of several Java APIs for modular construction of enterprise software. EJB is a server-side software component that encapsulates business logic of an application. An EJB web container provides a runtime environment for web related software components, including computer security, Java servlet lifecycle management, transaction processing, and other web services. The EJB specification is a subset of the Java EE specification.
6. **.NET Framework** - a software framework developed by Microsoft that runs primarily on Microsoft Windows.
   1. **Software Framework** - an abstraction in which software providing generic functionality can be selectively changed by additional user-written code, thus providing application-specific software. A software framework provides a standard way to build and deploy applications.
7. **Restful API** - an application program interface (API) that uses HTTP requests to GET, PUT, POST and DELETE data.
   1. API - acronym for Application Programming Interface, which is a software intermediary that allows two applications to talk to each other.
8. **React** - a JavaScript library[2] for building user interfaces. React can be used in the development of single-page applications and mobile applications. It aims primarily to provide speed, simplicity, and scalability. As a user interface library, React is often used in conjunction with other libraries such as Redux.
   1. **Redux** - an open-source JavaScript library for managing application state. It is most commonly used with libraries such as React or Angular for building user interfaces.
9. **NodeJS** - a JavaScript runtime built on Chrome's V8 JavaScript engine. Node.js uses an event-driven, non-blocking I/O model that makes it lightweight and efficient. Node.js' package ecosystem, npm, is the largest ecosystem of open source libraries in the world. Node.js represents a "JavaScript everywhere" paradigm, unifying web application development around a single programming language, rather than different languages for server side and client side scripts.
   1. **npm** - a package manager for the JavaScript programming language. It is the default package manager for the JavaScript runtime environment Node.js. It consists of a command line client, also called npm, and an online database of public and paid-for private packages, called the npm registry. The registry is accessed via the client, and the available packages can be browsed and searched via the npm website. The package manager and the registry are managed by npm, Inc.
10. **NoSQL Databases** - provides a mechanism for storage and retrieval of data that is modeled in means other than the tabular relations used in relational databases. The data structures used by NoSQL databases (e.g. key-value, wide column, graph, or document) are different from those used by default in relational databases, making some operations faster in NoSQL. The particular suitability of a given NoSQL database depends on the problem it must solve. Many NoSQL stores compromise consistency (in the sense of the CAP theorem) in favor of availability, partition tolerance, and speed. Most NoSQL stores lack true ACID transactions, although a few databases, such as MarkLogic, Aerospike, FairCom c-treeACE, Google Spanner (though technically a NewSQL database), Symas LMDB, and OrientDB have made them central to their designs.
    1. **MongoDB** - a free and open-source cross-platform document-oriented database program. Classified as a NoSQL database program, MongoDB uses JSON-like documents with schemas.
       * + **Document-Oriented Database (Document Store)** - a computer program designed for storing, retrieving and managing document-oriented information, also known as semi-structured data
         + **JSON (JavaScript Object Notation)** - an open-standard file format that uses human-readable text to transmit data objects consisting of attribute–value pairs and array data types (or any other serializable value).
         + **semi-structured data** - a database model where there is no separation between the data and the schema, and the amount of structure used depends on the purpose
         + **Schema** - a database system is its structure described in a formal language supported by the database management system (DBMS). The term "schema" refers to the organization of data as a blueprint of how the database is constructed (divided into database tables in the case of relational databases)