**1. what is the difference between maven and gradle**

***Maven:*** *It* is a popular open-source build tool developed by the Apache Group. Maven helps them build and manage projects in their day to day work. Maven uses Extensible Markup language(XML) for the structuring of the application.

* Maven is based on developing pure Java language-based software.
* It uses Extensible Markup Language(XML) for creating project structure.
* Developing applications in a given time limit.
* This tool serves a limited amount of developers and is not that customizable.

***Gradle:*** Gradle is an open-source tool that helps us to create software with mechanization. This tool is widely used for the creation of different kinds of software due to its high performance. It works on Java and a Groovy-based Domain-Specific Language (DSL) for developing the project structure.

* Gradle is based on developing domain-specific language projects.
* It uses a Groovy-based Domain-specific language(DSL) for creating project structure.
* Developing applications by adding new features to them.
* This tool is highly customizable as it supports a variety of IDE’s.

**2. what is difference between yaml and properties file**

***YAML:***( YAML Ain't Markup Language)

* mainly made for configuration files.
* Supports key/val, basically map, List and scalar types (int, string etc.)
* Its usage is quite prevalent in many languages like Python, Ruby, and Java
* Hierarchical Structure
* Spring Framework doesn’t support @PropertySources with .yml files
* If you are using spring profiles, you can have multiple profiles in one single .yml file

***Properties file:***

* Supports key/val, but doesn’t support values beyond the string
* It is primarily used in java
* Non-Hierarchical Structure
* supports @PropertySources with .properties file
* Each profile need one separate .properties file

**3. what is profiles in spring boot**

A profile is a set of configuration settings. Spring Profiles helps segregating your application configurations, and make them available only in certain environments.﻿ An application run on many different environments

***Why we need spring boot profiles.***

Each environment requires a setting that is specific to them. For example, in DEV, we do not need to constantly check database consistency. Whereas in TEST and STAGE, we need to. These environments host specific configurations called Profiles

**4. difference between internal embedded and external db config**

The embedded database concept is very helpful during the development phase, because they are lightweight, fast, quick start time, improve testability, ease of configuration, it lets developer focus more on the development instead of how to configure a data source to the database, or waste time to start a heavyweight database to just test a few lines of code.

HSQL,H2,Derby,MySQL etc are the embedded databases

**5. what is entity and different types of mappings**

An entity is a lightweight persistence domain object. Typically, an entity represents a table in a relational database, and each entity instance corresponds to a row in that table.

Types of Mapping:

* One-To-One shared primary key relationship mapping
* One-To-One foreign key relationship mapping
* One-To-Many relationship mapping
* Many-To-Many relationship mapping
* Many-To-Many extra columns relationship mapping

**6. logging in spring boot application**

The purpose of logging is to track error reporting and related data in a centralized way. Logging should be used in big applications and it can be put to use in smaller apps, especially if they provide a crucial functions.

It gives you the information about **Date and Time of the log, log level shows INFO, ERROR or WARN, Process ID ,Thread Name and Logger Name**