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## PART-I : THEORETICAL UNDERSTANDING

1. When managing packages in a project, why might a developer choose to lock the version of a package instead of always using the latest version?

There are some of main reasons why developers lock the package version. They are:

- \* On installing the same repository package version as existing may ensure that same dependencies are installed across development and production environment.

- \* By this way we can prevent errors and conflicts.

- \* As developer works in a team, anyone can run npm install in the package that used exactly same dependency tree that were developed.

2. Describe a situation in web development where it would be more appropriate to use asynchronous method rather than synchronous ones.

- \* If a user want his/her app to run fast, but API takes time to fetch data. we can use asynchronous program.

- \* Asynchronous load quickly and increases user experiences.

- \* In case of several task needs to be performed, we can use asynchronous.

- \* The application that was created using asynchronous program doesn't need to wait for the completion of each task. Example: Emails, Slacks, Whatsapp, so on.



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3.

In php, developers often reuse code by including or requiring files. Briefly explain the difference between the 'include' and 'require' functions, and when you might choose one over the other.

Include() and require() are both used to create from one php file to another or a new php file.

### Require()

- \* Require() will produce fatal error if the file is not existing
- \* The script will be stopped after the error displayed.
- \* We can use Require() if we don't compromise and pay attention to all the statements in the program.
- \* It is the best practice for the developer to stand in the safer side by choosing require()
- \* Require() is advisable to use over framework, LSS or any complex php applications.

### Include()

- \* Include() will produce a warning if the file is not existing
- \* The script will continue after the (error - warning) is displayed.
- \* We cannot use include() in the same cases of attention and compromise.
- \* It is not a best practice.
- \* Include() is not that much advisable for complex applications.

Conclusion:

I will choose require() over include().