

**Assignment01-Q3:**

Maven is beneficial to programmers in multiple ways.

- Maven delivers improved performance and faster project build time.
- Maven works cross-platform so programmers can easily switch between operating systems.
- Maven allows programmers to write plug-ins easily
- Maven has huge repositories (local, central, etc.) that allow programmers to share user libraries with others in the community.
- Maven provides all the necessary libraries, eliminating the need to visit websites to obtain software.

**Assignment01-Q4:**

Divide and Conquer:

- More maintainable as classes are more focussed
- It makes code more reusable as similar blocks of code solutions can be used in other projects
- Easier debugging as the errors can be associated with a specific class.

Information Hiding:

- Keeps private databases hidden from users - preventing misuse or even confusion for the users.
- Reduces the complexity of the program
- More maintainable as changes in data won't affect the program's usability/code.

Open Close:

- Additional features can be added using subclasses without changing existing code - reducing the risk of errors.
- Allows code to be more expandable by adding more flexibility
- Other programmers can add to code without a detailed understanding of existing code - allowing for flexibility

Single Responsibility:

- Each class has a focused purpose, making code readable, easily testable and manageable.
- Classes are independent reducing the dependence between different classes and their functions.
- Changes to one aspect won't affect the functions of other classes; allowing for easier maintenance.