



SUMMARY FOR THE MINDMAP

Encapsulation:

- Protects the internal state of an object.
- Allows access only through defined methods.

Data Validation:

- Ensures that incoming data is valid.
- Prevents unwanted or harmful data from affecting the object's state.

Control Over Data:

- Manages how data is accessed and modified.
- Provides a single point for implementing changes.

Abstraction:

- Separates how data is stored and used.
- Allows changes in storage without affecting users.

Maintainability:

- Easier to update and maintain code.
- Centralizes changes in one place.

Readability:

- Makes code easier to read and understand.
- Clarifies the intended use of variables.

Interface Segregation:

- Provides specialized interfaces for different types of access.
- Prevents unnecessary dependencies between parts of the code.

Design Patterns:

- Supports software design patterns like MVC, Observer.
- Enhances flexibility in software design.

Security:

- Controls access to sensitive data.
- Avoids security issues related to direct access.

Performance:

- Optimizes performance by reducing unnecessary access.
- Improves performance through better access management.