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CSE210 – Week 05

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**Explain Inheritance**

# Meaning of Encapsulation

Encapsulation means wrapping something up as if placing it inside a capsule. It means carefully deciding what actions your classes should perform and hiding the details of how they do it, while also preventing other code from seeing or changing those details.

## Benefit of Encapsulation

Improved data security and protection is one of encapsulation's main benefits. Encapsulation lowers the chance of mistakes and security breaches by preventing unwanted access and altering an object's state by concealing internal data and only allowing restricted access through methods.

## Application of Encapsulation

One way we can apply Encapsulation is by the process of combining data (variables) and methods (functions) that work with that data into a single entity, such as a class. This improves security and maintainability by shielding the data from direct external access and alteration.

## Code Example of Encapsulation

Example 1:

*public class Account*

*{*

*private List<int> \_transactions = new List<int>();*

*public void Deposit(int amount)*

*{*

*\_transactions.Add(amount);*

*}*

*}*

Example 2:

*public class Fraction*

*{*

*private int \_top;*

*private int \_bottom;*