SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)
COIMBATORE-35

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

UNIT I

INTRODUCTION TO OOP

Abstraction (Hiding internal details)

Hiding internal details and showing functionality is known as abstraction. For example, phone call, we don't know the internal processing.

2 Types

1. Data abstraction
2. Process abstraction

In Java, we use abstract class and interface to achieve abstraction.

Encapsulation (Wrapping up of data)

Binding (or wrapping) code and data together into a single unit are known as encapsulation. For example, a capsule, it is wrapped with different medicines.

A java class is the example of encapsulation. Java bean is the fully encapsulated class because all the data members are private here.

Types

1. Member Variable Encapsulation
2. Function Encapsulation
3. Class Encapsulation

Capsule

Advantage

Protects an objects from unwanted access by clients

Difference between abstraction & encapsulation

Abstraction	Encapsulation
Design level process	Implementation level process

Reduce Complexity	Provide privacy & maintain control over transparency