

# 23CSB101 OBJECT ORIENTED PROGRAMMING LANGUAGE

## UNIT-01 INTRODUCTION TO OOP AND JAVA:

### Lect-01: Introduction to OOP

The procedural programming model is derived from structured programming. Procedural programming uses procedures to instruct the computer what to do in a series of steps.

Object-Oriented Programming (OOP) and Procedural Programming are two different programming paradigms. In Procedural Programming, the focus is on writing procedures or functions that perform specific tasks. The program is divided into smaller modules, and data is shared between these modules using global variables. On the other hand, OOP focuses on creating objects that encapsulate both data and the functions that operate on that data. These objects can communicate with each other through methods and can inherit properties and behaviors from parent objects. OOP promotes code reusability, modularity, and easier maintenance, while Procedural Programming is simpler and more straightforward for smaller programs.

### Comparison of Procedural Programming and Object-Oriented Programming

Attribute	Object-Oriented Programming	Procedural Programming
Paradigm	Object-oriented	Procedural
Focus	Objects and their interactions	Step-by-step procedures
Data Abstraction	Emphasized	Not emphasized
Data Encapsulation	Emphasized	Not emphasized
Inheritance	Supported	Not supported
Polymorphism	Supported	Not supported
Code Reusability	High	Low
Code Readability	High	Medium
Code Complexity	Low	Medium
Modularity	High	Medium