Chapter 4: Software Estimation Metrics

1. Software Metrics

Software metrics are quantitative measures used to estimate, monitor, and control software development. Common metrics include Lines of Code (LOC), Function Points (FP), productivity, effort, cost, and defect density.

2. Estimation Techniques: LOC and FP

- **LOC (Lines of Code):** Estimates effort and cost based on the number of lines in the program. Simple but language-dependent.
- **FP (Function Points):** Measures software size based on functionality delivered to the user. Language-independent and more reliable early in the project.

3. COCOMO II Model

COCOMO II (Constructive Cost Model) is an algorithmic model used to estimate effort, cost, and schedule. It considers project size, scale factors, and cost drivers to provide more accurate estimates for modern software projects.

4. Planning and Tracking Project Progress

Project planning involves estimating effort, allocating resources, and defining schedules. Progress tracking uses metrics such as milestones achieved, effort spent, and defect rates to ensure the project stays on track.