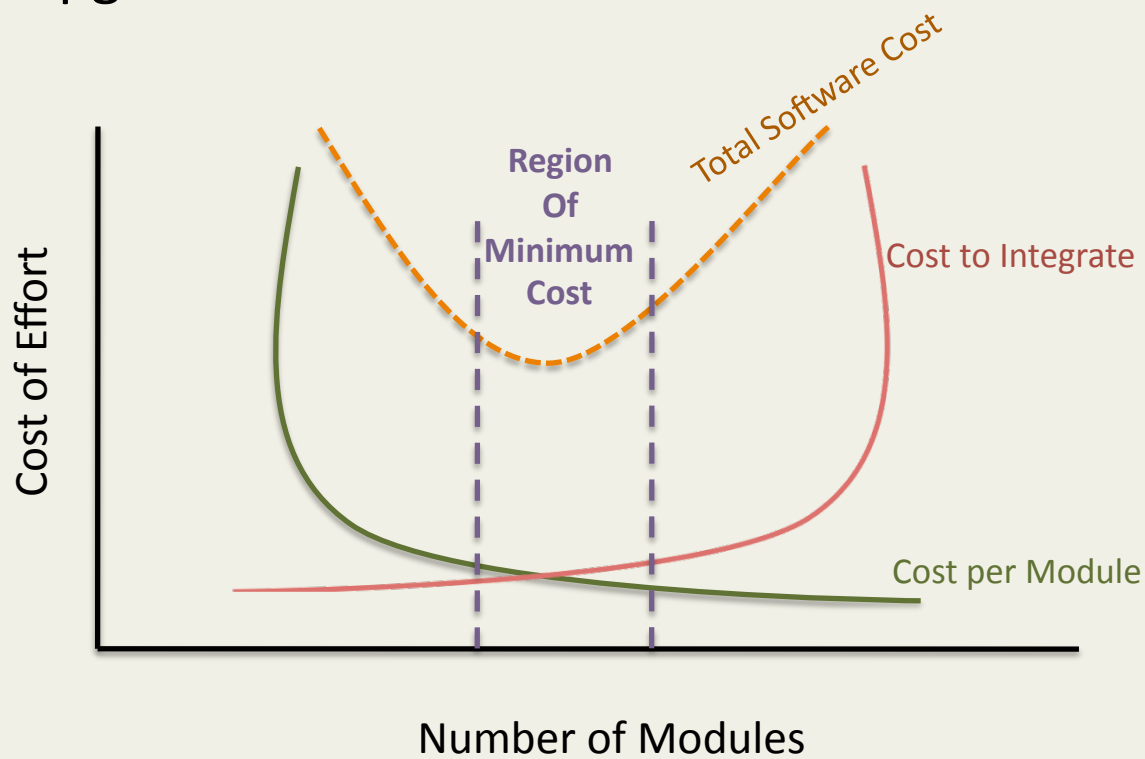# Chapter 08:
Design Concepts

Supplementary Notes

Modularity vs Software Cost

- From pg 226 of the text:

Sustainability (Maintenance)

- Staffing changes over time
  - Original designer may leave
  - Original programmer may move on to other projects
  - Maintenance may go on for many years beyond first deployment
- Design, Architecture, Components
  - Often maintenance is not considered
  - Focus is "ideal" design or architecture
  - Consequences of complex implementation reverberate for many years
- Example: Voyages Project
  - Hibernate, AJAX
  - Simple changes require programmer intervention
  - Even simple map label modifications are a complex, time-consuming event

Fact/Fallacy Tidbit

- Fact 41

  Maintenance typically consumes 40% to 80% of software costs

- Discussion

  – Original software build cost is about 20%-60% of total

  – Maintenance is dominant phase: never ends

  – "Old hardware becomes obsolete; old software goes into production every night"

  From Robert Glass, "Facts & Fallacies of Software Engineering"