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”