

Design Checklist

Design Practices

- Have you iterated, selecting the best of several attempts rather than the first attempt?
- Have you tried decomposing the system in several different ways to see which way will work best?
- Have you approached the design problem both from the top down and from the bottom up?
- Have you prototyped risky or unfamiliar parts of the system, creating the absolute minimum amount of throwaway code needed to answer specific questions?
- Has your design been reviewed, formally or informally, by others?
- Have you driven the design to the point that its implementation seems obvious?
- Have you captured your design work using an appropriate technique such as a Wiki, email, flipcharts, digital camera, UML, CRC cards, or comments in the code itself?

Design Goals

- Does the design adequately address issues that were identified and deferred at the architectural level?
- Is the design stratified into layers?
- Are you satisfied with the way the program has been decomposed into subsystems, packages, and classes?
- Are you satisfied with the way the classes have been decomposed into routines?
- Are classes designed for minimal interaction with each other?
- Are classes and subsystems designed so that you can use them in other systems?
- Will the program be easy to maintain?
- Is the design lean? Are all of its parts strictly necessary?
- Does the design use standard techniques and avoid exotic, hard-to-understand elements?

- Overall, does the design help minimize both accidental and essential complexity?