Top Down Design

Also known as:
• divide and conquer
• stepwise refinement
• structured programming

If we look at a problem as a whole, it may seem impossible to solve because it is so complex.

Complex problems can be solved using top-down design, where
• We break the problem into a sequence of smaller tasks
• Then break the sub-tasks into tasks
• Soon, each of the tasks will be easy to do

Advantages to top down design:
• Breaking the problem into parts helps us to clarify what needs to be done.
• At each step of refinement, the new parts become less complicated and, therefore, easier to figure out.
• Parts of the solution may turn out to be reusable.
• Breaking the problem into parts allows more than one person to work on the solution.

Top Down Design usually results in a hierarchy chart that describes the tasks that must be accomplished. Each “leaf” task is a module (usually implemented using a function).