Instructions for grader:

1. In this homework assignment, I have used **BUILDER PATTERN** for constructing Task(and it’s subclasses) objects, because at first I was using constructors to assign values for new Tasks, like Id, Label, estimatedHours, etc. This worked fine for LeafTask, because it must have all the values, which can be passed via constructor. But for creating ParentTask, it does not need to have estimatedHours value, it is calculated from lower level LeafTasks inside it. But the constructor required all the values, because ParentTask is a subclass of Task. To overcome this, I used Builder pattern to constructing all the Task objects and it subclasses objects. Now only the id, label and description was ‘required’ from all the objects, and estimatedHours and assignEngineer as kept optional. This way we need not have to pass estimatedHours and assignEngineer to the ParentTask.
2. I have also used **COMPOSITE PATTERN** to store the list of Task objects inside a Task object. So while iterating the list of object we consider group of similar object (LeafTask, ParentTask, etc) as a single objet, and calculate qualtaties like OriginalEstimatedTotalHours, PercentComplete, etc from it.
3. I have not particularly applied the **ITERATOR PATTERN**, but I do have used for each loop at various places in the code, which internally uses iterator pattern.