# Lab Work

Create a java project “Students”, with the following classes:

* StudentBean.java (with the fields)
  + Id (Integer)
  + Name (String)
  + AssignmentMarks (Double)
  + ExamsMarks (Double)
  + Grade (Character)
  + Getters and Setters
  + A “String toString()” method that returns a concatenation of the ID and the name of the student
  + A “boolean equals(Object obj)” method that compares the id and return true if it matches. False if not.
* Calculator.java (with the methods)
  + boolean isIdValid(StudentBean student) and returns true only if id is bigger than 0.
  + Character calculateGrade(StudentBean student) which calculates the grade based on the following algorithm :
    - We first calculate the Total marks :
      * If either exam marks OR assignment marks is 0, then total = 0
      * Else Total Marks = 60% of Exams + 40% of Assignment
    - Using the total marks, we return the following :
      * A 🡪 Total marks between 80 and 100
      * B 🡪 Total marks between 60 and 79
      * C 🡪 Total marks between 40 and 59
      * F 🡪 Total marks less than 40

1. Create a sonar-project.properties in your project’s workspace and analyse your project using sonar-scanner.
2. View the results on sonar and correct the different alerts introduced.