

King Saud University
College of Computer & Information Science

CSC111

Lab Exam 2_B

(A. 5 marks) Write a Java program (class name: **Grade1**) that determines a student's letter grade. The program will first read a student id of type int then read three scores (quiz, mid-term, and final scores) all of type double. Each of these scores is out of 100. Then it will calculate total score as following:

- Quiz is 30% of the total score.
- Mid-term is 30% of the total score.
- Final is 40% of total score.

After that it determines and prints the letter grade based on the following rules:

- $\text{total score} \geq 90$ \rightarrow grade=A
- $70 \leq \text{total score} < 90$ \rightarrow grade=B
- $50 \leq \text{total score} < 70$ \rightarrow grade=C
- $\text{total score} < 50$ \rightarrow grade=F
- otherwise you print "Invalid"

Here is a sample run of the program

SAMPLE RUN:

```
Enter student id: 434001254 ↵
Quiz score: 80 ↵
Mid-term score: 68 ↵
Final score: 90 ↵
Grade for student 434001254 is B.
```

(B 3 marks) Convert your program into an interactive Grade calculator that can handle more than one student. Write a new class named: **Grade2**. Your program should keep reading students data and calculating their grades until user enter -1 as a student id. At this point your program should terminate.

Here is a sample run of the program

SAMPLE RUN

```
Enter student id: 434001254 ↵
Quiz score: 60 ↵
Mid-term score: 60 ↵
Final score: 80 ↵
Grade for student 434001254 is C.
Enter student id: -1 ↵
Goodbye
```