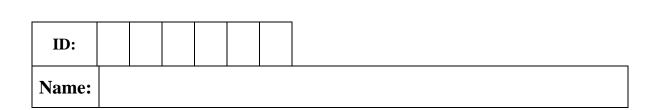
King Fahd University of Petroleum and Minerals

Information and Computer Science Department

ICS 102: Introduction to Computing Second Semester 2005 - 2006 (053)

FINAL EXAM (25%)



Grades		
Question	Max	Scored
1	8	
2	10	
3	10	
4	10	
5	12	
TOTAL	50	

- 1. Design and write a Java program which:
 - Reads unknown number of integers from a file called "numbers.txt",
 - Saves the positive integers into an output file called "positive.txt"
 - Saves the negative integers into an output file called "negative.txt

- 2. Design and write a Java program which:
 - Reads 100 integers using a Scanner object into an array called DUP. (The integers in DUP are not necessarily distinct.)
 - handle **exceptions** when reading
 - Copies the distinct integers in DUP in to another array called DIS
 - Prints the integers in DIS.

- 3. Design and write a Java program which:
 - Declares a 2-D Integer array of 5 rows and different number of columns in each row.
 - Populate the 2-D array using a Scanner object.
 - Compute and print the average of each row.

- 4. Last year 250 ICS102 students took the final exam. The final exam was graded out of 100. Design and write a Java program which:
 - Reads the student grades (assume they are all integers) using a Scanner object
 - Counts how many students scored 0, how many students scored 1, how many scored 2, up to how many scored 100.
 - Prints the median score.
 - <u>Note</u>: Your program should not be more than 30 lines.

- 5. Design and write a Java program for classes TEST and STUDENT. The STUDENT class has the following 3 instance variable:
 - ID
 - Name
 - An array of 4 doubles (grades of 4 quizzes).

And the following methods:

- One constructor
- One accessor which returns the array of quizzes
- One mutator which changes the value of one quiz
- And other methods needed by the TEST class.

The TEST class:

- o Creates 1000 STUDENT objects
- Prints The average of each STUDENT object
- Prints the ID, the Name, and Quiz 2 score of each STUDENT object with the highest score in quiz 2.