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| --- | --- |
| No. of Pages | 2 |
| No. of Questions | 2 |
| Total Marks | 20 |
| **Time**: 50 minutes | |

B

**Department of Computer Science and Engineering**

**MIDTERM EXAMINATION Spring 2019**

**CSE 110: Programming Language I**

**CSE 161: Computer Programming**

* Write intial of theory teacher and section on top of the answer script in LARGE FONT

AAR/ABD/AHR/AKO/AMH/ARF/DSH/FSH/ISH/JNM/MSI/MSN/NSM/RYB/SBI/SHC/SZN/TRD/WAR

* Answer all questions. Use **back part** of the the answer script for rough work.
* Answer Question 1 at the **beginning part** of answer script.
* Write answer of Question 2 **on the question paper**.
* Figure in bracket [] next to each question indicates marks for that question.
* At the end of exam, put **question paper** inside answer script and **return both**.
* Understanding the question is part of the exam, please do not ask questions. **No washroom breaks.**

Section: \_\_\_\_\_\_ ID: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name in CAPITAL: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Names/initials of Lab Teachers \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Lab Room Number \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Lab Day and Time\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Question 1 [10 Points]**

**[Answer on the answer-script]**

Draw the **flowchart** of a program that asks the user for **quantity** and takes some marks out of 100 as input. Valid marks are 0 to 100. However, due to user error, some marks may fall outside that range, say 101 or -5 (minus five). Print average of **invalid** marks and percentage of **valid** marks (Accuracy). Assume there are atleast one valid mark and atleast one invalid mark.

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| --- | --- | --- | --- |
| **Example No.** | **Inputs for that example** | **Output for that example** | **Explanation** |
| 1 | 5, 20, -3, 105, 70, 100 | Average: 51  Accuracy (%): 60 | 5 means there are 5 inputs.  Average of invalid marks is (-3 + 105)/2  =102/2 =51  20, 70 and 100 are valid. So, there are 3 numbers out of 5  Percentage = 3/5x100 = 60 |
| 2 | 3, 500, 2, 100 | Average: 500  Accuracy (%): 66.66 | 3 means there are 3 inputs.  Average of invalid marks is (500)/1  =500  2 and 100 are valid. So, there are 2 numbers out of 3  Percentage = 2/3x100  = 66.66 |

**Question 2 [10Points]**

[answer on the question paper]

|  |  |
| --- | --- |
|  | **public class Q2B** |
|  | **{** |
|  | **public static void main(String[] args)** |
|  | **{** |
|  | **int i = 5;** |
|  | **while (i > 0)** |
|  | **{** |
|  | **int j = i;** |
|  | **while (j > 1)** |
|  | **System.out.print(j--);** |
|  | **System.out.println("####");** |
|  | **--i;** |
|  | **}** |
|  | **double x = 9;** |
|  | **double y = 8;** |
|  | **double z = 7;** |
|  | **System.out.println(x > y || y < z);** |
|  | **System.out.println(x < y && y > z);** |
|  | **System.out.println(x > y);** |
|  | **System.out.println(x + y > z);** |
|  | **System.out.println(x + y > z);** |
|  | **}** |
|  | **}** |

[Answer on the question paper. **There are NO errors / mistakes in this question. The question is correct.**]

**Show output of the above program:**

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