**NUST SCHOOL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE**

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| Faculty Member: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Semester: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Section: \_\_\_\_\_\_\_\_\_\_\_\_ |

Department of Electrical Engineering

EE- 222: Microprocessor Systems

**LAB # 05**

**Writing Assembly Language Program**

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| Student name | Reg. No. | Lab Report Marks / 10 | Viva Marks / 5 | Total/15 |
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**Objective:**

The aim of this lab is to learn about loops, jumps, comparisons and their working in Assembly Language.

**Task:**

Using the following table as a guide, write an assembly program that asks the user to enter an integer test score between 0 and 100. The program should display the appropriate letter grade:

|  |  |
| --- | --- |
| **Score Range** | **Letter Grade** |
| 90 to 100 | A |
| 80 to 89 | B |
| 70 to 79 | C |
| 60 to 69 | D |
| 0 to 59 | F |

Add the following features to the above program;

1- Run in a loop so that multiple test scores can be entered.

2- Accumulate a counter of the number of test scores.

3- Perform range checking on the user's input: display an error message if the test score is less than 0 or greater than 100.

**[10 marks]**

**Note:** viva will be taken at the end of lab carrying **5 marks**

**Sample Output**