National University of Computer and Emerging Sciences



**Laboratory Manual**

***(Introduction to Computing)***

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| Course Instructor | Sir Amir Wali |
| Lab Instructors | Zubair Farooqi, Ismaeel Haider |
| Section | A1/A2 |
| Semester | FALL-2016 |
| Date | 18th October 2016 |

Department of Computer Science

FAST-NU, Lahore

**Lab Manual**

***(First Programs in C++)***

**Problem 1:**

Create a C++ Calculator program that takes 2 Integers as input from User and provides the following options:

1. Add
2. Subtract
3. Multiply
4. Divide

(All operations are to be Integer.)

**Problem 2:**

Write a Program that takes N numbers from user as input and displays their average to console.  
i.e.

User enters: 4, 10, 11, 12, 13

Program output: 11.5

**Problem 3:**

Write C++ program that takes an integer as input and outputs if it is a Prime Number or not.

**Problem 4:**

Implement an algorithm for a number guessing game on C++ as discussed in class. Here’s what your program should do:

* Ask the user for a range and guess the number thought by the user.
* Apply sanity checks for the range (start point should not be equal or greater than the end point).
* To guess the number, take the mid-point of the range and ask the user if the guessed number is greater or less than the mid-point, adjust your range accordingly. Repeat this step until you guess the number successfully.

*(Don’t hesitate to ask for any help!)*