

National University of Computer and Emerging Sciences



Lab Manual *for* Programming Fundamentals

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Objectives:

In this lab we will learn

- User Defined Functions

Reference:

```
functionType functionName(formal parameter list)
{
    statements
}
```

```
void functionName(formal parameter list)
{
    statements
}
```

Practice Questions:

Q1) Functions Practice question:

```
// This program uses a function that returns true or false.
#include <iostream>
using namespace std;

// Function prototype
bool isEven(int);

int main()
{
    int val;

    // Get a number from the user.
    cout << "Enter an integer and I will tell you ";
    cout << "if it is even or odd: ";
    cin >> val;

    // Indicate whether it is even or odd.
    if (isEven(val))
        cout << val << " is even.\n";
    else
        cout << val << " is odd.\n";
    return 0;
}

bool isEven(int number)
{
    bool status;

    if (number % 2 == 0)
        status = true; // The number is even if there is no remainder.
    else
        status = false; // Otherwise, the number is odd.
    return status;
}
```

(program output continues)

Program Output with Example Input Shown in Bold

```
Enter an integer and I will tell you if it is even or odd: 5 [Enter]
5 is odd.
```

Problems:

Problem 1: (Marks 5)

Define two void functions to print the maximum and the minimum number respectively among three numbers entered by user.

Problem 2: (Marks 10)

Write a program using the C++ programming language to print all the prime numbers between two given numbers by creating a function.

make function with following prototype:

```
bool isPrime(int num)
```

Example:

```
Enter the first number: 20
Enter the second number: 35

The Prime numbers between 20 and 35 are : 23 29 31
```