Department of Computer Science
NIT , Calicut

# CS2093 Hardware Laboratory

Winter Semester 2017-2018

## Assignment set 5: Subroutines

## Instructions

1. All the assignments should be submitted through Eduserver.
2. Pen drives are not permitted inside the lab.
3. Practice problems will not be evaluated.

## Practice Problem

1. Implement the following recursive procedure using NASM to check whether string is palindrome or not?

```
int ispalindrome(char *s, int len)
{
        if (len <=1 ) return 1;
        else return((s[0] == s[len-1]) && ispalindrome(s+1, len-2));
}
```

## Assignment problem

1. Write a program to read 10 numbers and find the sum of squares of those numbers using subroutine.
2. Write a NASM program to print fibonacci series up to a number using recursive subroutine.
3. Implement the following recursive subroutine using NASM

```
int addNumbers(int n)
{   if(n != 0)
      return (n + addNumbers(n-1));
   else
      return n;
}
```

4. Write a recursive subroutine to find factorial of a number using NASM.

5. Implement the following recursive function using NASM.

```
int Fibonacci(int i)
{
        if (i == 0)
                return 0;
        if (i == 1)
                return 1;
        return (Fibonacci(i - 1) + Fibonacci(i - 2));
}
```