Computer Science & Engineering Department
I. I. T. Kharagpur

Compilers Laboratory: CS39003

3rd Year CSE: 5th Semester

Assignment - 2: Creating Library — *Marks: 10*
Assign Date: *28th July, 2014* — Submit Date: *23:55, 11th August, 2014*

1. Write a C program consisting of the following functions to create a *library*. You cannot use any standard library function. You have to use in-line assembly language program of x86 along with `int $128` (software interrupt) for GCC assembler.

   - `int prints(char *)` - prints a string of characters. The parameter is terminated by '`\0`'. The return value is the number of characters printed.
   - `int printi(int n)` - prints the integer value of `n` (no newline). It returns the number of characters printed.
   - `int readi(int *eP)` - reads an integer (signed) and returns it. The parameter is for error (`ERR = 1, OK = 0`).
   - `int readf(float *fP)` - reads a floating point number in '`%f`' format e.g. `-123.456`. Caller get the value through the pointer parameter. The return value is `ERR` or `OK`.
   - `int printd(float f)` - prints the floating point number passed as parameter. Returns the number of characters printed.

   The header file `myl.h` is as follows:

```
#ifndef _MYL_H
#define _MYL_H
#define ERR 1
#define OK 0
int prints(char *);
int printi(int);
int readi(int *eP);  // *eP is for error, if the input is not an integer
int readf(float *);  // return value is error or OK
int printf(float);
int prints(char *);
#endif
```

2. Name of your `.c` file should be `ass2_`*roll*`.c`. Only header file you include is `#include "myl.h"`. *It should not contain the function* `main()`. Write your `main()` (in a separate file) to test your library. Do not change the supplied header file.