

Department of Computer Science and Engineering

Indian Institute of Technology, Kharagpur

Compiler Laboratory: CS39003
3rd year CSE, 5th semester

Assignment - 2: Creating Library
Assign Date: August 11, 2023

Marks: 50
Submit Date: 23:55, August 18, 2023

1. Write a C program consisting of the following functions to create a library. You cannot use any standard library function.

- **int printStr(char *)** – prints a string of characters. The parameter is terminated by ‘\0’. The return value is the number of characters printed.
- **int readInt(int *n)** – reads a signed integer in ‘%d’ format. Caller gets the value through the pointer parameter. The return value is OK (for success) or ERR (on failure).
- **int printInt(int n)** – prints the signed integer (n) with left-alignment. Printing sign for a negative number is mandatory while for a positive number it is not required. On success, function will return the number of characters printed and on failure it will return ERR.
- **int readFlt(float *f)** – reads a floating point number in ‘%f’ format (for example, -123.456). Caller gets the value through the pointer parameter. The return value is ERR or OK.
- **int printFlt(float f)** – prints the floating point number (f) with left-alignment. Printing sign for a negative number is mandatory while for a positive number it is not required. However, decimal point should be printed to differentiate it from an integer number. Returns the number of characters printed (on success) or ERR (on failure).

Use only the following header file for your C program.

```
/* Header file for Assginemnt 2: Name it as myl.h */
```

```
#ifndef _MYL_H  
#define _MYL_H  
#define ERR 0  
#define OK 1  
int printStr(char *);  
int printInt(int);  
int readInt(int *);  
int readFlt(float *);  
int printFlt(float);  
#endif
```

2. Name of your .c file as ***ass2_roll.c***, where *roll* is your roll number. Include only "**myl.h**" as your header file. *It should not contain the function main().* Write your `main()` function in a separate file. Use *Makefile* to test your library. Move your *main.c*, *myl.h*, *Makefile* and *ass2_roll.c* in folder **asgn2_roll**. Zip the folder and upload as a single file in the moodle server.

Marking scheme: *Each function will carry equal weight. There will be a penalty of 10 marks if Makefile is not uploaded.*