**CS 1050 Prelab 5**

**Spring 2017**

**Purpose:**

 Practice creating/handling functions.

* Call functions from main and return values.
* Use condition statements to run the program logically.
* Using rand().
* **Using <time.h> and <stdlib.h> libraries.**

**Description**

You are required to perform certain math operations on a number. Ask the user for the input and check whether if the input is a valid number or not. Use function to perform error checks. Then after validating the number, use that number and call the functions listed below and print the results accordingly. Remember: If your code does not have implementation of the user defined function(s), you will be awarded no credit for that part. Also, use return values appropriately. Feel free to ask your TAs for help.

**Implement the following functions for the lab assignment:**

**void drinkMenu(void)** – Displays drink options and asks the user to select a drink. Refer sample output for the options. Scanf should be main, this function should only display the menu.

**int errorCheck (int)** – Takes the user input as an argument (integer type) and checks if the number is valid or not (must be between 1 and 4). Returns 0 if invalid and 1 otherwise.

**int calculateRandomNumber(void)** – This function returns a random number between 1-25 to main(). Use rand() and srand() functions from the stdlib.h library. HINT : Just 1 line of code inside this function.

**int main(void) –** Call all the above listed functions in a sequential form. First, call **displayMenu** ask for a number and call **errorCheck** (use while loop). Next, call the calculateRandomNumber() function and print the returned value in a printf.

DO NOT FORGET TO INCLUDE time.h and stdlib.h headers in order to use rand() and srand().

**Sample Outputs**

Character in bold are inputs from the user:

**What would you like to drink?**

**1. Water: free**

**2. Coke: $1.00**

**3. Lemonade: $1.50**

**4. Chocolate Milk: $1.75**

**Enter an option: 6**

**Not a valid option! Please enter again:-1**

**Not a valid option! Please enter again:11**

**Not a valid option! Please enter again:0**

**Not a valid option! Please enter again:1**

**The random number is 22.**

**dpstm3:~$ ./a.out**

**What would you like to drink?**

**1. Water: free**

**2. Coke: $1.00**

**3. Lemonade: $1.50**

**4. Chocolate Milk: $1.75**

**Enter an option: -1**

**Not a valid option! Please enter again:3**

**The random number is 8.**