Assignment 6

M.Sc 4th semester

Group A & B

There are two possible ways to execute C-functions.

Way 1: #include <stdio.h> int sum(int x){ int s=0,d; while($x > 0$){$d = x\%10; s = s + d; x = x/10;$} return s;}
void main() {int a,b; printf("Give a number"); scanf("%d", &a); b=sum(a); printf("sum of digits=%d", b);}

Way 2: Create two files. (1) function file (give a name "FLA61.h"): in this file write the C-function.
For example: int sum (int x) {int $s = 0, d$; while($x > 0$) {$d = x\%10$; $s = s+d$; $x = x/10$;} return s;}
Now close the C-function file.
(2) Main function file: call it as "MLA61.c". Now you write the main programm into this.
For example: #include<stdio.h> #include"FLA61.h" void main() {int a,b; printf("Give number");scanf("%d", &a);b=sum(a);printf("sum of digits",b);}
If arguments are more than one then call the function as int fun(int x, int y, int z,.....) in the function file. Similarly, in the main programm also write O=fun($i_1, i_2, ...$).
Note that both the files "FLA61.h" and "MLA61.h" should be located in the same directory say "Your name".
(A) Like the example above, write a function for the followings and obtain the output in main programm

1. Last even digit: led(23145)=4.
2. Biggest digit: bd(247156)=7.
3. Position of biggest digit: pbd(247156)=4.
4. Sum of even digits: sed(247156)=12.
5. Exchange last two digits: eld(247156)=247165.
6. Factorial: fact(5)=120.

7. Integer square root: isr(27)=5, isr(49)=7.
8. First digit multiple of 2: dmt(247156)=2.
9. Sum of prime digits: spd(247156)=14.
10. Increment even digits by 1: ied(247156)=357157.

Note: do not give same name for two different functions.

(B) Write a function for the followings and obtain the output in main programm

1. Sum of smallest factors: ssf(24,36)= 2+2=4.
2. k^{th} last digit: kld(2314978,3)=9.
3. smallest common factor: scf(24,36)=2.
4. greatest common factor: gcf(24,36)=12.
5. least common multiple: lcm(24,36)=72.
6. greatest common divisor: gcd(24,36)=12.
7. sum of common factors: socf(84,105)=7.
8. sum of digits of a number x which are more than y: omto(273563,4)=6+5+7=18.
9. Replace k^{th} last digit by a digit: rep(273563,3,8)=273863
10. Sum of digit between given range sm(23158,3,9)=8+5+3=16, sm(516984)=8+6+5=19.