

Chittagong University of Engineering & Technology

Department of Computer science & Engineering

**A C programming project : To make a
calculator & quiz program**

Course number: CSE-142

Course title: Computer Basics & Programming (Sessional)

Experiment number: 08

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Remarks

Name of the student: Emtiaj Hasan

Student's ID number: 1004050

Level: I

Term: I

Section: A

Group: A-2

Objective

My project is to make a calculator and quiz program. As we are level 1, term 1 student, and this time is the eleventh hours of this term, we are given to do a project which are supervised by our dearest Sir Sujon Chowdhury.

//A calculator

```
#include<stdio.h>

#include<conio.h>

#include<math.h>

int main()

{

    double a,b,c,x1,x2;

    int emtiaj;

    __int64 z,fct=1,i;

    printf("\n G'day, this is Emtiaj Hasan. I have made a simple calculator using C
language.\n\n");

    printf("\t\tWhat would you like to do?\n");

    printf("\t\t1.Sum\n\t\t2.Subtraction
\n\t\t3.Multiplication\n\t\t4.Division\n\t\t5.Factorial\n\t\t6.Square root\n\t\t7.Roots
of Quadratic equation\n\t\t8.Nothing\n\n");

    printf("\t\tPress corresponding number.\n\n");

    while(emtiaj!=8)

    {

        scanf("%d",&emtiaj);

        switch(emtiaj)

        {

            case 1://sum

                printf("Enter two number for doing Sum\n");

                scanf("%lf %lf",&a,&b);

                printf("Sum is %.3lf\n",a+b);

                break;
```

case 2://subtraction

```
printf("Enter two number for doing Subtraction\n");
```

```
scanf("%lf %lf",&a,&b);
```

```
printf("Subtraction is %.3lf\n",a-b);
```

```
break;
```

case 3://multiplication

```
printf("Enter two number for doing Multiplication\n");
```

```
scanf("%lf %lf",&a,&b);
```

```
printf("Multiplication is %.3lf\n",a*b);
```

```
break;
```

case 4://division

```
printf("Enter two number for doing Division\n");
```

```
scanf("%lf %lf",&a,&b);
```

```
printf("Division is %.3lf\n",a/b);
```

```
break;
```

case 5://factorial

```
printf("Enter a number for doing factorial\n");
```

```
scanf("%l64d",&z);
```

```
if(z<0&&z%2==0) printf("Factorial of negative even number is -infinity\n");
```

```
else if(z<0&&z%2!=0) printf("Factorial of negative odd number is  
+infinity\n");
```

```

else

{
for(i=1;i<=z;i++)
{
fct*=i;
}

printf("Factorial is %l64d\n",fct);

}

break;

case 6://square root

printf("Enter a number for doing square root of a number\n");

scanf("%lf",&a);

if(a<0) printf("Square root of %.3lf is an imaginary number\n",a);

else printf("Square root of %.3lf is %.3lf\n",a,sqrt(a));

break;

case 7://roots of equation

printf("Quadratic equation is ax^2+bx+c=0\n");

printf("Enter co-efficient of x^2, x & constant.\n");

scanf("%lf %lf %lf",&a,&b,&c);

if((b*b-4*a*c)<0) printf("Since Discriminant of this equation is negetive,the
roots are imaginary.\n");

else

{

x1=(-b+sqrt(b*b-4*a*c))/(2*a);

x2=(-b-sqrt(b*b-4*a*c))/(2*a);

```

```
        printf("%.3lf, %.3lf\n",x1,x2);  
    }  
    break;  
case 8://break  
    printf("Thank you");  
    break;  
}  
}  
  
getch();  
return 0;  
}
```

Output

G'day, this is Emtiaj Hasan. I have made a simple calculator using C language.

What would you like to do?

- 1.Sum
- 2.Subtraction
- 3.Multiplication
- 4.Division
- 5.Factorial
- 6.Square root
- 7.Roots of Quadratic equation
- 8.Nothing

Press corresponding number.

1

Enter two number for doing Sum

2 3

Sum is 5.000

1

Enter two number for doing Sum

2.3 3.6

Sum is 5.900

2

Enter two number for doing Subtraction

6 3

Subtraction is 3.000

3

Enter two number for doing Multiplication

3 6

Multiplication is 18.000

4

Enter two number for doing Division

6 2

Division is 3.000

5

Enter a number for doing factorial

5

Factorial is 120

5

Enter a number for doing factorial

-6

Factorial of negative even number is -infinity

5

Enter a number for doing factorial

-5

Factorial of negative odd number is +infinity

6

Enter a number for doing square root of a number

9

Square root of 9.000 is 3.000

6

Enter a number for doing square root of a number

-6

Square root of -6.000 is an imaginary number

7

Quadratic equation is $ax^2+bx+c=0$

Enter co-efficient of x^2 , x & constant.

3 5 6

Since Discriminant of this equation is negative, the roots are imaginary.

7

Quadratic equation is $ax^2+bx+c=0$

Enter co-efficient of x^2 , x & constant.

1 5 6

-2.000, -3.000

8

Thank you

//A quiz program

```
#include<stdio.h>
#include<conio.h>
char name[100];
int main()
{
    int a,b,c,d,e,f,g,h,i,j,count=0;
    printf(" Hello, this is Emtiaj Hasan. This is a quiz program. Participate to it.\n\n");
    printf("\t\tEnter your name please.\n\n\t\t");
    scanf("%[^\n]",name);

    printf("\n A)What is the capital city of Bangladesh?\n\n");
    printf(" 1) Dhaka\t2) Chittagong\t3) Rajshahi\t4) Sythet\n>");
    scanf("%d",&a);
    if(a==1)
        printf(" You are right\n");
    else printf(" Sorry,you are wrong\n");
    if(a==1) count++;

    printf("\n B)Who gave the thesis of Theory of Relativity?\n\n");
    printf(" 1) Jamal Najrul Islam\t2) Einstien\t3) Stephen Hawking\t4) Max Plank\n>");
    scanf("%d",&b);
    if(b==2)
        printf(" You are right\n");
    else printf(" Sorry,you are wrong\n");
    if(b==2) count++;

    printf("\n C)How many keywords have ANSI C language?\n\n");
    printf(" 1) 25\t2) 20\t3) 32\t4) 40\n>");
    scanf("%d",&c);
    if(c==3)
        printf(" You are right\n");
    else printf(" Sorry,you are wrong\n");
    if(c==3) count++;

    printf("\n D)Who made the Cosmic Calendar?\n\n");
    printf(" 1) Isaac Asimov\t2) Carl Sagan\t3) Nicolas Caviste\t4) Arthur C. Clarke\n>");
    scanf("%d",&d);
    if(d==2)
        printf(" You are right\n");
```

```
else printf(" Sorry,you are wrong\n");
if(d==2) count++;
```

```
printf("\n E)How many Planets have the Solar system gotten?\n\n");
printf(" 1) 10 \t2) 7\t3) 8\t4) 9\n>");
scanf("%d",&e);
if(e==3)
printf(" You are right\n");
else printf(" Sorry,you are wrong\n");
if(e==3) count++;
```

```
printf("\n F)Who invented Nylon?\n\n");
printf(" 1) wallace carothers\t2) Frank Whittle\t3) James Clarke\t4) Gottlieb
Daimler\n>");
scanf("%d",&f);
if(f==1)
printf(" You are right\n");
else printf(" Sorry,you are wrong\n");
if(f==1) count++;
```

```
printf("\n G)Who gave this equation :  $e^{(i*pi)}+1=0$ ?\n\n");
printf(" 1) Carl Friedrich Gauss \t2) Paul Erdos\t3) Srinivasa Ramanujan\t4) Leonhard
Euler\n>");
scanf("%d",&g);
if(g==4)
printf(" You are right\n");
else printf(" Sorry,you are wrong\n");
if(g==4) count++;
```

```
printf("\n H)How many data types have C got?\n\n");
printf(" 1) 6\t2) 5\t3) 7\t4) 8\n>");
scanf("%d",&h);
if(h==2)
printf(" You are right\n");
else printf(" Sorry,you are wrong\n");
if(h==2) count++;
```

```
printf("\n I)What is not an operating system?\n\n");
```

```
printf(" 1) Windows 7\t2) Linux\t3) Ubuntu\t4) Snow leopard\n>");
scanf("%d",&i);
if(i==2)
printf(" You are right\n");
else printf(" Sorry,you are wrong\n");
if(i==2) count++;
```

```
printf("\n J)Who designed Sears Tower (now Willis Tower)?\n\n");
printf(" 1) Fazlur Rahman Khan\t2) John Hancock \t3) Allen Downey\t4) Jeffrey
Elkner\n>");
scanf("%d",&j);
if(j==1)
printf(" You are right\n");
else printf(" Sorry,you are wrong\n");
if(j==1) count++;
```

```
printf("\n %s, you have got %d on 10.",name,count);
```

```
getch();
return 0;
}
```

Output

Hello, this is Emtiaj Hasan. This is a quiz program. Participate to it.

Enter your name please.

Emtiaj Hasan

A)What is the capital city of Bangladesh?

1) Dhaka 2) Chittagong 3) Rajshahi 4) Sythet

>1

You are right

B)Who gave the thesis of Theory of Relativity?

1) Jamal Najrul Islam 2) Einstien 3) Stephen Hawking 4) Max Plank

>2

You are right

C)How many keywords have ANSI C language?

1) 25 2) 20 3) 32 4) 40

>3

You are right

D)Who made the Cosmic Calendar?

1) Isaac Asimov 2) Carl Sagan 3) Nicolas Caviste 4) Arthur C. Clarke

>2

You are right

E)How many Planets have the Solar system gotten?

1) 10 2) 7 3) 8 4) 9

>3

You are right

F)Who invented Nylon?

1) wallace carothers 2) Frank Whittle 3) James Clarke 4) Gottlieb Daimler

>1

You are right

G)Who gave this equation : $e^{(i \cdot \pi)} + 1 = 0$?

1) Carl Friedrich Gauss 2) Paul Erdos 3) Srinivasa Ramanujan 4) Leonhard Euler
>4
You are right

H)How many data types have C got?

1) 6 2) 5 3) 7 4) 8
>2
You are right

I)What is not an operating system?

1) Windows 7 2) Linux 3) Ubuntu 4) Snow leopard
>2
You are right

J)Who designed Sears Tower (now Willis Tower)?

1) Fazlur Rahman Khan 2) John Hancock 3) Allen Downey 4) Jeffrey Elkner
>1
You are right

Emtiaj Hasan, you have got 10 on 10.

Discussion

We are learning C programming language. We learned uses of lots of function. By using this I have made a simple calculator & quiz program. When I am working with it, I faced a little bit of problem. So I discussed with Sir & he told the way how to do, but not gave the code. Therefore I am pretty gratefull to Sujan Sir for his contribution in my programming.