

# STRUCTURED PROGRAMMING

---

## *Lab Assignment-1*

---

**NAME :** *JARIN TASNIM AHMED RAISA*

**DEPARTMENT:** *C.S.E*

**BATCH :** *56<sup>th</sup>*

**SECTION:** *D*

**ID:** *221-115-124*

**DATE:** *22/03/2022*

1. Write a C program that will print your name.

```
//program to print my name
#include<stdio.h> int main()
{
    printf("Name: Ashraful Quaiyum Chowdhury Shafi");    return
0;
}
```

2. Write a C program that will print your name, your father and mother name in three separate lines.

```
//program to print my name and father's and mother's name in three separate lines
#include<stdio.h> int main()
{
```

```
printf("Name: Ashraful Quaiyum Chowdhury Shafi \n");  
printf("Father's name: Abdul Quaiyum Chowdhury\n"); printf("Mother's  
name: Shahnaz Chowdhury\n"); return 0;  
}
```

3. Write a C program that will print the sum of two variables a and b; where a = 10 and b = 20.

```
//program to print sum of two variables  
#include<stdio.h> int main()  
{  
    int a=10,b=20; printf("sum=%d",a+b);  
    return 0;  
}
```

4. Write a C program to calculate sum of two integer numbers (given by the user) and print it.

```
//program to calculate sum of two integer numbers (given by the user)
#include<stdio.h> int main()
{
    int a,b;  printf("Enter two
numbers:");  scanf("%d %d",&a,&b);
printf("sum=%d",a+b);  return 0;
}
```

5. Write a C program that will take three numbers from user and find their average.

```
//program that will take three numbers from user and find their average.
```

```

#include<stdio.h> int main()
{
    float a,b,c,sum,avg;   printf("Enter three
numbers:");   scanf("%f %f %f",&a,&b,&c);
sum=a+b+c;   avg=sum/3;
    printf("average=%.2f",avg);   return
0;
}

```

6. Write a C program that will take three integer as input from user and print their average. (You should use type-cast to get proper result)

```

//C program that will take three integer as input from user and print their average.(using type cast)
#include<stdio.h> int main()
{
    int a,b,c,sum;   float avg;
printf("Enter three numbers:");   scanf("%d
%d %d",&a,&b,&c);   sum=a+b+c;
avg=(float)sum/3;
printf("average=%.2f",avg);   return
0;
}

```

7. Write a C Program to convert Km value into meter value.

```
//Program to convert Km value into meter value.
```

```
#include<stdio.h> int main()
```

```
{
```

```
    float a;    printf("Enter km value:");
```

```
    scanf("%f",&a);
```

```
    a=a*1000;
```

```
    printf("Meter value=%.2f",a);
```

```
    return 0;
```

```
}
```

8. Write a C Program to convert Celsius value into Fahrenheit value.

//Program to convert Celsius value into Fahrenheit value.

```
#include<stdio.h> int main()
{
    float c,f;    printf("Enter celsius value:");
    scanf("%f",&c);    f=(9*c)/5+32;
    printf("fahrenheit value=%.2f",f);
    return 0;
}
```

9. Write a C Program to interchange values of two numbers using third variable.

//C Program to interchange values of two numbers using third variable.

```
#include <stdio.h> int main()
{
    int var1, var2, temp;    printf("Enter two
numbers:");    scanf("%d %d",&var1,&var2);
```

```
temp=var1; var1=var2; var2=temp; printf("After  
changing value:%d %d",var1,var2);
```

```
return 0;  
}
```

10. Write a C Program to interchange values of two numbers without using third variable.

```
//Program of interchanging two integer numbers without using third variable
```

```
#include <stdio.h> int main()  
{  
    int var1, var2; printf("Enter two numbers:");  
    scanf("%d %d",&var1,&var2); var1=var1+var2;  
    var2=var1-var2; var1=var1-var2; printf("After changing  
value:%d %d",var1,var2);  
  
    return 0;  
}
```



11. Write a C program to input two numbers and print their quotient and remainder.

```
//program to input two numbers and print their quotient and remainder.  
#include <stdio.h> int main()  
{  
    int a,b;    printf("Enter two  
numbers:");    scanf("%d %d",&a,&b);  
    printf("quotient=%d\n",a/b);  
    printf("remainder=%d\n",a%b);  
  
    return 0;  
}
```

12. Write a C Program to accept any character from user and display its ASCII number on screen.

```
//Program of finding ASCII value from from any user defined character
```

```

#include <stdio.h> int main()
{
    char c;    printf("Enter any character");
    scanf("%c",&c);    printf("ASCII value of
%c=%d",c,c);    return 0;

}

```

13. Write a C Program to input any ASCII number and display appropriate character on screen.

//Program of printing ASCII character from ASCII value

```

#include <stdio.h> int main()
{
    int a;    printf("Enter ASCII value:");
    scanf("%d",&a);    printf("ASCII character of
%d=%c",a,a);

    return 0;
}

```

```
}
```

14. Write a C Program to input any Capital letter and display it with small letter.

```
//Program of converting capital letter to small letter
```

```
#include <stdio.h> #include
```

```
<ctype.h> int main()
```

```
{
```

```
    char c,result;    printf("Enter any capital
```

```
character:");    scanf("%c",&c);    result=
```

```
tolower(c);    printf("result=%c",result);
```

```
return 0;
```

```
}
```

15. Write a C Program to input any Small letter and display it with capital letter. //Program to input any Small letter and display it with capital letter.

```
#include <stdio.h> #include
<ctype.h> int main()
{
    char c,result;    printf("Enter any small
character:");    scanf("%c",&c);    result=
toupper(c);    printf("result=%c",result);    return
0;
}
```

16. Write a C Program to input any Capital letter and display it with small letter. (without using tolower() function)

```
//Program to input any Capital letter and display it with small letter. (without using tolower() function)
#include<stdio.h> int main()
{
```

```
char a; printf("enter uppercase character:");  
scanf("%c",&a); a=a+32; printf("lowercase  
character is:%c",a);  
  
return 0;  
}
```

17. Write a C Program to input any Small letter and display it with capital letter. (without using toupper() function)

```
//Program to input any Small letter and display it with Capital letter. (without using toupper() function)  
#include<stdio.h> int main()  
{  
    char a; printf("enter lowercase character:");  
    scanf("%c",&a); a=a-32; printf("uppercase  
character is:%c",a);  
  
    return 0;  
}
```

18. Write a C program to input the number of days from the user and convert it into years, months and days.

```
//program of converting days into year, months and days
```

```
#include<stdio.h>
```

```
int main()
```

```
{
```

```
    int a,year,month,day;    printf("Enter days:");    scanf("%d",&a);
```

```
    year=a/365;    month=(a%365)/12;    day=(a%365)%12;
```

```
    printf("year=%d,month=%d,day=%d",year,month,day);
```

```
    return 0;
```

```
}
```

19. Write a C Program to input three digits number from user and calculate sum of first and last numbers. (Hint : I/p : 358 O/p :11)

```
//program to find sum of first and last numbers of a three digit number
#include <stdio.h> int main()
{
    int num, sum=0, firstDigit, lastDigit;    printf("Enter any number to
find sum of first and last digit: ");    scanf("%d", &num);    lastDigit =
num % 10;    firstDigit = num;    while(num >= 10)
    {        num = num / 10;
    }    firstDigit = num;    sum = firstDigit + lastDigit;
printf("Sum of first and last digit =
%d", sum);    return 0;
}
```

20. Write a C Program to input three digits number from user and display square of first and last numbers.(Hint : l/p : 358 O/p : Square of 3 is 9 and Square of 8 is 64)

```
//program to find square of first and last numbers of a three digit number
#include <stdio.h> int main()
{
    int num, sum=0, firstDigit, lastDigit;    printf("Enter any number to
find sum of first and last digit: ");    scanf("%d", &num);    lastDigit =
num % 10;    firstDigit = num;    while(num >= 10)
    {        num = num / 10;
    }    firstDigit = num;
firstDigit=pow(firstDigit,2);
lastDigit=pow(lastDigit,2);    printf("square of first
```

```

digit=%d\n",firstDigit);   printf("square of last
digit=%d\n", lastDigit);   return 0;
}

```

21. Write a C Program to input two digits number from user and display with reverse number on screen (Hint : I/P : 32 O/P : 23)

```
//Program to input two digits number from user and display with reverse number on screen
```

```

#include<stdio.h> int main()
{
    int a,b,var1,var2;   printf("Enter number");
scanf("%d",&a);   b=a%10;   a=a/10;   var1=b*10;
var2=a;   printf("after inversing
value=%d",var1+var2);

    return 0;
}

```

22. Write a C program to find out the quotient and remainder of two numbers. (Without using modulus ( % ) operator)

```
//program to find out the quotient and remainder of two numbers. (Without using modulus ( % )
operator)
```



```

#include <stdio.h> int main()
{
    int divisor,divident,quotient=0,remainder;
    printf("Enter divisor:");   scanf("%d",&divisor);
    printf("Enter divident:");
    scanf("%d",&divident);   while
    (divisor>=divident){       divisor=divisordivident;
    quotient=quotient+1;
        }   remainder=divisor;
    printf("quotient=%d\n",quotient);   printf("%remainder=%d\n",remainder);
    return 0;
}

```