

**Subject**

Programming and Data Structures using C

**Assignment 2**

Submitted By:

Submitted To:

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**Write a C Program for the following problem statements**

**Q1. Print “ your name-SOA University ”.**

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

```
int main()
{
printf("SOA University");
return 0;
}
```

**Output:-**

SOA University

**Q2. Print your name, mobile number and email id in different lines.**

```
#include <stdio.h>
int main()
{
printf("Sourav Bera \n");
printf("8370800404 \n");
printf("souravbera2000.ckt@gmail.com\n");
return(0);
}
```

**Output:-**

Sourav Bera

837080040

Souravbera2000.ckt@gmail.com

**Q3. Get int, float and char as input, then print the same.**

```

#include <stdio.h>

int main()
{
    char a[100];
    int b;
    float c;

    printf("Enter the integer value :");
    scanf("%d",&b);
    printf("Enter the decimal value :");
    scanf("%f",&c);
    printf("Enter the character value :");
    scanf("%s",&a);

    printf("\t entered values \n integer - %d \n decimal - %f \n character - %s",b,c,a);
    return(0);
}

```

### **Output:-**

Enter the value: abc

Enter the decimal value: Enter the character

Value: entered values

Integer-0

Decimal- 0.000000

character -abc

**Q4. Find the cube of the given number.**

```
#include <stdio.h>

int main()
{
    int number,cube;

    printf("enter a number:");

    scanf("%d",&number);

    cube= number*number*number;

    printf("cube of number is:%d",cube);

    return 0;
}
```

**Output:-**

Enter a number : 9

Cube of number is : 729

**Q5. Find the sum of five given numbers.**

```
#include <stdio.h>

int main()
{
    int b=0,c;

    for(int i=1;i<=5;i++)
    {
```

```
printf("Enter %d number : ",i);  
scanf("%d",&c);  
b=c+b;  
}  
printf("sum of five number is %d",b);  
return(0);  
}
```

**Output:-**

Enter 1 number : 2

Enter 2 number : 3

Enter 3 number : 4

Enter 4 number : 5

Enter 5 number : 6

Sum of five number is 20

**Q6. Find a student average mark given mark1 and mark2.**

```
#include <stdio.h>  
int main()  
{  
    float m1,m2;  
    printf("Enter the student marks of subject 1 & 2 respectively:\n");  
    scanf("%f%f",&m1,&m2);
```

```
    m1=(m1+m2)/2;
    printf("Average mark of student is %f",m1);
    return(0);
}
```

### **Output:-**

Enter the student marks of subject 1 & 2 respectively:

20 30

Average mark of student is 25

**Q7. Calculate the total fine charged by library for late return books. The charge is 0.20 INR for 1 day.**

```
#include <stdio.h>

int main()
{
    float b;

    const float a=0.20;

    printf("Enter number of days of late return book \n");

    scanf("%f",&b);

    b=b*a;

    printf("The total fine charged is:%f INR",b);
}
```

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

### **Output:-**

Enter number of days of late return book

5

The total fine charged is:1.00 INR

**Q8.You had bought a nice shirt which cost Rs.29.90 exclusive of 15% discount. Count the discounted price for the shirt.**

```
#include <stdio.h>  
  
int main()  
{  
    float cost=29.90;  
    float discount=0.15;  
    float discounted_cost, idc;  
    idc=cost*discount;  
    discounted_cost=cost-idc;  
    printf("The discounted cost price for the shirt is:%f INR",discounted_cost);  
    return(0);  
}
```

**Output:-**

The discounted cost price for the shirt is:25.414999 INR

**Q9. swap two numbers with third variable**

```
#include <stdio.h>

int main()
{
    float a,b,c;

    printf("Enter two numbers to perform swap \n");
    printf("first number:");
    scanf("%f",&a);
    printf("second number:");
    scanf("%f",&b);
    printf("before swap \n");
```



```
printf("%0.1f%0.1f",a,b);  
c=a;  
a=b;  
b=c;  
printf("\n after swap \n");  
printf("%0.1f%0.1f",a,b);  
return(0);  
}
```

**Output:-**

Enter two numbers to perform swap

first number:5

second number:6

before swap

5.06.0

after swap

6.05.0

**Q10. swap two numbers without third variable(By + and-(or)By \* and /).**

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

```
int main()
```

```
{
```

```
float a,b;
```

```
printf("Enter two numbers to perform swap \n");  
printf("first number:");  
scanf("%f",&a);  
printf("second number:");  
scanf("%f",&b);  
printf("before swap \n");  
printf("%0.1f%0.1f",a,b);  
a=b-a;  
b=b-a;  
a=a+b;  
printf("\n after swap \n");  
printf("%0.1f%0.1f",a,b);  
return(0);  
}
```

**Output:-**

Enter two numbers to perform swap

first number:2

second number:9

before swap

2.09.0

after swap

9.02.0