

ASSIGNMENT-3

A job Ready Boot Camp in c++, DSA & iot

Name- shivprsan kharwar

1. Write a program to check whether a given number is positive or non-positive

```
#include<stdio.h>

int main()
{
    int a;
    printf("Enter A Number:");
    scanf("%d",&a);
    if(a>0)
    {
        printf("%d is positive number ",a);
    }
    else
    {
        printf("%d is Non-positive ",a);
    }
}
```

2. Write a program to check whether a given number is divisible by 5 or not.

```
#include<stdio.h>

int main()
{
    int a,b;
    printf("Enter A number:");
    scanf("%d",&a);
    if(a%5==0){
        printf("%d is divisible by 5\n",a);
    }
}
```

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```
else
{
printf("%d is not divisible by 5\n",a);
}}
```

3. Write a program to check whether a given number is an even number or an odd number.

```
int main()
{
int a;
printf("Enter A Number:");
scanf("%d",&a);

if(a%2)
{
printf("Given Number %d is odd",a);
}
else{
printf("Given number %d is Even",a);
}
}
```

4. Write a program to check whether a given number is an even number or an odd number without using % operator.

```
int main()
{
int a,b;
printf("Enter A Number:");
scanf("%d",&a);
b=a&1;// i am using bitwise operator
if(b==1)
```

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```
        {
printf("Given Number %d is odd",a);
        }
    else{
printf("Given number %d is Even",a);}}
```

5. Write a program to check whether a given number is a three-digit number or not.

```
#include<stdio.h>
int main()
{
    int a;
    printf("Enter aNumber:");
    scanf("%d",&a);
    if(a>99&&a<1000)
printf("it is three digit number",a);
    else
printf("it is Not three digit",a);
    return 0;

}
```

6. Write a program to print greater between two numbers. Print one number of both is the same

```
#include<stdio.h>

int main()
```

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```
{  
    int a,b;  
    printf("Enter Two Number:");  
    scanf("%d%d",&a,&b);  
  
    if(a>b)  
        printf("a is greater ",a);  
    else  
        if(b>a)  
            printf("b is greater ",b);  
    else  
        if(a==b)  
            printf("%d");  
    return 0;  
}
```

7. Write a program to check whether roots of a given quadratic equation are real & distinct, real & equal or imaginary roots.

```
#include<stdio.h>  
int main()  
{  
    int a,b,c;  
    printf("Enter three number: ");  
    scanf("%d%d%d",&a,&b,&c);  
    int disc=b*b-4*a*c;  
    if(disc>0)  
        printf("Real&distinct");  
    else  
        if(disc<0)
```

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```
printf("Imaginary");  
    else  
printf("Real and equal");  
    return 0;  
}
```

8. Write a program to check whether a given year is a leap year or not.

```
#include<stdio.h>  
int main()  
{  
    int x;  
printf("Enter A year:");  
    scanf("%d",&x);  
    if((x%400==0))  
    {  
printf("%d is a leap year ",x);  
    }  
    else  
        if(x%100==0)  
  
printf("%d is not leap year",x);  
        else if(x%4==0)  
printf("%d is a leap year ",x);  
        else  
printf("%d is not leap year",x);  
    }
```

9. Write a program to find the greatest among three given numbers. Print number once if the greatest number appears two or three times

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

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```
int a,b,c;
printf("Enter Any three number:");
scanf("%d%d%d",&a,&b,&c);

if(a>b)
printf("%d",a);
else
if(b>c)
printf("%d",b);
else

printf("%d",c);
return 0;
}
```

10. Write a program which takes the cost price and selling price of a product from the user. Now calculate and print profit or loss percentage.

```
#include<stdio.h>
int main()
{
float a,perloss,perprofit,profit,loss;
float b;
printf("Enter Cost price:");
scanf("%f",&a);
printf("Enter selling price:");
scanf("%f",&b);
profit=b-a;
loss=a-b;
perprofit=(profit/a)*100;
perloss=(loss/a)*100;
printf("profit percentage is %.2f\n",perprofit);
printf("\nloss percentage is %.2f",perloss);
}
```

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11. Write a program to take marks of 5 subjects from the user. Assume marks are given out of 100 and passing marks is 33. Now display whether the candidate passed the examination or failed

```
#include<stdio.h>
int main()
{
    int result,math,che,phy,hnd,eng;
    printf("Enter marks of mathematics:");
    scanf("%d",&math);
    printf("Enter marks of chemistry:");
    scanf("%d",&che);
    printf("Enter marks of physics:");
    scanf("%d",&phy);
    printf("Enter marks of hindi:");
    scanf("%d",&hnd);

    printf("Enter marks of English:");
    scanf("%d",&eng);
    result=math+che+phy+hnd+eng;
    if(result>=33)
printf("Candidate passed the examination and total marks is %d",result);
    else
printf("Candidate failed the examination and total marks is %d ",result);
    return 0;
}
```

12. Write a program to check whether a given alphabet is in uppercase or lowercase.

```
int main()
{
    char ch;
    printf("ENTER A CHARACTER:");
    scanf("%c",&ch);
    if(ch>='a'&&ch<='z')
```

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```
printf("Lowercase");  
    else  
printf("Uppercase");  
    return 0;  
}
```

13. Write a program to check whether a given number is divisible by 3 and divisible by 2.

```
#include<stdio.h>  
int main()  
{  
    int a;  
printf("Enter The number:");  
    scanf("%d",&a);  
    if(a%3==0&&a%2==0)  
printf("Given number is divisible by 3 and divisible by 2",a);  
    else  
printf("Given number is not- divisible by 3 and not-divisible by 2",a);  
  
    return 0;  
}
```

14. Write a program to check whether a given number is divisible by 7 or divisible by 3.

```
#include<stdio.h>  
int main()  
{  
    int a;  
printf("Enter The number:");  
    scanf("%d",&a);  
    if(a%7==0&&a%3==0)  
printf("Given number is divisible by 7 and divisible by 3",a);  
    else  
printf("Given number is not- divisible by 7 and not-divisible by 3",a);  
  
    return 0;
```


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15. Write a program to check whether a given number is positive, negative or zero.

```
#include<stdio.h>
int main()
{
    int a;
    printf("Enter A Number:");
    scanf("%d",&a);
    if(a>0)
    printf("%d is positive number ",a);
    else
    if(a<0)
    printf("%d is negative Number ",a);
    else
    printf("zero",a);

}
```

16. Write a program to check whether a given character is an alphabet (uppercase), an alphabet (lower case), a digit or a special character

```
int main()
{
    char ch;
    printf("ENTER A CHARACTER:");
    scanf("%c",&ch);
    if(ch>='a'&&ch<='z')
    printf("Lowercase");
    else
    if(ch>='A'&&ch<='Z')
    printf("Uppercase");
    else
    if(ch>='0'&&ch<='9')
    printf("digit");
```

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```
        else
        printf("special character");
        return 0;
    }
```

17. Write a program which takes the length of the sides of a triangle as an input. Display whether the triangle is valid or not.

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

{
    int a,b,c;
    printf("Enter length of side:");
    scanf("%d%d%d",&a,&b,&c);
    if(a==b&&b==c&&a==c)
    printf("Triangle is valid and it is Equilateral triangle\n");
    else
    printf("Triangle is not valid\n");

    return 0;
}
```

18. Write a program which takes the month number as an input and display number of days in that month.

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

    int a;
    printf("Enter Number of month:");
    scanf("%d",&a);
```

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```
switch(a)
{
    case 1:
        printf("Number of day 30",a);
        break;
    case 2:
        printf("Number of day is 28",a);
        break;
    case 3:
        printf("Number of day is 31",a);
        break;
    case 4:
        printf("Number of day is 30",a);
        break;
    case 5:
        printf("Number of day is 31",a);
        break;
    case 6:
        printf("Number of day is 30",a);
        break;
    case 7:
        printf("Number of day is 31",a);
        break;

    case 8:
        printf("Number of day is 31",a);
        break;
    case 9:
        printf("Number of day is 30",a);
        break;
    case 10:
        printf("Number of day is 31",a);
        break;
    case 11:
        printf("Number of day is 30",a);
        break;
    case 12:
        printf("Number of day is 31",a);
        break;
}
```

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```
printf("\n");  
return 0;  
}
```