iNeuron

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Course Name: **Job Ready Bootcamp in C++, DSA and IOT**

Assignment No: **3**

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

Program

```
#include<stdio.h>
int main()
{
   int n=-7;
   if(n>0)
       printf("%d is positive number",n);
   else
       printf("%d is non-positive",n);
   return 0;
}
```

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

Program

```
#include<stdio.h>
int main()
{
    int n,x;
    printf("Enter a number:");
   scanf("%d",&n);
   x=n%5;
   if(x==0)
         printf("%d is divisible by 5",n);
   else
          printf("%d is not divisible by 5",n);
    return 0;
}
```

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

Program

```
#include<stdio.h>

int main()

{

   int n,x;

   printf("Enter a number:");

   scanf("%d",&n);

   x=n%2;

   if(x==0)

      printf("%d even number",n);

   else

      printf("%d Odd number",n);

   return 0;

}
```

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

Program

```
#include<stdio.h>

int main()

{

    int n,x;

    printf("Enter a number:");

    scanf("%d",&n);

    x=n&1;

    if(x==0)
```

```
        printf("%d even number",n);
    else
        printf("%d Odd number",n);
    return 0;
}
```

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

Program

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

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

Program

```
#include<stdio.h>
int main()
{
   int x,y;
   printf("Enter two number:");
```

```
    scanf("%d%d",&x,&y);
    if(x==y)
       printf("Both numbers are same and one numbers is %d",x);
    else
    {
       if(x>y)
          printf("%d is greater number",x);
       else
          printf("%d is greater number",y);
    }
    return 0;
}
```

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

Program

```
#include<stdio.h>
int main()
{
   int a,b,c,x;
   printf("Enter value of a,b and c:");
   scanf("%d%d%d",&a,&b,&c);
   x=b*b-4*a*c;
   if(x>0)
      printf("roots are real and distinct");
   else if(x==0)
      printf("roots are real and equall");
```

```
    else
        printf("roots are imaginary");
    return 0;
}
```

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

Program

```
#include<stdio.h>
int main()
{
    int year;
    printf("Enter a year:");
    scanf("%d",&year);
    if(year%400==0||year%4==0&&year!=0)
        printf("Leap year");
    else
        printf("Not leap year");
    return 0;
}
```

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

Program

```
#include<stdio.h>
int main()
{
    int a,b,c;
```

```
    printf("Enter three number:");
    scanf("%d%d%d",&a,&b,&c);
    if(a>b&&a>c)
       printf("%d is greater number",a);
    else
    {
       if(b>a&&b>c)
          printf("%d is greater number",b);
       else
          printf("%d is greater number",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.

Program

```
#include<stdio.h>
int main()
{
   float cost,selling,pp,lp, profit,loss;
   int profit,loss;
   printf("Enter cost price:");
   scanf("%f",&cost);
   printf("Enter selling price:");
   scanf("%f",&selling);
```

```
    profit=selling-cost;
    if(selling>cost)
    {
       pp=(profit/cost)*100;
       printf("Profit percentage is %f",pp);
    }
    else
    {
       loss=cost-selling;
       lp=(loss/cost)*100;
       printf("Loss percentage is %f",lp);
    }
    return 0;
}
```

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.

Program

```
#include<stdio.h>
int main()
{
   int math,py,che,ur,eng;
   printf("Enter a marks of math,py,che,ur,eng:");
   scanf("%d%d%d%d%d",&math,&py,&che,&ur,&eng);
   if(math>=33&&py>=33&&che>=33&&ur>=33&&eng>=33)
      printf("Pass");
```

```
    else
        printf("Fail");
    return 0;
}
```

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

Program

```
#include<stdio.h>
int main()
{
    char n;
    printf("Enter a character:");
    scanf("%c",&n);
    if(n>=65&&n<=90)
        printf("Uppercase");
    else if(n>=97&&n<=122)
        printf("lowercase");
    else
        printf("incorrect input");
    return 0;
}
```

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

Program

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

```
{
   int n;
   printf("Enter a number:");
   scanf("%d",&n);
   if(n%2==0&&n%3==0)
      printf("%d is divisible by 3 and 2",n);
   else
        printf("%d is not divisible by 3 or 2",n);
        return 0;
     }
```

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

Program

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

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

Program

```
#include<stdio.h>

int main()

{

   int n;

   printf("Enter a number:");

   scanf("%d",&n);

   if(n>0)

      printf("Positive number");

   else

   {

      if(n<0)

         printf("Negative number");

      else

         printf("Zero");

   }

   return 0;

}
```

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

Program

```
#include<stdio.h>

int main()
```

```
{
   int n;
   printf("Enter a character:");
   scanf("%c",&n);
   if(n>=97&&n<=122)
      printf("Alphabet is lowercase");
   else if(n>=65&&n<=122)
      printf("Alphabets is uppercase");
   else if(n>=48&&n<=57)
      printf("Digit number");
   else
      printf("Specisl 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.

Program

```
#include<stdio.h>
int main()
{
   int a,b,c;
   printf("Enter a value of a,b and c:");
   scanf("%d%d%d",&a,&b,&c);
   if(a+b>c&&b+c>a&&a+c>b)
```

```
        printf("Valid triangle");
    else
        printf("Not valid triangle");


    return 0;
}
```

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

Program

```
#include<stdio.h>
int main()
{
    int n;
    printf("Enter a month number:");
    scanf("%d",&n);
    if(n>0&&n<=12)
    {
        if(n==1||n==3||n==7||n==8||n==10||n==12)
            printf("31 Days in this month");
        else
        {
            if(n==4||n==5||n==6||n==9||n==11)
                printf("30 Days in this month");
            else
                printf("28 Days in this month");
```

```
        }
    }
    else
        printf("Not correct month number");
    return 0;
}
```