

### Assignment 3

1. Write a program to check whether a given Number  
is positive or Non positive?

```
#include <stdio.h>
int main ()
{
    int x;
    printf ("Enter a Number");
    scanf ("%d", &x);
    if (x > 0)
    {
        printf ("Positive");
    }
    else
    {
        printf ("Non positive");
    }
    return 0;
}
```

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

#include <stdio.h>

int main()

{

int x;

printf("Enter a Number");

scanf("%d", &x);

if ( $x \% 5 == 0$ );

{

printf("Divisible by 5");

}

else

{

printf("Not divisible by 5");

}

return 0;

}

③ Write a program to check whether a given Number is even or not

#include <stdio.h>

int main()

{

int x;

printf("Enter a Number");

scanf("%d", &x);

if ( $x \% 2 == 0$ )

printf("even");

else

printf("odd");

}

return 0;

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

```
#include <stdio.h>
int main()
{
    int t, X;
    printf("Enter a Number");
    scanf("%d", &X);
    t = X;
    if ((t/2) * 2 != X)
    {
        printf("Odd Number");
    }
    else
    {
        printf("Even Number");
    }
    return 0;
}
```

5: Write a Program to check whether a given Number is three digit or not

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

```
int main()
```

```
{
```

```
    int x;
```

```
    printf("Enter a Number");
```

```
    scanf("%d", &x);
```

```
    if (x > 99 && x < 999)
```

```
{
```

```
        printf("three digit Number");
```

```
}
```

```
else
```

```
{
```

```
    printf("Not a three digit Number");
```

```
}
```

```
return 0;
```

```
}
```

Q) Write a program to print greatest among two numbers.  
Print one number if both are the same.

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

```
int main()
```

```
{
```

```
    int a, b;
```

```
    printf("Enter first Number");
```

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

```
    printf("Enter second Number");
```

```
    scanf("%d", &b);
```

```
    if (a > b)
```

```
{
```

```
        printf("%d", a);
```

```
}
```

```
else if (a == b)
```

```
{
```

```
    printf("%d", a);
```

```
}
```

```
{
```

```
    printf("%d", b);
```

```
}
```

```
return 0;
```

```
}
```

① Write a Program to check whether roots of a given quadratic equation are real & distinct, real & equal or Imaginary roots

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

{

```
int a, b, c, d;  
printf(" coefficient of  $x^2$  ");  
scanf("%d", &a);  
printf(" coefficient of  $x^1$  ");  
scanf("%d", &b);  
printf(" constant term ");  
scanf("%d", &c);
```

$$d = (b * b) - (4 * a * c);$$

```
if ( D == 0 )
```

{

```
    printf(" Equal roots ");
```

}

```
else if ( D > 0 )
```

{

```
    printf(" Real Roots ");
```

}

{

```
    printf(" Imaginary roots ");
```

}

```
return 0;
```

}

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

#include <stdio.h>

int main()

{

int y;

printf("Enter a Number");

scanf("%d", &y);

If ( $y \% 4$ )

{

printf("Not leap year");

y

else

{

printf("leap year");

}

return 0;

y

Q. Write a program to find greatest among three given Numbers  
Print Number once if the greatest Number appear thrice.

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

```
int main()
```

```
{
```

```
int x, y, z;
```

```
printf(" Enter a first Number");
```

```
scanf("%d", &x);
```

```
printf(" Enter a Second Number");
```

```
scanf("%d", &y);
```

```
printf(" Enter a third Number");
```

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

```
if (x > y)
```

```
    printf(" x is greater %d", x);
```

```
else if (y > z)
```

```
    printf(" y is greater %d ", y);
```

```
else
```

```
    printf(" z is greater %d ", z);
```

```
return 0;
```

```
}
```

⑩ Write a program which takes, the cost price and selling Price of a product from the user. Now calculate % of profit and Loss.

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

```
int main()
```

```
{
```

```
int C, S, L, P;
```

```
printf("Enter a Cost Price");
```

```
scanf("%d", &C);
```

```
printf("Enter a Selling Price");
```

```
scanf("%d", &S);
```

```
if (C > S)
```

```
{
```

$$L = ((C - S) / C) * 100$$

```
printf("Loss is %d %.", L);
```

```
}
```

```
else
```

```
{ P = (S - C) / C * 100;
```

```
printf("Profit is %d %.", P);
```

```
}
```

```
return 0;
```

```
}
```

11. Write a program to take 5 marks of 5 subjects from 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 p, c, m, e, co;
```

```
    printf("Enter a No. of Physics");
```

```
    scanf("%d", &p);
```

```
    printf("Enter a No. of Chemistry");
```

```
    scanf("%d", &c);
```

```
    printf("Enter a Number of Maths");
```

```
    scanf("%d", &m);
```

```
    printf("Enter a No. of English");
```

```
    scanf("%d", &e);
```

```
    printf("Enter a NO. of Computer");
```

```
    scanf("%d", &co);
```

```
if (p >= 33 && c >= 33 && m >= 33 && e >= 33 && co >= 33)
```

```
{
```

```
    printf("Passed");
```

```
}
```

```
else
```

```
{
```

```
    printf("Failed");
```

```
}
```

```
return 0;
```

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

#include < stdio.h >

int main()

{

char x;

printf("Enter a character");

scanf("%c", &x);

if (x ≥ 65 && x ≤ 91)

{

printf("Uppercase");

} else if (x ≥ 98 && x ≤ 122)

{

printf("Lowercase");

else

{

printf("Wrong input");

}

}

return 0;

Ques Write a program to check whether a given Number is divisible by 3 and uppercase 2.

#include <stdio.h>

int main()

{

int x;

printf("Enter a Number");

scanf("%d", &x);

if (x % 3 && x % 2)

{

printf("Not divisible");

}

else

{

printf("Divisible");

}

return 0;

}

Q1) Write a program to check a given Number is divisible by 7 and 3.

```
#include <stdio.h>
int main()
{
    int x;
    printf("Enter a Number");
    scanf("%d", &x);
    if (x % 3 == 0 && x % 7 == 0)
    {
        printf("Not Divisible");
    }
    else
    {
        printf("Divisible");
    }
    return 0;
}
```

(Q2) Write a Program to check a given Number is positive, Negative or zero.

```
#include <stdio.h>
int main()
{
    int x;
    printf("Enter a No.");
    scanf("%d", &x);
    if (x > 0)
        printf("Positive");
    else if (x < 0)
        printf("Negative");
    else
        printf("Zero");
    return 0;
}
```

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

#include <stdio.h>

int main()

{

char x;

printf("Enter a character");

scanf("%c", &x);

if ( $x \geq 65$  &&  $x \leq 90$ )

{

printf("Upper Case")

}

else if ( $x \geq 97$  &&  $x \leq 122$ )

{

printf("Lower Case");

else

printf("Not found");

return 0

}

M) Write a program to check whether a given triangle is valid or not.  
Input : Display whether the triangle is valid or not.

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

```
int main()
```

```
{ int a, b, c;
```

```
printf("Enter first side");
```

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

```
printf("Enter second side");
```

```
scanf("%d", &b);
```

```
printf("Enter third side");
```

```
scanf("%d", &c);
```

```
if (a+b > c)
```

```
{
```

```
    printf("triangle");
```

```
else {
```

```
{
```

```
    printf("Not a triangle");
```

```
}
```

```
return 0;
```

```
}
```

(IP) Write a program which takes the Month Number as an input and display Number of day in that Month.

↳ Include <stdio.h>

int main()

{

int ~~as~~ x;

printf("Enter a Month Number");

scanf("%d", &x);

if (x == 1 || x == 12 || x == 3 || x == 7 || x == 8 || x == 10)

{

printf("31 days");

}

else if (x == 4 || x == 6 || x == 9 || x == 11)

{

printf("30 days");

}

else

{

printf("28 days");

}

return 0;

}