

Assignment - 9

(1) write a program to check whether a given number is divisible by 3 and divisible by 2

Ans

```
#include < stdio.h >
int main()
{
    int a;
    printf ("Enter a Number");
    scanf ("%d", &a);
    if (a % 3 == 0 && a % 2 == 0)
        printf ("Divisible");
    else
        printf ("Not Divisible");
    return 0;  Output: Enter a Number
}
```

divisible

(2) write a program to check whether a given number is ~~not~~ divisible by 7 or divisible by 3.

Ans

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

Not divisible by 7 and 3.

③ Write a program to check whether a given number is positive, negative or zero.

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

{

```
int a;
printf("Enter a number");
scanf("%d", &a);
```

```
if (a > 0) {
```

{

```
    printf("Positive");
```

```
} else if (a < 0) {
```

{

```
    printf("Negative");
```

if (a == 0)

{

```
    printf("Zero");
```

```
} return 0;
```

④ Write a program to check whether a given year is leap year or not.

Ans #include <stdio.h>

int main()

{

```
int year;
printf("Enter a year");
```

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

```
if (year % 100 == 0)
```

{

```
    if (year % 400 == 0)
```

```
        printf("leap year");
```

else

```
} printf("Not leap year");
```

```
else if (year % 4 == 0)
    printf ("Leap year");
else
    printf ("NOT leap year");
return 0;
}
```

(5) write a program to find greater among three numbers. If two or three numbers are identical and greatest among all then print it only one.

Ans #include <stdio.h>

```
int main()
{
    int a, b, c, max;
    printf ("Enter three numbers");
    scanf ("%d %d %d", &a, &b, &c);
    max = a > b ? a > c ? a : c : b > c ? b : c;
    printf ("Greatest among three No. is %d", max);
    return 0;
}
```

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

Ans #include <stdio.h>

```
int main()
{
```

```
    char ch;
    printf ("Enter a character");
    scanf ("%c", &ch);
```

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```

if (ch >= 'A' && ch <= 'Z')
    printf (" Upper Alphabet");
else if (ch >= 'a' && ch <= 'z')
    printf (" Lower Alphabet");
else if (ch >= '0' && ch <= '9')
    printf (" Digit");
else
    printf (" Special characters");

return 0;
}

```

- (2) write a program which takes the length of the side of a triangle as an input. Display whether the triangle is valid or not.

```

#include <stdio.h>
int main()
{
    float a, b, c;
    printf ("Enter the three sides of triangle : ");
    scanf ("%f %f %f", &a, &b, &c);
    if ((a + b) > c) && (a + c) > b && (b + c) > a
        printf ("Triangle is valid");
    else
        printf ("Triangle is not valid");
}
```

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

Ans #include<stdio.h>

int main()

{

 int month;

 printf("Enter a month number");

 scanf("%d", &month);

 if((month==1) || (month==3) || (month==5) || (month==7))

 { /* January */ || (month==8) || (month==10) || (month==12))

{

 printf("This month is 31 days");

}

 else if((month==2))

{

 printf("This month is 28/29 days");

}

 else if((month==4) || (month==6) || (month==9) ||

{

 printf("This month is 30 days");

else

{

 printf("Invalid month");

}

Output: Enter a month Number. 12

return 0; This is month is 31 days.

(g) Write a program to find the natural
of roots of quadratic equation.

Ans #include <stdio.h>

int main()

Printf ("Enter x ax², bx and c"),

`Scanf ("%i.%i.%i.%i.%i", sa, sb, sc);`

$$D = b * b - 4 * a * c;$$

if $(x > 0)$ in 2, "left" \rightarrow "right" 2

~~old name) ((E=energy)) || (i=direction))~~

4. If $D > 0$, then there are two distinct real roots.

else if ($\sigma < 0$)

~~pointf ("Imaginary roots");~~

else

printf ("Equal roots");

Output: 4 12 9

Output : 4 12 9

Equal roots

10. Write a C program to input marks of five subjects - physics, chemistry, Biology, Mathematics and computer. calculate percentage and grade according to following:

Ans #include <stdio.h>

int main()

Cap "atmospheric" driver

int P, C, B, M, comp;

```
point f ("Enter five subjects");
```

```
scanf ("%d %d %d %d %d", &op, &sc, &sb, &sm);
```

$$\text{float point angle} = (P + C + B + M + \text{comp}) / 5.0.$$

```
if (percentage >= 90)
```

```
{
```

```
    printf ("Grade A");
```

```
}
```

```
# else if (percentage >= 80);
```

```
{
```

```
    printf ("Grade B");
```

```
}
```

```
else if (percentage >= 70);
```

```
{
```

```
    printf ("Grade C");
```

```
}
```

```
else if (percentage >= 60)
```

```
{
```

```
    printf ("Grade D");
```

```
else if (percentage >= 50)
```

```
{
```

```
    printf ("Grade E");
```

```
}
```

```
else
```

```
{
```

```
    printf ("Grade F");
```

```
return
```

```
0; outp: Grade E
```

85
75

50
49

68