Assignment-3

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

Ans →

```
#include <stdio.h>
    int main()
{ int n;
printf("enter a no");
scanf("%d", &n);

  if (n>0)
  printf("positive");

  else
   printf("non-positive");

  return 0;
```

② write a program to check whether a given no. is divisible by 5 or not.

Ans →

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

{  int n;

  printf("Enter a no");
  scanf("%d", &n);
```

if (x % 5 == 0)
printf (" no is divisible by 5");

else
printf (" not divisible by 5 ");

return 0;

}

③ write a program to check whether a given no is an even no. or an odd no.

#include <stdio.h>
int main()

{ int x;
printf ("enter a no");
scanf ("%d", &x);
if (x % 2 == 0)
printf (" even no");
else
printf (" odd no");

return 0;

④ write a program to check whether a given no is an even or odd no without using '%d' operator.

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```
#include <stdio.h>
int main()
{ int n;
printf("Enter a no");
scanf("%d", &n);
if (n/2*2 ==n)
printf("%d is even", n);
else
printf("%d is odd", n);
return 0;
}
```

(5) write a program to check whether a given no is three digit or not.

Ans →

```
#include<stdio.h>
    int main()
{   int n;
printf("enter a no");
scanf("%d", &n);
  //n%10;
   x = n/10;
 if(n)
{ //n%10;
   n = n/10;
   if(n==0)
   printf("Not three digit");
else
{  if(n)
   { n%10;
     n = n/10;
     if(n==10)
     printf("given no is three digit");
     else
     printf("not three digit");
}
}
}
```

```
else
printf(" Not three digit ");
    return 0;

}
```

(6) write a program to print greater if two no. print one no. if both are the same.

Ans →

```
# include <stdio.h>
    int main()
{ int a, b, c, d;
printf(" enter two no");
scanf( ~~"%d, &~~ "%d %d", &a, &b);
    if ( a > b)
printf(" %d is greater", a);
else
printf(" %d is greater", b);
~~if ( a%10 == b%10)~~
~~printf(~~
c = a%10; d = b%10;
  if (c == d);
  printf ("%d", c);
else
{
```

```
a = a/10;  b = b/10;
  if (a == b)
  printf ("%d", a);
  else
   printf ("not same");
}
    return 0;
}
```

(7) write the program to check whether the roots of given quadratic eq^n are real & distinct, real and equal or imaginary roots.

Ans →

```
# include<stdio.h>
   int main()
{ int a, b, c;
printf ("enter a, b, c, values");
scanf ("%d %d %d", &a, &b, &c);
   D = b*b - 4ac;
if (D>0)
printf ("real and distinct");
else if (D==0)
printf ("real and equal");
```

```
else
printf("Imaginary roots");
return 0;
}
```

(5) write a program to check whether a given year is leap year or not.

```
#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("Non-leap year");
}
else
{ if(year%4==0)
  printf("leap year");
  else
  printf("Non-leap year");
```

return 0;

}

① write a program to find the greatest among three given numbers. print number once if the greatest number appears two or three times.

Ans

```
# include <stdio.h>
  int main()
{ int a, b, c;
printf("Enter a, b, c values \n");
scanf("%d %d %d", &a, &b, &c);

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

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

return 0;

}

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

Ans:→

```
#include <stdio.h>
int main()
{ int CP, SP; float P, L;
printf("Enter the C.P and S.P of the
        product");
scanf("%d %d", &CP, &SP);
if(CP < SP)
{ P = (S.P - C.P) / CP * 100;
printf("%f", P);
}
else
{ L = (C.P - S.P / C.P) * 100;
printf("%f", L);
} return 0;
}
```

(1) write a program to take marks of 5 subject from the user. Assure marks are given out of 100 and passing mark is 33. Now display whether the candidate passed the examination or failed.

Sol":

```
# include <stdio.h>
    int main ()
{ int a, b, c, d, e;
printf ("Enter the marks of a, b, c, d, e");
scanf ("%d %d %d %d %d", &a, &b, &c, &d, &e);

if (a<33 && b<33 && c<33 &&
    d<33 && e<33)

printf ("fail");

else
printf ("pass");

return 0;

}
```

(12) write a program to check whether a given alphabet is in upper case or lower case.

```
#include<stdio.h>
int main()
{
    char a;
printf("Enter a character");
scanf("%c", &a);
if(a>='A' && a<='Z')
printf("upper case");
else
printf("lower case");
    return 0;
}
```

(13) write a program to check whether a number is divisible by 3 and 7.

→

```
#include<stdio.h>
int main()
{ int a;
printf("Enter a number");
scanf("%d", &a);
if(a%7==0)
printf("%d is divisible by 7", a);
else
if(a%3==0)
printf("%d is divisible by 3", a);
return 0;
}
```

(14) write a program to check whether a no is divisible by 2 and 3.

Ans →

```
# include <stdio.h>
    int main()
{ int a;
printf("Enter a no");
scanf("%d", &a);
if(a%2 && a%3)
printf("%d divisible by 2 and 3", a);
else
printf("Not divisible");
return 0;
}
```

(15) write a program to check whether a given no is positive, negative or zero.

Ans →

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

{ int a;
printf("Enter a no");
scanf("%d", &a);

if(a>0)
printf("No is positive");
else if(a==0)
  printf("No is zero");

else
  printf("No is negative");

    return 0;

}
```

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

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

{ int a;
printf("enter a value");
scanf("%d", &a);
 if(a>='A' && a<='Z')
 printf("Uppercase");
 else if(a>='a' && a<='z')
  printf("lower case");

if(a>=0)
 printf("A digit");

 else
 printf("a special character");

   return 0;

}
```

(17) write a program to which takes the length of the sides of a triangle as an input. display whether the triangle is valid or not.

Ans:

```
#include <stdio.h>
int main()
{ int a, b, c;
printf("enter the side of a, b, c");
scanf("%d %d %d", &a, &b, &c);
if(a+b>c || b+c>a || c+a>b)
printf("valid triangle");
else
printf("invalid triangle");
return 0;
}
```

(19) write a program which takes month number as input and displays number of days in a month.

```
#include <stdio.h>
int main()
{ int a;
printf("Enter a no\n");
scanf("%d", &a);
if(a==1 || a==3 || a==4 || a==5
 || a==7 || a==8 || a==10 ||
  a==12)
printf("31 days");
else if(a==2)
 printf("28 days");
else printf("30 days");
 return 0;
}
```