1. **Ramesh's basic salary is input through the keyboard. His dearness allowance is 40% of basic salary, and house rent allowance is 20% of basic salary. Write a program to calculate his gross salary.**
2. The distance between two cities (in km.) is input through the keyboard. Write a program to convert and print this distance in meters, feet, inches and centimeters.
3. If the marks obtained by a student in five different subjects are input through the keyboard, find out the aggregate marks and percentage marks obtained by the student. Assume that the maximum marks that can be obtained by a student in each subject is 100.
4. Temperature of a city in Fahrenheit degrees is input through the keyboard. Write a program to convert this temperature into Centigrade degrees.

4. Temperature of a city in Fahrenheit degrees is input through the keyboard. Write a program to convert this temperature into Centigrade degrees.
5. The length & breadth of a rectangle and radius of a circle are input through the keyboard. Write a program to calculate the area & perimeter of the rectangle, and the area & circumference of the circle
6. Two numbers are input through the keyboard into two locations C and D. Write a program to interchange the contents of C and D.
7. If a five-digit number is input through the keyboard, write a program to calculate the sum of its digits. (Hint: Use the modulus operator '%')

its digits. (Hint: Use the modulus operator %)

8. If a five-digit number is input through the keyboard, write a program to reverse the number.
9. If a four-digit number is input through the keyboard, write a program to obtain the sum of the first and last digit of this number.

10. In a town, the percentage of men is 52. The percentage of total literacy is 48. If total percentage of literate men is 35 of the total population, write a program to find the total number of illiterate men and women if the population of the town is 80,000.

11. A cashier has currency notes of denominations 10, 50 and 100. If the amount to be withdrawn is input through the keyboard in hundreds, find the total number of currency notes of each denomination the cashier will have to give to the withdrawer.

Problem section: 5/9/24

1. Ramesh basic salary is input through the Keyboard. his dearness allowance is 40% basic salary, & house rent allowance is 20% of basic salary. write a program to his gross salary.

sol:

```c
# include < stdio.h
int main ()
{
float bs, DA, HRA, GS;
Printf ("\n Enter the Basic salary : ");
scanf ("%f", &bs);
da = bs * 0.4
hra = bs * 0.2
gs = bs + da + hra
Printf ("\n da : %f", da);
Printf ("\n hra :%f, hra)
Print ("\n gs : %f, gsa)
Return 0 :
```

2. The distance b/w 2 cities is I/P through keyboard. Write a program to convert this datum in metres, feet, inches & cm

```c
#include <stdio.h>
int main()
{
    float metres, feet, inches, km, m, cm;
           (m)      (f)    (i)      (km) (m) (cm)
    printf("\n Enter the distance b/w 2 cities");
    scanf("%f :", &km);

    m = km x 1000;
    cm = m x 100;
    in = cm / 2.54;
    feet = inches / 12;
    printf("\n m : %f, m");
    printf("\n cm : %f, cm");
    printf("\n in : %f, in");
    printf("\n feet : %f, feet);
    return 0;
}
```

km

$C = \dfrac{F-32}{5/9}$

$\dfrac{C}{5} = \dfrac{F-32}{9}$

$F = C \times \dfrac{9}{5}$

$C = \dfrac{(F-32) \times 5}{9}$

$\dfrac{F \times C}{5} \times 100$

$\dfrac{5}{500} \times 100$

3. If mark obtained by a student in different
subjects are input through the keyboard, find out the
aggregate marks & percentage marks obtained
by the student. assume that the maximum marks
that can be obtained by a student in each is
100.

sal:

```c
#include < std io.h

int main ()
{
float a, b, c, d, e, G, P;
printf ("/n Enter the obtained mark in 5 subjects:");
scanf ("%f, %f, %f, %f, %f : " & a &b &c &d &e);

G = a + b + c + d + e;
P = G/500 * 100
print ("/n G : %f, a ");              aggregate marks
print ("/n b : %f
printf ("\n aggregate marks : %f", G);    G : 75
printf ("\n percentage marks : %f", P);

return 0
}
```

The temperature of the city in fahereh-
I/P through the keyboard. calculate rea-
mp in celsius.

```c
int main ()
{
    float fahrenheit, c ;
            (f)
    printf ("/n Enter the temperature : ");
    scanf ("%f : &F);
    c = (F - 32) 5 ;
                9
    printf ("/n temp in celsius : %f (5/9);
                        (F-3)  ; c);
    return 0;
}
```

5. length & breadth of rectangle & radius of a circle
are input through the keyboard. write a
pgm to calculate the area & perimeter
of the rectangle & area & circumference of
the circle.

```c
#include <stdio.h>
int main ()
{
    float : l, b, r, a, p, c, a_cir;
                                (S)
    printf ("/n Enter the value of length & breadth
    scanf ("%f %f :,&l&b);                      &?
    a = l*b ;
    p = 2*(l + b);
    printf ("/n area of the rectangle :%fa);
    printf ("/n Perimeter of the rectangle : %
```
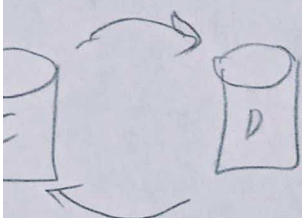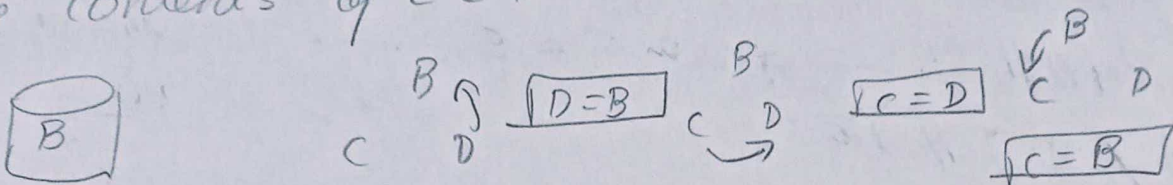
```c
printf ("/n, enter the ...
scanf ("%f :&r);
a-cir = π§n2;
c = 2π*r.
Pount ("/n area of circle : %f", a-cir);
Pruint ("/n circumference of circle : %f", c);
return o;
}
```

1- Two numbers are Input through the keyboard into locations C & D. write a prg to interchange the contents of C & D.

concept : Interchanging values

```c
= include <.stdio.h>
t main ()

oat c, B, D;
unt(" /n Enter the two values :");
ant("%d, %f? &C, &D);
)=B
=D
=B
unt f ("/n The value of c: %d, c);
ntf("/n The value of D : %d", D);

return o;
}
```

1) If a 5 digit number is I/p through the keyboard, write a program to calculate the sum of digits. [hint: use the modulus operator (%)]

```
#include <stdio.h>
int main()
{
    int a, b, c, d, e, f, g, h, i, sum;
    printf("\n Enter 5 digit number:");
    scanf("%d", &a);
    b = a/100;      // 1234
    c = a%10;       5    sum+ = c
    d = b/10;       //123
    e = b%10;       D    sum+ = e
    f = d/10;       // 12
    g = d%10;       // 3    sum+ = g
    h = f/10;       // 1
    R = f%10;       // 2

    Sum = c + e + g + h + i
    printf("\n Sum of 5 digit number:%d", S
    return 0;
}
```

b = 1234

10 √ 1 2 3.4 5 → 0
    1 0
    ─────
    2 3.4 5
    2 0
    ─────
    3 4 5
    3 0
    ─────
    4 5
    4 0
    ─────
    5

rev = h i g

        1 2 3
c   10 │ 1 2 3 4
        1 0
        ─────
        11

sum of 5 digit number:%d f i s

        1 2
    10 │ 1 2
        1 0
        ─────
        2

            1 2
    10 │ 1 2 3
        1 0
        ─────
        2 3
        2 0
        ─────
        3

n);

8) If a 5-digit number is input through the keyboard, write a pgm to reverse the number.

sol:-

```c
# include < stdio.h>
int main ()
{
    int a, b, c, d, e, f, g, h, i;
    print ("\n Enter the 5 digit number:");   // 1234
        (same as previous)
    Printf ("\n Reverse number: %d %d %d %d %d; c e g i k

    return 0
}
```

9) If a 4 digit number is input through the keyboard, write a pgm to obtain the sum of the first & last digit of this number.

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

    int a, b, c, d, e, f, g, sum;
    print ("\n Enter the 4 digit number:");   // 123
    scant ("%d &a);
        = a / 10 ;// 123;
        = a%10 ://4;
        = b / 10 ;// 2;
        = b %10;//3;
        = d / 10 ://1;
        = d%10; // 2;
    n = c + f;
    print ("\n Sum of first & last 2 numbers ; %d,
```

1 + 4

```
        1 2 3
    10 | 1 2 3 4
        10
        2 3 4
        2 0
         3 4
         3 0
          4

        1
    10 | 1 2
        1 0
         2

         1 2
    10 | 1 2 3
        1 0
         2 3
         2 0
```

10) In a town, the % of men is 52. The % of total literacy is 35% total % of literate men is 35 of total population, write a program to find the total no of illiterate men & women. If population of town is 80,000.

Sol: FC95

```c
# include < stdio.h >
int main() {
    int pop = 80,000, men, women, litmen, illitmen
                                    litwom, illitwom;

    men = 52 * (pop)/100;
    women = pop - men;
    litmen = 35 *(pop/100);
    lit = (48 * 80,000) /100;
    illitmen = men - litmen;
    litwom = totlit - litmen
    illitwom = pop - ( litmen + litmen + illitme

    Printf ("\n num of illitrate men = %d",
    Printf "\n num of illitrate women: %d",

    return 0;
}
```

52
35
87

48
100-52 = 48

4) A cashier has currency notes of denomination 10, 50 & 100. If the amount to be withdrawn is I/p through the keyboard in hundred. find the total number of currency notes of each denomination the cashier will have to give to the withdrawer.

Sol:-

int main()
{

int amt;

Print f ("Enter the amount to withdraw.");

scanf (" %d ", & amt);

Point f ("n required notes of Rupees 100 : %.d " (am

Print ("|n required notes of rupees 50 : %.d "(am

Point f (" |n required notes of rupees 10 : %.d "(am

Print f (" |n amount still running <= %.d" min ((amt

return 0;

1275
100 = 12 = 1200
50 = 1 = 50
10 = 2 = 20
        5
     ‾‾‾‾
     1275

            12
        ‾‾‾‾‾‾
   100 | 1275
        1200
        ‾‾‾‾‾
        (275) → R

wip
modu

        12
      ‾‾‾‾
  100 | 12T
       12C
      ‾‾‾‾

        2
     ‾‾‾‾
  10 | 25
       20
      ‾‾‾
        5

10) If the total S.P of 15 items & the total profit earned on them is I/P through the keyboard write a pgm to find the cop of one item.

S·P of 15 items = I/P = 200
total profit = I/P = 50.
C·P = ?

```c
#include <stdio.h>
int main()
{
    int c-p, S-p, profit;
    printf("\n Enter the selling price15");
    scanf("%f", &S-p);
    printf("\n Enter the profit ;");
    scanf("%f", & profit);
    c-p = (S-p - profit)/15
    printf("\n Cost price of 1 item is %f ,
    return 0;
}
```

operators using programs.

additional assignment operator :-

```c
int main()
{
    int a = 10, b = 5 ;
    a += b ;    // a = a + 5
    printf("A : %d", a)  //A = 15
    a -= 10 //a = a - 10 ;
    printf(" \n A : %d", a)//A = 0
    a *= 10 //  a = a X 10
    printf(" \n A : %d", a )//A = 100
    a /= 2 //  a = a ÷ 2
    printf(" \n A : %d", a) //A = 5
```

relational operator :

```c
int main()
{
    int a = 10, b = 5 ;
    printf(" Greater than : %d", a > b) ;
    printf(" \n less than            : %d, a <
    intf(" \n Greater then or Equal : %d  a >=
    rintf(" \n lesser than or equal : %d  a <=
    intf(" \n Equal )                : %d  a ==
    return 0
```

O/P   Greater   = 1
       less than   = 0
       greater then or equal = 1
       lesser than or equal = 0

logical operator:-

all condition true &&
any 1 out of 3 ||
! o/p true → 0
false → 1

int a = 32
printf(" \n logical_AND : %d ,(a>=35 && a<= 100));
prnt (" \n loqical _OR : %d, (a>= 35 || a<= 100));
prntf(" \n loqual - not %d,(a>= 35 || ac = 100))
return 0;

o/p AND 0
   OR 1
   not 0

increment & decrement

++ , ++a , a++

-a , a-

{
int a =1
printf("p_INC : %d ,+
printf ("p_INC : %.d", ++
print (Pr_A : %.d", a
Print (Pre-Dec :

o/p = 2

leap year find out :

```
int main ()

{
printf ("\n Enter the year: ");
scanf ("%d , & year);
if (year % 100 !=0)   { if (year % 400 ==0)
{ print (%d is leap year", year):
else {
Print (" %.d is a leap year", year):
}

else

{ if (year % 4 ==0)
{
Print (" %.d is leap year", year);
} else { print (%.d is leap y
return 0:
}
```

school result management. 1.five marks I/p through the keyboard. 2.Find total & average of the given marks. 3. Find the result whether the given marks must be >=35. 4. Grade as per the following condition.

        90 - 100 - A Grade
)   60 - 89 - B Grade
        70 - 79 - C Grade
        < 70   - D Grade
        Fail   - No Grade.

```c
#include <stdio.h>
int main ()
{
    int m1, m2, m3, m4, m5, total;
    float avg;
    printf("\n Enter 5 marks : \n");
    scanf("%d%d%d%d%d", &m1, &m2, &m3, &m4, &m5);
    total = m1 + m2 + m3 + m4 + m5;
    avg = total/5;
    printf("\n Total : %d", total);
    printf("\n average : %f", avg);
    if(m1 >= 35 && m2 >= 35 && m3 >= 35 && m4 >= 35 && m5 >= 35)
    {

    printf("\n Result : pass");

    if(avg >= 90 && avg <= 100);
```

An library charges a fine for Every book returned late, for 6-10 days the fine is 50 paise. for 6-10 days fine is ₹1 & above 10 days fine is ₹5. if you return the book after 30 days your membership will be cancelled, write a program to accept the number of days the member is late to return the book & display the fine or the appropriate message.

```c
int main()
{
    int days;
    Printf("\n Enter the days: ");
    scanf("%d", &days);
    if( days >=1 && days <= 5)
    {
        Printf("\n fine is ₹ 0.50 paise");
    }
    if (days >=6 && days <= 10)
    {
        Printf("\n fine is ₹1 ");
    }
    if (days > 30 days)
    {
        Printf("\n the membership will be cance...
    }
    return 0;
```

Any integer is i/p through the keyboard
write a pgm to find out whether "it is
an odd number or Even number.

(use % (modulus) operator)

```c
int main ()
{
    int n ;
    printf ("\n Enter the number:");
    scant ("%d , "&n

    if ( n %.2 = = 0);
    {
        print ( \n %.d is even number", n) ;
    }
    else
    {
        printf ("%.d is odd number". n ).
    }
    return 0.
```