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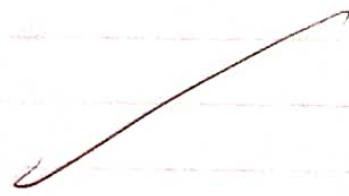
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CHEMISTRY

I N D E X

Output :

Hello



Output :

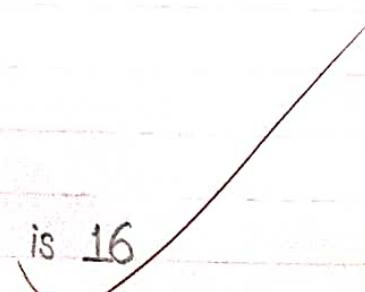
Enter first number

13

Enter second number

3

Addition of the two numbers is 16



COMPUTER LAB ASSIGNMENTLab Assignment - 1 (Basic C - Programs)

P-1: Write a program to print 'Hello' message.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    printf ("Hello");
    getch();
}
```

P-2: Write a program to add any two numbers.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int a,b,c;
    printf ("Enter first number\n");
    scanf ("%d", &a);
    printf ("Enter second number\n");
    scanf ("%d", &b);
    c = a+b;
    printf ("Addition of the two numbers is %d", c);
    getch();
}
```

Teacher's Signature : _____

Output :

Triangle area calculator

Output :

Enter base of triangle

14

Enter height of triangle

24

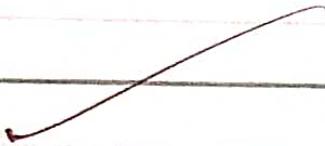
Area of triangle is 168

Console I (log) | Log terminate A del

Enter base of triangle
14

Enter height of triangle
24

Area of triangle is 168



Output :

Enter temperature in celcius

35

Temperature in Fahrenheit is 95.000000

Console I (log) | Log terminate A del

Enter temperature in celcius
35

Temperature in Fahrenheit is 95.000000

P-3: Write a program to find the area of a triangle.

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

```
#include <conio.h>
```

```
void main()
```

```
{
```

```
int b,h,A;
```

```
clrscr();
```

```
printf ("Enter base of triangle \n");
```

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

```
printf ("Enter height of triangle \n");
```

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

```
A = b * h * (0.5);
```

```
printf ("Area of triangle is %d", A);
```

```
getch();
```

```
}
```

P-4: Write a program to convert temperature from celcius to fahrenheit.

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

```
#include <conio.h>
```

```
void main()
```

```
{
```

```
float c,f;
```

```
clrscr();
```

```
printf ("Enter temperature in celcius \n");
```

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

```
f = (9*c/5) + 32;
```

```
printf ("Temperature in Fahrenheit is %f", f);
```

```
getch();
```

```
}
```

Output :

Enter radius (of a circle) : 50

Circumference of circle is 314.000000

Area of circle is 7850.000000

Program - 5

P.5 Write a program to find area and circumference of a circle.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    float r, C, A;
    printf ("Enter radius of a circle \n");
    scanf ("%f", &r);
    C = 3.14 * 2 * r;
    A = 3.14 * r * r;
    printf ("Circumference of circle is %f \n", C);
    printf ("Area of circle is %f \n", A);
    getch();
}
```



Output : ~~the output of the program~~

Enter first number ~~14~~

Enter second number ~~9~~

Addition is ~~23.000000~~

Subtraction is ~~5.000000~~

Multiplication is ~~126.000000~~

Division is ~~1.555556~~

LAB - ASSIGNMENT - 2

(Types of Operators)

Program - 6

p.6 Write a program to demonstrate the working of arithmetic operators.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    float a,b,c,d,e,f;
    printf ("Enter first number");
    scanf ("%f", &a);
    printf ("Enter second number");
    scanf ("%f", &b);
    c = a+b;
    printf ("Addition is %f\n", c);
    d = a-b;
    printf ("Subtraction is %f\n", d);
    e = a*b;
    printf ("Multiplication is %f\n", e);
    f = a/b;
    printf ("Division is %f\n", f);
    getch();
}
```

STANDARD OUT

(Output by user)

Output :

2. output

Enter first number 22

Enter second number 6

Is first greater \Rightarrow 1

Is second greater \Rightarrow 0

Are they equal \Rightarrow 0

Program-7

P.7 Write a program to demonstrate the working of relational operators.

```
# include <stdio.h>
# include <conio.h>
void main()
{
    int a,b,c,d,e;
    clrscr();
    printf("Enter first number");
    scanf("%d", &a);
    printf("Enter second number");
    scanf("%d", &b);
    c = (a > b);
    d = (a < b);
    e = (a == b);
    printf("As first greater => %d\n", c);
    printf("As second greater => %d\n", d);
    printf("Are they equal => %d\n", e);
    getch();
}
```

Output :

Value of logical and is 1
Value of logical or is 1
Value of logical not is 0

Program - 8

P.8 Write a program to demonstrate the working of logical operators.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int a=10, b=5, c=1, d, e, f;
    d = (a>b) && (a>c);
    e = (a<b) || (a>c);
    f = !a;
    printf ("Value of logical and is %d\n", d);
    printf ("Value of logical or is %d\n", e);
    printf ("Value of logical not is %d\n", f);
    getch();
}
```

Output :

Enter the value of a

2

Value after post increment is 2

Value after pre increment is 4

Value after post decrement is 4

Value after pre decrement is 2

Program - 9

P.9 Write a program to demonstrate the working of increment/decrement operator.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int a,b,c,d,e;
    clrscr();
    printf("Enter the value of a\n");
    scanf("%d", &a);
    b = a++;
    c = ++a;
    d = a--;
    e = --a;
    printf("Value after post increment is %d\n", b);
    printf("Value after pre increment is %d\n", c);
    printf("Value after post decrement is %d\n", d);
    printf("Value after pre decrement is %d\n", e);
    getch();
}
```

Output:

Entered by user and output in string variable.

Output:

Enter a,b,c

2

3

4

Greatest is 4

Program - 10

P.10 Write a program to find largest among three numbers using conditional / ternary operator.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int a,b,c,k;
    clrscr();
    printf("Enter a,b,c\n");
    scanf("%d %d %d", &a, &b, &c);
    k = (a>b) ? ((a>c) ? a:c) : ((b>c) ? b:c);
    printf("Greatest is %d", k);
    getch();
}
```

QUESTION

Write a C program to print a right-angled triangle pattern.

Output: ~~Print a symmetric diamond pattern~~

Enter n	11	< Enter >	when n < number > is odd
	Odd		else if n is even
			odd = n / 2 + 1 for i = 1 to odd for j = 1 to i print *
			for j = i + 1 to odd print space
			print *
			for j = i + 1 to odd print space
			print *
			end for i
			end for odd

Lab Assignment - 3

(Conditional Statements)

P.11 Write a program to check whether a number is odd or even.

```
# include <stdio.h>
# include <conio.h>
void main()
{
    int n;
    clrscr();
    printf("Enter n\n");
    scanf("%d", &n);
    if (n % 2 == 0)
    {
        printf("Even");
    }
    else
    {
        printf("Odd");
    }
    getch();
}
```

Teacher's Signature : _____

1) Determine if Character is an

Output shows a series of steps of solving a flow diagram

Enter Character

simran

Given character is an alphabet

<Right> solution #

<down> solution #

Character is an

Character

(Character)

(Character)

(Character)

(Character)

(Character)

(Character)

(Character)

Program 12

P.12 Write a program to check a given character is alphabet or not.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    char ch;
    clrscr();
    printf("Enter Character\n");
    scanf("%c", &ch);

    if ((ch >= 'a' && ch <= 'z') || (ch >= 'A' && ch <= 'Z'))
        printf("Given character is an alphabet");
    else
        printf("Given character is not an alphabet");
    getch();
}
```

Output: elements having a factor of square n should be
Toss out others

Enter a number 13

Positive Number

Square > elements to
Square > should be
Toss out others

3
16 > set
16 > 16
16 > 16

16 > 16
16 > 16
16 > 16

16 > 16
16 > 16
16 > 16

16 > 16
16 > 16
16 > 16

16 > 16
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16 > 16

16 > 16
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16 > 16

16 > 16
16 > 16
16 > 16

16 > 16
16 > 16
16 > 16

Program - 13

P13 Write a program to check, a given number is positive, negative or zero.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int a;
    printf("Enter a number");
    scanf("%d", &a);
    if (a>=1)
        printf("Positive Number");
    if (a<=-1)
        printf("Negative Number");
    if (a==0)
        printf("Zero");
    getch();
}
```

Output:

Enter n 7
Sunday

Program-14

P14 Write a program using switch case statements to display Monday to Sunday.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int n;
    clrscr();
    printf("Enter n");
    scanf("%d", &n);
    switch(n)
}
```

Case 1 :

```
printf("Monday");
break;
```

Case 2 :

```
printf("Tuesday");
break;
```

Case 3 :

```
printf("Wednesday");
break;
```

Case 4 :

```
printf("Thursday");
break;
```

Van der Kolk

Wetland & coastal zone studies and management of wetlands
with particular reference to the wetlands of the Netherlands

Edited by J. G. van der Kolk
and J. H. G. van der Valk

With contributions by
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J. H. G. van der Valk
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Wetlands - Biology

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Wetlands - Geology

Subject listing:
Wetlands - Hydrology

Date _____

Expt. No. _____

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Case 5 :

```
printf("Friday");  
break;
```

Case 6 :

```
printf("Saturday");  
break;
```

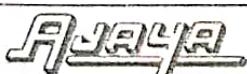
Case 7 :

```
printf("Sunday");  
break;
```

Default :

~~printf("Wrong Choice");~~

~~getch();~~



Teacher's Signature : _____

Output :

Enter a and b.

2

3

Entered your choice

1-Add, 2-Sub, 3-Mul, 4-Div

1

Addition is $\Rightarrow 5$

Program - 15

P.15 Write a program to perform arithmetic operations using switch case (mini calculator using +, -, *, /)

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int a,b,c,n;
    printf ("Enter a and b \n");
    scanf ("%d %d", &a, &b);
    printf ("Enter your choice \n");
    printf ("1-Add, 2-Sub, 3-Mul, 4-Div ");
    scanf ("%d", &n);
}
```

Switch (n)

{

Case 1 :

```
c=a+b;
printf ("Addition is => %d", c);
break;
```

}

Case 2 :

```
i   c=a-b;
printf ("Subtraction is => %d", c);
break;
```

l

AJAYA

1. Wetland - Wetland - Wetland - Wetland

2. Wetland - Wetland - Wetland - Wetland

3. Wetland - Wetland - Wetland - Wetland

4. Wetland - Wetland - Wetland - Wetland

5. Wetland - Wetland - Wetland - Wetland

6. Wetland - Wetland - Wetland - Wetland

7. Wetland - Wetland - Wetland - Wetland

8. Wetland - Wetland - Wetland - Wetland

9. Wetland - Wetland - Wetland - Wetland

10. Wetland - Wetland - Wetland - Wetland

Case 3 :

```
{   c = a * b;  
    printf ("Multiplication is => %d", c);  
    break;  
}
```

}

Case 4 :

```
{   c = a / b;  
    printf ("Division is => %d", c);  
    break;  
}
```

}

Default :

```
{   printf ("Wrong Choice");  
}
```

}

```
getch();  
}
```

✓

Output :

First 10 natural numbers are :

1
2
3
4
5
6
7
8
9
10

Their sum is : 55

Lab Assignment - 4

(Looping Statements)

Program 16

P16 Write a program to display first 10 natural numbers and their sum.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int i=1, sum=0;
    clrscr();
    printf("First 10 natural numbers are : \n");
}
```

~~while (i <= 10)~~

```

    printf("\n %d", i);
    sum = sum + i;
    i++;
}
```

~~printf("\n Their sum is : %d", sum);~~

Teacher's Signature : _____

Output:

3 6 9 12
15 18 21
24 27 30

Entered number: 3

3

1 = 3
2 = 6
3 = 9
4 = 12
5 = 15
6 = 18
7 = 21
8 = 24
9 = 27
10 = 30

Program 17

P.17 Write a program to print table of a number using
for loop ?

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int n,i;
    clrscr();
    printf ("Enter number : \n");
    scanf ("%d", &n);

    for (i=1; i<=10; i++)
    {
        printf ("%d * %d = %d \n", n, i, n*i);
    }
    getch();
}
```

Output : Enter a number : 6

Enter a number :

6

NOT PRIME

Program 18

P.18 Write a program to check given number is prime number or not a prime?

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int n, i, f = 0;
    printf ("Enter a number : \n");
    scanf ("%d", &n);

    for (i=2 ; i<n, i++)
    {
        if (n % i == 0)
        {
            f = 1;
            break;
        }
    }

    if (f == 0)
        printf ("PRIME \n");
    else
        printf ("NOT PRIME \n");

    getch();
}
```

Output:

Enter a number :

42

Reverse of number n is : 24

Program 19

P.19 Write a program to find out reverse of a given number?

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

```
#include <conio.h>
```

```
void main()
```

```
{
```

```
int n, K, x=0;
```

```
printf ("Enter a number : %d");
```

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

```
while (n>0)
```

```
{
```

```
K = n % 10;
```

```
x = x * 10 + K;
```

```
n = n / 10;
```

```
}
```

```
printf ("Reverse of number n is : %d", x);
```

```
getch();
```

Output:

Enter a number

4

Factorial of given number = 24

Program 20

P.20 Write a program to find factorial of a given number?

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

```
# include <conio.h>
```

```
void main()
```

```
{
```

```
int n, i=1, f=1;
```

```
clrscr();
```

```
printf ("Enter a number \n");
```

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

```
while (i <= n)
```

```
{
```

```
f=f * i;
```

```
i++;
```

```
}
```

```
printf ("The Factorial of given number = %d", f);
```

```
getch();
```

```
}
```

Output:

Output:

Entered number of terms : 6

Fibonacci Series : 0, 1, 1, 2, 3, 5

Program 21

P.21 Write a program to print out fibonacci series upto 'n' terms ?

```
# include <stdio.h>
# include <conio.h>
void main()
{
    int i, n, t1=0, t2=1;
    int next term;
    clrscr();
    printf("Enter number of terms : ");
    scanf("Fibonacci Series : %d, %d", t1, t2);
    for (i=3; i<=n; i++)
        next term = t1+t2;
    {
        printf("%d", next term);
        t1 = t2;
        t2 = next term;
    }
    getch();
}
```

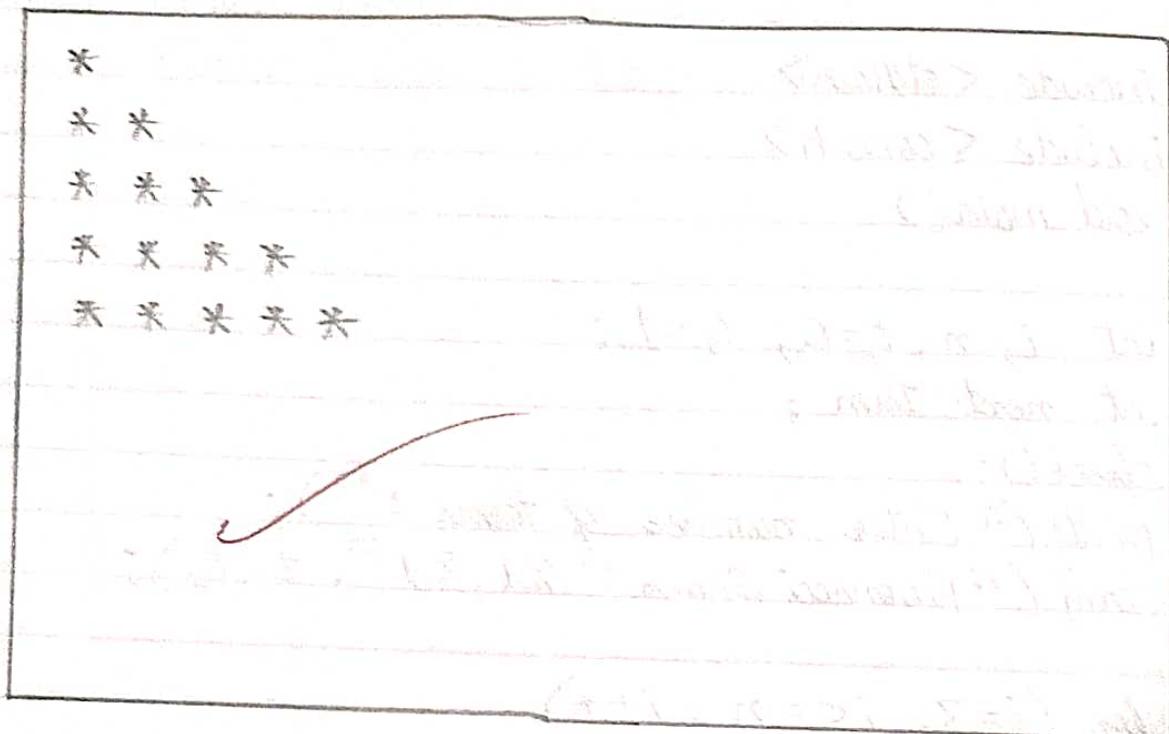
~~Ques~~

AJAYA

Teacher's Signature : _____

La mano

Output 8



Graph of f(x)

Graph of f(x) + 1

Graph of f(x) - 1

Ability

LAB ASSIGNMENT - 5(Pattern based problem using Nested Loop)

Program - 22

P-22 Write a program to print half pyramid using * symbol.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int i, j;
    for (i=1; i<=5; i++)
    {
        for (j=1; j<=i; j++)
        {
            printf ("*");
        }
        printf ("\n");
    }
    getch();
}
```

Output:

33 mapped

1	one	two	and	three	at	mapped	to	first
2	2							
3	3	3						
4	4	4	4					
5	5	5	5	5				
6	6	6	6	6	6			

<dict> elements

<dict> elements

Output type

for i in range(1, 7):
 print(i)

for i in range(1, 7):
 print(i)

i = 1
i = 2
i = 3
i = 4
i = 5
i = 6

(1, 2, 3, 4, 5, 6) tuple

(1, 2, 3, 4, 5, 6) tuple

Program - 23

P-23 Write a program to print half pyramid using numbers.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int i, j ;
    for (i=1; i<=6; i++)
    {
        for (j=1; j<=i; j++)
        {
            printf ("%d", i);
        }
        printf ("\n");
    }
    getch();
}
```

Output s

A					
B	B				
C	C	C			
D	D	D	D		
E	E	E	E	E	

Program - 24

P.24 Write a program to print half pyramid using alphabets.

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

```
# include < conio.h >
```

```
void main()
```

```
{
```

```
    int i, j ;
```

```
    char ch = 'A' ;
```

```
    for (i=1; i<=5; i++)
```

```
        for (j=1; j<=i; j++)
```

```
{
```

```
        printf ("%c", ch);
```

```
}
```

```
        ch++ ;
```

```
    printf ("\n");
```

```
}
```

```
getch();
```

```
}
```

Output:

~~Substitution~~ > ~~displacement~~

六

Edisons > Edison
— (from May)

大 大 大
大 大 大 大

米

$$\begin{aligned} & \text{and } (t_1 + t_2 - 2) \geq 0 \quad \text{and} \\ & (t_1 + t_2 - 2) \geq 0 \quad \text{and} \end{aligned}$$

$\left(\frac{1}{2} \sin^2 j + \frac{1}{2} \right) \sin$

schubert 38th Street

C. L. Johnson

1000

Program - 25

P.25 Write a program to print full pyramid using * symbol.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int i, j, k ;
    for (i=1 ; i<=5 ; i++)
    {
        for (j=1 ; j<=10-i ; j++)
        {
            printf(" ");
        }
        for (k=1 ; k<=(2*i)-1 ; k++)
        {
            printf("*");
        }
        printf("\n");
    }
    getch();
}
```

Ex. program

Output:

1	< Author > student #
2 2 2	< student > student #
3 3 3 3 3	Other Name
4 4 4 4 4 4 4	Author Name
5 5 5 5 5 5 5 5 5	(Author's name)

Ex. program

Author Name

Author

Program - 26

P.26 Write a program to print full pyramid using numbers.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int i, j, k, a=1 ;
    for (i=1 ; i<=5 ; i++)
    {
        for (j=1 ; j<=10-i ; j++)
        {
            printf ("%d", a);
        }
        for (k=1 ; k<=(2*i)-1 ; k++)
        {
            printf ("%d", a);
        }
        a++;
        printf ("\n");
    }
    getch();
}
```

Enter 10 numbers

1
2
3
4
5
6
7
8
9
10

Sum is 55

Avg is 5

Output view

Date 29/4/24

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LAB ASSIGNMENT - 6 (ARRAY)

Program - 27

P.27 Write a program to calculate sum and average of 10 elements of given Array.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int a[10], i, sum=0, avg ;
    clrscr();
    printf ("Enter 10 numbers \n");
    for (i=0; i<10; i++)
    {
        scanf ("%d", &a[i]);
    }
    for (i=0; i<10; i++)
    {
        sum = sum + a[i];
    }
    avg = sum/10 ;
    printf ("Sum is %d, Avg is %d", sum, avg);
    getch();
}
```

Enter 10 numbers

2

8

25

32

64

7

12

29

36

9

Maximum is 64

Program - 28

P.28 Write a program to find the maximum no in the Array.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int a[10], i, max ;
    clrscr();
    printf ("Enter 10 numbers \n");
    for (i=0; i<10; i++)
    {
        scanf ("%d", &a[i]);
    }
    max = a[0];
    for (i=0; i<10; i++)
    {
        if (a[i] > max)
        {
            max = a[i];
        }
    }
    printf ("Maximum is %d", max);
    getch();
}
```

Enter 10 numbers

64

17

37

46

74

35

58

26

46

57

Elements of array in ascending order:

17 26 35 37 46 46 57 58 64 74

Program - 29

P.29 Write a program to sort Array elements in ascending / descending order.

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

```
#include <conio.h>
```

```
void main()
```

```
{ int a[10], i, j, temp ;
```

```
clrscr();
```

```
printf ("Enter 10 numbers\n");
```

```
for (i=0; i<10; i++)
```

```
{ scanf ("%d", &a[i]);
```

```
}
```

```
for (i=0; i<10; i++)
```

```
{ for (j=i+1; j<10; j++)
```

```
{ if (a[i] > a[j])
```

```
{ temp = a[i];
```

```
a[i] = a[j];
```

```
a[j] = temp;
```

```
}
```

```
}
```

```
}
```

```
printf ("Elements of array in ascending order : ");
```

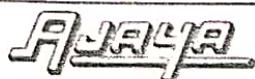
```
for (i=0; i<10; i++)
```

```
{ printf ("%d ", a[i]);
```

```
}
```

```
getch();
```

```
}
```



Enter 10 numbers

1
2
3
4
5
6
7
8
9
10

Enter item which you want to search 7

Location is 7

Program - 30

P.30 Write a program to search a specified element in Array.

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

```
#include <conio.h>
```

```
void main()
```

```
{
```

```
int a[10], i, item, loc;
```

```
clrscr();
```

```
printf ("Enter 10 numbers \n");
```

```
for (i=0; i<10; i++)
```

```
{
```

```
scanf ("%d", &a[i]);
```

```
}
```

```
printf ("Enter item which you want to search ");
```

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

```
for (i=0; i<10; i++)
```

```
{
```

```
if (a[i] == item)
```

```
{
```

```
loc = i + 1;
```

```
break;
```

```
}
```

```
}
```

```
printf ("Location is %d ", loc);
```

```
getch();
```

```
}
```

Enter Array

5
10
15
18
22

Enter element to be inserted

40

Enter location

3

5
10
40
15
18
22

Program - 31

P.31 Write a program to insert an element at specified position in the Array.

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

```
#include <conio.h>
```

```
void main()
```

```
{ int a[6], i, item, loc ;
```

```
printf ("Enter Array\n");
```

```
for (i=0; i<5; i++)
```

```
{ scanf ("%d", &a[i]);
```

```
}
```

```
printf ("Enter element to be inserted\n");
```

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

```
printf ("Enter location\n");
```

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

```
for (i=5; i>=loc; i--)
```

```
{ a[i] = a[i-1];
```

```
}
```

```
a[i] = item;
```

```
for (i=0; i<6; i++)
```

```
{
```

```
printf ("\n%d", a[i]);
```

```
}
```

```
getch();
```

```
}
```

Enter Array

5
10
15
18
22

Enter location 3

5
10
18
22



Program - 32

P.32 Write a program to delete an element at specified position in the Array.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int a[5], i, item, loc;
    printf("Enter Array\n");
    for (i=0; i<5; i++)
    {
        scanf("%d", &a[i]);
    }
    printf("Enter location");
    scanf("%d", &loc);
    for (i=loc-1; i<4; i++)
    {
        a[i] = a[i+1];
    }
    for (i=0; i<4; i++)
    {
        printf("\n%d", a[i]);
    }
    getch();
}
```

Enter 3×3 matrix

1

2

3

4

5

6

7

8

9

Output is

1 2 3

4 5 6

7 8 9

Program - 33

P.33 Write a program to input and output 2-D Array elements.

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

```
#include <conio.h>
```

```
void main()
```

```
{
```

```
int a[3][3], i, j;
```

```
printf("Enter 3x3 matrix \n");
```

```
for (i=0; i<3; i++)
```

```
{
```

```
    for (j=0; j<3; j++)
```

```
{
```

```
    scanf("%d", &a[i][j]);
```

```
}
```

```
}
```

```
printf("Output is \n");
```

```
for (i=0; i<3; i++)
```

```
{
```

```
    for (j=0; j<3; j++)
```

```
{
```

```
    printf("%d", a[i][j]);
```

```
}
```

```
    printf("\n");
```

```
}
```

```
getch();
```

Enter first 3×3 matrix

1	2	3
4	5	6
7	8	9

Enter second 3×3 matrix

9	8	7
6	5	4
3	2	1

Addition

10	10	10
10	10	10
10	10	10

Program - 34

P.34 Write a program for addition of two matrices.

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

```
#include <conio.h>
```

```
void main()
```

```
{
```

```
int a[3][3], b[3][3], c[3][3], i, j;
```

```
printf ("Enter first 3x3 matrix \n");
```

```
for (i=0; i<3; i++)
```

```
{
```

```
for (j=0; j<3; j++)
```

```
{
```

```
scanf ("%d", &a[i][j]);
```

```
}
```

```
}
```

```
printf ("Enter second 3x3 matrix \n");
```

```
for (i=0; i<3; i++)
```

```
{
```

```
for (j=0; j<3; j++)
```

```
{
```

```
scanf ("%d", &b[i][j]);
```

```
}
```

```
}
```

```
for (i=0; i<3; i++)
```

```
{
```

```
for (j=0; j<3; j++)
```

```
{
```

Teacher's Signature : _____

~~Chloro~~ chlorine

(11.2.10.3)

~~1. (1988, 1989) 1988~~

6-3: 2010-11

~~(efficiency)~~

Strewn about the ground

63-1523-3

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$$c[i][j] = a[i][j] + b[i][j];$$

7

3

```
printf("Addition is \n");
```

for... (i=0; i<3; i++)

1

2

for (j=0; j<3; j++)

2

2

```
printf ("%d", c[i][j]);
```

3

3

~~printf ("\\n");~~

2

3

getch():

۷

2

Enter first 3×3 matrix

1	2	3
4	5	6
7	8	9

Enter second 3×3 matrix

1	2	3
4	5	6
7	8	9

Subtraction is

0	0	0
0	0	0
0	0	0

Program - 35

P35 Write a program for subtraction of two matrices.

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

```
#include <conio.h>
```

```
void main()
```

```
{ int a[3][3], b[3][3], c[3][3], i, j;
```

```
printf ("Enter first 3x3 matrix \n");
```

```
for (i=0; i<3; i++)
```

```
{ for (j=0; j<3; j++)
```

```
{ scanf ("%d", &a[i][j]);
```

```
}
```

```
} printf ("Enter second 3x3 matrix \n");
```

```
for (i=0; i<3; i++)
```

```
{ for (j=0; j<3; j++)
```

```
{ scanf ("%d", &b[i][j]);
```

```
}
```

```
} for (i=0; i<3; i++)
```

```
{ for (j=0; j<3; j++)
```

```
{ c[i][j] = a[i][j] - b[i][j];
```

```
}
```

```
} printf ("Subtraction is \n");
```

```
for (i=0; i<3; i++)
```

```
{ for (j=0; j<3; j++)
```

```
{ printf ("%d ", c[i][j]);
```

```
} printf ("\n");
```

```
} getch();
```

```
}
```

Enter first 3×3 matrix

1	2	3
4	5	6
7	8	9

Enter second 3×3 matrix

9	8	7
6	5	4
3	2	1

Multiplication is

27	24	18
84	65	54
133	114	90

Program - 36

P.36 Write a program for multiplication of two matrices

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

```
#include <conio.h>
```

```
void main()
```

```
{ int a[3][3], b[3][3], c[3][3], i, j, k;
```

```
printf ("Enter first 3x3 matrix \n");
```

```
for (i=0; i<3; i++)
```

```
{ for (j=0; j<3, j++)
```

```
{ scanf ("%d", &a[i][j]);
```

```
}
```

```
} printf ("Enter second 3x3 matrix \n");
```

```
for (i=0; i<3; i++)
```

```
{ for (j=0; j<3; j++)
```

```
{ scanf ("%d", &b[i][j]);
```

```
}
```

```
{ for (i=0; i<3; i++)
```

```
{ for (j=0; j<3; j++)
```

```
{ for (k=0; k<3; k++)
```

```
{ c[i][j] = c[i][j] + (a[i][k] * b[k][j]);
```

```
}
```

```
}
```

```
} printf ("Multiplication is \n");
```

```
for (i=0; i<3; i++)
```

```
{ for (j=0; j<3; j++)
```

```
{ printf ("%d ", c[i][j]);
```

```
{ printf ("\n");
```

```
} getch();
```

AJAYA

Enter a 3×3 matrix

1
2
3
4
5
6
7
8
9

Transpose is

1	4	7
2	5	8
3	6	9

Program - 37

P.37 Write a program for transpose of a matrix.

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

```
#include <conio.h>
```

```
void main()
```

```
{
```

```
int a[3][3], i, j;
```

```
printf ("Enter a 3x3 matrix\n");
```

```
for (i=0; i<3; i++)
```

```
{ for (j=0; j<3; j++)
```

```
{ scanf ("%d", &a[i][j]);
```

```
}
```

```
}
```

```
printf ("Transpose is\n");
```

```
for (i=0; i<3; i++)
```

```
{ for (j=0; j<3; j++)
```

```
{ printf ("%d ", a[j][i]);
```

```
}
```

```
printf ("\n");
```

```
}
```

```
getch();
```

```
}
```

Enter Radius

2.00

Area is 12.56

Circumference is

Diameter is 4.00

LAB ASSIGNMENT - 7

(FUNCTIONS AND RECURSIONS)

Program - 38

- P.38 Write a program to find diameter, circumference and area of circle using function.

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

```
#include <conio.h>
```

```
void area (float x);
```

```
void cir (float x);
```

```
void dia (float x);
```

```
void main()
```

```
{ float x;
```

```
clrscr();
```

```
printf ("Enter Radius in ");
```

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

```
area(x);
```

```
cir(x);
```

```
dia(x);
```

```
getch();
```

```
}
```

```
void area (float x)
```

```
{
```

```
float a;
```

```
a = 3.14 * x * x;
```

```
printf ("Area is %f m", a);
```

```
}
```

the first time I have seen a
true blue bird. It was a
small bird with a long tail.
It was singing all day long.
I have never seen such a
beautiful bird before. It
was a great pleasure to see
such a bird. I will never
forget it.

void cir (float r)

{
 float b ;

$$b = 2 * 3.14 * r ;$$

 printf ("Area of %f m", b);

}
void dia (float x)

{
 float c ;

$$c = 2 * x ;$$

 printf ("Diameter of %f m", c);

}

Enter two numbers a and b

$$a = 9$$

$$b = 27$$

27 is maximum and 9 is minimum

Program - 39

P.39 Write a program to find maximum and minimum between two numbers using function.

```
#include <stdio.h>
#include <conio.h>
void max(int a, int b);
void main()
{
    int a, b;
    clrscr();
    printf("Enter two number a and b \n");
    scanf("%d %d", &a, &b);
    max(a, b);
    getch();
}

void max(int a, int b)
{
    if (a > b)
        printf("%d is maximum and %d is minimum", a, b);
    else
        printf("%d is maximum and %d is minimum", b, a);
}
```


Program - 40

P.40 Write a program to find prime numbers between a given range using function.

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

```
#include <conio.h>
```

```
void prime(int a, int b);
```

```
void main()
```

```
{ int i, j;
```

```
printf("Enter start value");
```

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

```
printf("Enter end value");
```

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

```
prime(i, j);
```

```
getch();
```

```
}
```

```
void prime(int i, int j)
```

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

```
for (a=i; a<=j; a++)
```

```
{ c=0;
```

```
for (b=1; b<=a; b++)
```

```
{ if (a%b==0)
```

```
{ c++;
```

```
}
```

```
if (c==2)
```

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

```
}
```

```
}
```

Enter a number 5

Factorial of 5 is 120

Program - 41

P.41 Write a program to find factorial of number using recursion

```
#include <stdio.h>
#include <conio.h>
int rec(int a);
void main()
{
    int i, j;
    printf("Enter a number");
    scanf("%d", &i);
    j = rec(i);
    printf("Factorial of %d is %d", i, j);
    getch();
}
int rec(int a)
{
    int z;
    if (a == 1)
        return a;
    else
        z = a * (rec(a - 1));
    return z;
}
```

Enter number of terms 5
Sum of 5 terms is 15

< Ante > return it
< Ante > return it
(call) see for
return (return) key

Call back to
< Call > return it
(call) see for
return (return) key

(Call, see for
return (return) key)

Program - 42

P.42 Write a program to find sum of n Natural Numbers using recursion.

```
#include <stdio.h>
#include <conio.h>
int sum (int a);
void main()
{ int i,j;
printf ("Enter number of terms");
scanf ("%d", &i);
j = sum (i);
printf ("Sum of %d terms is %d", i, j);
getch();
}
```

```
int sum (int a)
{ int n=0;
if (a==0)
    return a;
if (a>0)
    n = a + (sum (a-1));
return n;
```

Enter base number

4

Enter power 3

4 to the power 3 is 64

Program - 43

p.13 Write a program to calculate power of number using recursion

```
# include <stdio.h>
# include <conio.h>
int power (int a, int b)
void main ()
{
    int b,p,v;
    printf ("Enter base number \n");
    scanf ("%d", &b);
    printf ("Enter power \n");
    scanf ("%d", &p);
    v=power (b,p);
    printf ("%d to the power %d is %d", b,p,v);
    getch ();
}

int power (int b, int p)
{
    if (p==0)
        return (b*power (b, p-1));
    else
        return 1;
}
```

Enter a number 359
Reverse is 953

Program - 44

P.44 Write a program to find reverse of number using recursion

```
#include <stdio.h>
#include <conio.h>
int sum=0, rem ;
int rev (int a) ;
void main()
{ int a, x ;
printf ("Enter a number ") ;
scanf ("%d", &a) ;
x=rev(a) ;
printf ("Reverse is %d ", x) ;
getch() ;
}
```

```
int rev (int n)
{
    if (n)
        rem = n % 10 ;
        sum = sum * 10 + rem ;
        rev (n/10) ;
}
else
{
    return sum ;
}
```

Enter string

HelloWorld

Length of the given string 10

Lower case of the given string helloworld

Upper case of the given string HELLOWORLD

Reverse of the given string DLROWOLLEH

(a) True
False

(b) Given input

: 8, 9, 10, 11

: (8, 9, 10, 11) string

: (8, 9, 10, 11) strings

(c) True
False

: (8, 9, 10, 11) string

: (8, 9, 10, 11)

(d) True
False

: 8, 9, 10, 11

: (8, 9, 10, 11) string

: (8, 9, 10, 11) strings

: 8, 9, 10, 11

: (8, 9, 10, 11) string

: 8, 9, 10, 11

: (8, 9, 10, 11) strings

Lab Assignment - 8

(String and Character Array)

Program - 46

P.46 Write a program using string functions - `strlen()`, `strlwr()`, `strupr()`, `strrev()`.

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

```
#include <conio.h>
```

```
#include <string.h>
```

```
void main()
```

```
{ char a[10];
```

```
printf("Enter string\n");
```

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

```
printf("\n Length of the given string %d", strlen(a));
```

```
printf("\n Lower case of the given string %s", strlwr(a));
```

```
printf("\n Upper case of the given string %s",strupr(a));
```

```
printf("\n Reverse of the given string %s", strrev(a));
```

```
getch();
```

```
}
```

Enter first string CHITRANSH

Enter second string JAIN

Concatenation of given string is : CHITRANSHJAIN

Copy of given string is : JAIN

Comparison of given string is : 1

Program - 47

P.47 Write a program using string functions - strcat(), strcpy(), strcmp().

```
#include <stdio.h>
#include <conio.h>
#include <string.h>
void main()
{
    char a[10], b[10];
    printf("Enter first string");
    scanf("%s", &a);
    printf("Enter second string");
    scanf("%s", &b);
    printf("In Concatenation of given string is : %s", strcat(a,b));
    printf("In Copy of given string is : %s", strcpy(a,b));
    printf("In Comparison of given string is : %d", strcmp(a,b));
    getch();
}
```

Enter a string

Gjain@2005

No. of alphabets is 5

No. of digit is 4

No. of special character is 1

Program - 48

P.48 Write a program to find total number of alphabets, digits or special characters in a string.

```
#include <stdio.h>
#include <conio.h>
#include <string.h>
void main()
{
    int i=0, b=0, d=0, s=0;
    char a[10];
    clrscr();
    printf("Enter a string \n");
    scanf("%s", &a);
    for (i=0; a[i] != '\0'; i++)
    {
        if (a[i] >='A' && a[i] <='Z') || (a[i] >='a' && a[i] <='z')
        {
            b++;
        }
        else if (a[i] >='0' && a[i] <='9')
        {
            d++;
        }
        else
        {
            s++;
        }
    }
    printf("\n No. of alphabets is %d", b);
    printf("\n No. of digit is %d", d);
    printf("\n No. of special character is %d", s);
    getch();
}
```



Enter a string

Rajasthan Royals

Enter element to find frequency : s

Frequency of s is 2.

Program - 49

p.49 Write a program to find the frequency of given character

```
# include <stdio.h>
# include <conio.h>
# include <string.h>
void main()
{
    char str[100];
    int i, j, count = 0;
    char ch;
    printf("Enter a string\n");
    gets(str);
    printf("Enter element to find frequency : ");
    scanf("%c", &ch);
    for (i=0; str[i] != '\0'; i++)
    {
        if (str[i] == ch)
            count++;
    }
    printf("Frequency of %c is %d", ch, count);
    getch();
}
```

Enter a string KANAK
String is Palindrome

Method 1
Method 2
Method 3
Method 4

Method 5

Method 6

Method 7

Method 8

Method 9

Method 10

Method 11

Expt. No. _____

Program - 50

E50 Write a program to find an entered string is palindrome or not without using string functions.

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

```
# include <conio.h>
```

```
# include <string.h>
```

```
void main()
```

```
{ char a[10], b[10];
```

```
int i, j=0, k=0, z=0;
```

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

```
gets(a);
```

```
} for (i=0; a[i] != '\0'; i++)
```

```
{ k++;
```

```
} for (i=k-1; i>=0; i--)
```

```
{ b[j] = a[i];
```

```
j++;
```

```
} b[j] = '\0';
```

```
for (i=0; i<k; i++)
```

```
{ if (a[i] == b[i])
```

```
{ z++;
```

```
} if (k == z)
```

```
{ printf ("String is Palindrome");
```

```
}
```

```
else
```

```
{ printf ("Not a Palindrome");
```

```
}
```

Sury

```
getch();
```

Address of a 6356748

Address of b 6356744

10

10

6356748

($\alpha_1 = [1, 0, 0]$) \oplus

($\alpha_2 = [1, 1, 0]$) \oplus

($\alpha_3 = [0, 1, 0]$) \oplus

($\alpha_4 = [0, 0, 1]$) \oplus

($\beta_1 = [1, 0, 0]$) \oplus

($\beta_2 = [0, 1, 0]$) \oplus

($\beta_3 = [0, 0, 1]$) \oplus

($\gamma_1 = [1, 0, 0]$) \oplus

($\gamma_2 = [0, 1, 0]$) \oplus

Lab - Assignment 9

(Pointers)

Program - 52

P52 Write a program to create, initialize and use of pointers.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int a=10;
    int *p;
    p=&a;
    printf ("In Address of a %d", &a);
    printf ("In Address of p %d, &p);
    printf ("%d", a);
    printf ("%d", *p);
    printf ("%d", p);
    getch();
}
```

Enter a and b

3

4

The addition of two pointer is 7

The subtraction of two pointer is -1

The multiplication of two pointer is 12

The division of two pointer is 0

Program - 53

P53 Write a program to perform all arithmetic operations using pointers.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int a, b;
    int *P, *Q;
    printf ("Enter a and b");
    scanf ("%d %d", &a, &b);
    P = &a;
    Q = &b;
    printf ("The addition of two pointer is %d", *P + *Q);
    printf ("The subtraction of two pointer is %d", *P - *Q);
    printf ("The multiplication of two pointer is %d", (*P) * (*Q));
    printf ("The division of two pointer is %d", (*P) / (*Q));
    getch();
}
```

Enter a and b and d mark up a swap

5

6

After Swapping: 6 5

Program - 54

P.54 Write a program to swap numbers by call by references.

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

```
#include <conio.h>
```

```
void swap (int *P, int *q);
```

```
void main()
```

```
{
```

```
int a, b;
```

```
printf ("Enter a and b ");
```

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

```
swap (&a, &b);
```

```
getch();
```

```
}
```

```
void swap (int *P, int *q)
```

```
{
```

```
int c;
```

```
C = *P;
```

```
*P = *q;
```

```
*q = C;
```

```
printf ("After Swapping : %d %d ", *P, *q);
```

```
}
```

Enter String: HelloWorld
Length is 10

String is 10 characters long

String is 10 characters long

(0, 1, 2, 3, 4, 5, 6, 7, 8, 9) digits given

Given 10

(A, B, C, D, E, F, G, H, I, J) letters given

(A, B, C, D, E, F, G, H, I, J) letters given

(A, B, C, D, E, F, G, H, I, J) letters given

Given 10

(A, B, C, D, E, F, G, H, I, J) letters given

Given 10

Given 10

Given 10

(A, B, C, D, E, F, G, H, I, J) letters given

Program - 55

P.55 Write a program to find length of a string using pointers.

```
# include <stdio.h>
# include <conio.h>
Void main()
{
    char a[20];
    int k=0;
    char *P;
    printf ("Enter String ");
    scanf ("%s", &a);
    for (P=a; *P != '\0'; P++)
        k++;
}
```

```
printf ("Length is %d", k);
getch();
```

Enter a string and let's analyze it

My name is Chitransh Jain

Vowels is 4

Consonants is 9

Program - 56

P.56 Write a program to count vowels and consonants in a string using pointers.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    char str[100];
    char *P;
    int a,b;
    printf("Enter a string \n");
    gets(str);
    P = str;
    a=b=0;
    while (*P != '0')
    {
        if ((*P == 'A') || (*P == 'E') || (*P == 'I') || (*P == 'O') || (*P == 'U') ||
            *P == 'a' || *P == 'e' || *P == 'i' || *P == 'o' || *P == 'u')
            a++;
        else
            b++;
        P++;
    }
    printf("Vowels is %d In Consonants is %d", a, b);
    getch();
}
```

20. Write a C program to input 7 elements in array and print them in reverse order.

1

2

3

4

5

6

7

Array elements : 1,2,3,4,5,6,7

Program - 57

P.57 WAP to input and print array elements using pointer

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int arr [10];
    int N, i;
    int *P = arr;
    printf ("Enter elements in array : \n");
    for (i=0; i<N; i++)
    {
        scanf ("%d", &P[i]);
    }
    printf ("Array elements : ");
    for (i=0; i<N; i++)
    {
        printf ("%d", i[P]);
    }
    getch();
}
```

5 5 5

Se - wapit

Wapiti (Cervus canadensis) - 1900

<Adulta> abulans

<Adulta> abulans

Oreamnos americanus

: [xanth] arc. 1900

: 3.1. 1900

: 200 = 900

(Cervus canadensis abulans) (1900)

(Cervus canadensis abulans)

: (Oreamnos americanus) (1900)

: (Oreamnos americanus) (1900)

: (Oreamnos americanus) (1900)

: (Oreamnos americanus)

Program - 58

P.58 Write a program to use the concept of double pointers
(pointer to pointers).

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int a=5
    int *P, **Q;
    P=&a;
    Q=&P;
    printf("n %d", a);
    printf("n %d", *P);
    printf("n %d", **Q);
    getch();
}
```

2nd distance

1st distance
Enter feet : 12 (width of room)
Enter inch : 7.9

2nd distance

Enter feet : 2
Enter inch : 9.8

Sum of distances = 15' - 5.7"

(width) shalvi 7'

(width) shalvi 7'

(inner line)

2 = 0.5m

5.8 + 9.8 = 15.6

5.8 = 9

9.8 = 8

(5.8 + 9.8) ft. off

(5.8 + 9.8) ft. off

(5.8 + 9.8) ft. off

Outer

LAB ASSIGNMENT - 10

(Structure and Union)

Program - 59

P-59 Write a program to add two distances entered by user.
Measurement of distance should be in inch and feet. (12 inches = 1 foot)

```
#include <stdio.h>
#include <conio.h>
struct distance
{
    int feet;
    float inch;
} dist1, dist2, sum;
void main()
{
    printf("1st distance \n");
    printf("Enter feet : ");
    scanf("%d", &dist1.feet);
    printf("Enter inch : ");
    scanf("%f", &dist1.inch);

    printf("2nd distance \n");
    printf("Enter feet : ");
    scanf("%d", &dist2.feet);
    printf("Enter inch : ");
    scanf("%f", &dist2.inch);
```

1. Wetland
2. Shrubland
3. Grassland
4. Forest
5. Urban
6. River
7. Lake
8. Coastal
9. Mountain
10. Desert
11. Tropical rainforest
12. Temperate rainforest
13. Savanna
14. Temperate deciduous forest
15. Boreal forest
16. Temperate coniferous forest
17. Temperate broadleaf forest
18. Temperate evergreen forest
19. Temperate mixed forest
20. Temperate sclerophyllous forest
21. Temperate grassland
22. Temperate shrubland
23. Temperate wetland
24. Temperate coastal forest
25. Temperate mountain forest
26. Temperate desert
27. Temperate tundra
28. Temperate grassland
29. Temperate shrubland
30. Temperate wetland
31. Temperate coastal forest
32. Temperate mountain forest
33. Temperate desert
34. Temperate tundra

$\text{sum-feet} = \text{dist 1. feet} + \text{dist 2. feet};$

$\text{sum-inch} = \text{dist 1. inch} + \text{dist 2. inch};$

if ($\text{sum-inch} > 12$)

{

$\quad \quad \text{sum-feet};$

$\text{sum-inch} = \text{sum-inch} = 12;$

}

`printf ("Sum of distances = %d' - %f\"", sum-feet, sum-inch);`

`getch();`

}

Enter detail

Chileansh

42

18

Abhisar

5

19

Chetan

32

19

Rudra

24

18

Mayank

61

17

Program - 60

P.60 Write a program to read and display information of at least 5 students.

```

#include <stdio.h>
#include <conio.h>
struct student
{
    char name[20];
    int rollno;
    int age;
};

void main()
{
    int i;
    struct student s[5];
    printf("Enter detail");
    for (i=0; i<5; i++)
    {
        scanf("%s %d %d", &s[i].name, &s[i].rollno, &s[i].age);
    }
    for (i=0; i<5; i++)
    {
        printf("%s %d %d", s[i].name, s[i].rollno, s[i].age);
    }
    getch();
}

```

Enter detail

Rich Dad Poor Dad

400

2000

Rich Dad Poor Dad 400 2000

Program-61

P.61 Write a program to read and display information of book using Pointer.

```
#include <stdio.h>
#include <conio.h>
struct book
{
    char name[20];
    int Page;
    int Price;
};

void main()
{
    struct book b1;
    struct book *ptr;
    ptr = &b1;
    printf("Enter detail \n");
    scanf("%s %d %d", &ptr->name, &ptr->Page, &ptr->Price);
    printf("\n Name %s Page %d Lt Price %d",
          ptr->name, ptr->Page, ptr->Price);
    getch();
}
```

Rohit Sharma

37

5000000

Rohit Sharma 37 5000000

<Address> Rohit P

<Address> Rohit P

2000000

2000000

2000000

2000000

2000000

Citizen Army

2000000

2000000

2000000

Citizen Army

2000000

2000000

2000000

Citizen

2000000

2000000

2000000

2000000

2000000

2000000

2000000

2000000

Program - 62

P.62 Write a program to read and display information of an employee by passing structure to a function.

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

```
#include <conio.h>
```

```
struct employee
```

```
{
```

```
    char name[20];
```

```
    int age;
```

```
    int salary;
```

```
}
```

```
void display(struct employee E1);
```

```
void main()
```

```
{
```

```
    struct employee E1;
```

```
    printf("Enter information");
```

```
    scanf("%s %d %d", &E1.name, &E1.age, &E1.salary);
```

```
    display(E1);
```

```
    getch();
```

```
}
```

```
void display(struct employee E1)
```

```
{
```

```
    printf("Name %s Age %d Price %d",
```

```
        E1.name, E1.age, E1.salary);
```

```
}
```

Enter employee name

Rohit Sharma

Enter age and salary

37

50000000

Rohit Sharma 37 50000000

<Add> student

sayfing task

task done

as tri

task done

task done

task done

13 employee created

(Employee created)

13 employee created successfully

(As you

Classy

13 employee created successfully

Program - 63

P.63 Write a program to copy one structure into another.

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

```
#include <conio.h>
```

```
struct emp {
```

```
    char name [20];
```

```
    int age;
```

```
    int salary;
```

```
};
```

```
void main ()
```

```
{
```

```
    struct emp e1, e2;
```

```
    printf ("Enter employee name \n");
```

```
    scanf ("%s", &e1.name);
```

```
    printf ("Enter age and salary");
```

```
    scanf ("%d %d", &e1.age, &e1.salary);
```

```
    e2 = e1;
```

```
    printf ("In name %s It age %d It salary %d",
```

```
        e2.name, e2.age, e2.salary);
```

```
    getch();
```

```
}
```

Enter name : Chitraanh

Enter age : 18

Enter dob 2

6

2005

name Chitraanh age 18 dob 26 2005

Program - 64

P.64 Write a program to use the concept of nested structure.

```
#include <stdio.h>
#include <conio.h>
struct dob
{
    int dd, mm, yy;
};

struct emp
{
    char name[20];
    int age;
    struct dob d; //nested structure
};

void main()
{
    struct emp e;
    printf("Enter name : ");
    scanf("%s", &e.name);
    printf("Enter age : ");
    scanf("%d", &e.age);
    printf("Enter dob ");
    scanf("%d %d %d", &e.d.dd, &e.d.mm, &e.d.yy);
    printf("\n name %s \t age %d \t %d %d %d",
        e.name, e.age, e.d.dd, e.d.mm, e.d.yy);
    getch();
}
```

Enter name: Chitransh
Enter salary: 900000.0
Enter worker no: 1234567

Displaying

Name: Chitransh
Salary: 900000.0
Worker no.: 1234567

Program - 65

P.65 Write a program to read and display information of a person using Union.

```
#include <stdio.h>
#include <conio.h>
union job
{
    char name [20];
    float salary;
    int worker_no;
} job1;
void main()
{
    printf ("Enter name : ");
    scanf ("%s", &job1.name);
    printf ("Enter salary : ");
    scanf ("%f", &job1.salary);
    printf ("Enter worker no. : ");
    scanf ("%d", &job1.worker_no);
    printf ("Displaying \n Name : %s \n Salary: %.2f \n Worker no.: %d",
           job1.name, job1.salary, job1.worker_no);
    getch();
}
```

First program of file Handling in C++

<chassis> studio
<chassis> abteilung
der rechner

For more web
resources, try
these sites:

~~Signature~~

LAB ASSIGNMENT - 11

(File Handling)

Program - 66

P66 Write a program to read text from a file

```
#include <stdio.h>
#include <conio.h>
void main()
{
    File *FP ;
    FP = Fopen ("demo1.txt", "w");
    Fprintf (FP, "First program of File Handling in C");
    Fclose (FP);
    getch();
    return 0;
}
```

2nd Program of File Handling in C

1. Number
2. Number
3. Number
4. Number

Program - 67

P.67 Write a program to write a sentence in a file.

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

```
# include < conio.h >
```

```
void main()
```

```
{
```

```
File *fP;
```

```
char ch;
```

```
clrscr();
```

```
fP = fopen ("deme 1. txt", "w");
```

```
while (ch != EOF).
```

```
    S
```

```
    ch = fgetc (fP);
```

```
    printf ("%c", ch);
```

```
}
```

```
    fclose (fP);
```

```
    getch();
```

```
}
```

Enter number of students : 2

For student 1

Enter name : Yash

Enter marks: 76

For student 2

Enter name : Kishu

Enter marks: 73

Program - 68

P68 Write a program to read name and marks of n number of students from user and store them in a file.

```

#include <stdio.h>
#include <conio.h>
void main()
{
    char name[20];
    int marks, i, num;
    clrscr();
    printf ("Enter number of students : ");
    scanf ("%d", &num);
    FILE *fptr;
    fptr = fopen ("Student.txt", "w");
    if (fptr == NULL)
    {
        printf ("Error !");
        exit(1);
    }
    for (i=0; i<num; ++i)
    {
        printf ("For student %d Enter name : ", i+1);
        scanf ("%s", name);
        printf ("Enter marks ");
        scanf ("%d", &marks);
        fprintf (fptr, "%s %d\n", name, marks);
    }
    fclose (fptr);
    return 0;
}

```

Enter number of students: 1

For student 1

Enter name: Chitronish

Enter marks: 86

Program - 6.9

P.6.9 Write a program to read name and marks of n number of students from user and store them in a file, if the file previously exists then add the information of n students.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    char name[20];
    int marks, i, num;
    clrscr();
    printf("Enter number of students : ");
    scanf("%d", &num);
    FILE *ptr;
    ptr = fopen("Student.txt", "a");
    if (ptr == NULL)
    {
        printf("Error !");
        exit(1);
    }
    for (i=0; i<num; ++i)
    {
        printf("For student %d \n Enter name : ", i+1);
        scanf("%s", name);
        printf("Enter marks : ");
        scanf("%d", &marks);
    }
}
```

the first time I saw the bird
I thought it was a small
brown bird with a long tail.

After I saw it again I
thought it was a small
brown bird with a long tail.

After I saw it again I
thought it was a small
brown bird with a long tail.

After I saw it again I
thought it was a small
brown bird with a long tail.

After I saw it again I
thought it was a small
brown bird with a long tail.

After I saw it again I
thought it was a small
brown bird with a long tail.

After I saw it again I
thought it was a small
brown bird with a long tail.

After I saw it again I
thought it was a small
brown bird with a long tail.

After I saw it again I
thought it was a small
brown bird with a long tail.

Date _____

Expt. No. _____

Page No. _____

3) `fprintf(fltc, "In Name : %s In Marks = %d\n", name, marks);`

`fclose(fltc);
getch();
return 0;`



Teacher's Signature : _____

This is the code of File Handling

(Very short)

Chaitanya

Gawali

Program - 70

P.70 Write a program to copy contents from one file to another

```
#include <stdio.h>
#include <conio.h>
void main()
{
    File *fs, *ft;
    char ch;
    clrscr();
    fs = fopen ("demo1.txt", "r");
    if (fs == Null)
        puts ("Can't open source file");
    ft = fopen ("demo2.txt", "w");
}
```

```
while (feof (fs) == 0)
```

```
{
```

```
    ch = fgetc (fs);
    fputc (ch, ft);
}
```

```
}
```

```
fclose (fs);
fclose (ft);
getch();
return 0;
```

This is my first program

I am learning language in C

Good day

No. of lines = 3

No. of words = 13

No. of characters = 49

Program - 71

P.71 Write a program to count total number of lines, words and characters in a file.

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

```
#include <conio.h>
```

```
void main()
```

```
{
```

```
File *fp;
```

```
char ch;
```

```
close();
```

```
int line=0, word=0, cha=0;
```

```
fp=fopen("demo3.txt", "w+");
```

```
fprintf(fp, "This is my first program \n");
```

```
fprintf(fp, "I am learning language in C in Good day");
```

```
rewind(fp);
```

```
while ((ch=fgetc(fp))!=EOF)
```

```
{
```

```
cha++;
```

```
if (ch=='\n')
```

```
{
```

```
line++;
```

```
}
```

```
if (ch==' ' || ch=='\n' || ch=='\t')
```

```
{
```

```
word++;
```

```
}
```

1. Δ $\text{C}_6\text{H}_5\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{C}_6\text{H}_5$

2. Δ $\text{C}_6\text{H}_5\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{C}_6\text{H}_5$ $\xrightarrow{\text{KOH} \text{ in } \text{Et}_2\text{O}}$

3. $\text{C}_6\text{H}_5\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{C}_6\text{H}_5$
 $\xrightarrow{\text{KOH} \text{ in } \text{Et}_2\text{O}}$
Cyclohexane

4. C_6H_{12}

5. C_6H_{12}

6. Cyclohexane

7. $\text{C}_6\text{H}_5\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{C}_6\text{H}_5$
 $\xrightarrow{\text{KOH} \text{ in } \text{Et}_2\text{O}}$ $\text{C}_6\text{H}_5\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{C}_6\text{H}_5 = \text{V}$
 $\text{C}_6\text{H}_5\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{C}_6\text{H}_5 = \text{V}$
8. $\text{C}_6\text{H}_5\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{C}_6\text{H}_5$ (V) + $\text{C}_6\text{H}_5\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{C}_6\text{H}_5$ (V)

9. (V) hexane

10. $\text{C}_6\text{H}_5\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{C}_6\text{H}_5$

11. $\text{C}_6\text{H}_5\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{C}_6\text{H}_5$

12. $\text{C}_6\text{H}_5\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{C}_6\text{H}_5$

13. $\text{C}_6\text{H}_5\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{C}_6\text{H}_5$ (V) + $\text{C}_6\text{H}_5\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{C}_6\text{H}_5$ (V)

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} if ($cha > 0$)

{
 line ++ ;
 word ++ ;

}
printf ("No. of lines = %d \n", line);

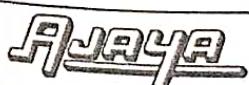
printf ("No. of words = %d \n", word);

printf ("No. of character = %d \n", cha);

fclose (fp);

getch();

}



Teacher's Signature : _____