

## WAP to find area of a circle

### Source Code :

```
#include<stdio.h>
#include<conio.h>
void main()
{
    clrscr();
    float pi,r,area;
    printf("Enter the radius of circle :");
    scanf("%f",&r);
    pi=3.14;
    area=pi*r*r;
    printf("The area of circle is : %f",area);
    getch();
}
```

### Output :

```
Enter the radius of circle : 4
The area of circle is : 50.240002
```

## WAP to find volume of a cylinder.

### Source Code :

```
#include<stdio.h>
#include<conio.h>
void main()
{
    clrscr();
    float pi,r,h,vol;
    printf("Enter the radius of cylinder :");
    scanf("%f",&r);
    printf("Enter the height of cylinder :");
    scanf("%f",&h);
    pi=3.14;
    vol=pi*r*r*h;
    printf("The volume of cylinder is : %f",vol);
    getch();
}
```

### Output :

```
Enter the radius of cylinder : 5
Enter the height of cylinder : 7
The volume of cylinder is : 549.500000
```

## WAP to input temperature in Fahrenheit and convert into Celsius.

### Source Code :

```
#include<stdio.h>
#include<conio.h>
void main()
{
    clrscr();
    float f,c;

    printf("Enter the temperature in fahrenheit :");
    scanf("%f",&f);
    c=(f-32)*0.56;
    printf("The temperature in celsius is : %f",c);
    getch();
}
```

### Output :

```
Enter the temperature in fahrenheit : 56
The temperature in celsius is : 13.440000
```

## WAP to input a number and find its square root

### Source Code :

```
#include<stdio.h>
#include<conio.h>
#include<math.h>
void main()
{
    clrscr();
    float a,b;
    printf("Enter a number :");
    scanf("%f",&a);
    b=sqrt(a);
    printf("The sqaure root of the given number is : %f",b);
    getch();
}
```

### Output :

```
Enter a number : 25
The sqaure root of the given number is : 5.000000
```

## WAP to input 3 numbers and find their average.

### Source Code :

```
#include<stdio.h>
#include<conio.h>
void main()
{
    clrscr();
    float a,b,c,avg;
    printf("Enter any three numbers :");
    scanf("%f%f%f",&a,&b,&c);
    avg=(a+b+c)/3;
    printf("The average of the numbers is : %f",avg);
    getch();
}
```

### Output :

```
Enter any three numbers : 3 6 9
The average of the numbers is : 6.000000
```

## WAP to input find Simple Interest

### Source Code :

```
#include<stdio.h>
#include<conio.h>
void main()
{
    clrscr();
    float p,t,r,si;
    printf("Enter the principle :");
    scanf("%f",&p);
    printf("Enter the time :");
    scanf("%f",&t);
    printf("Enter the interest rate:");
    scanf("%f",&r);
    si=(p*t*r)/100;
    printf("The simple interest is : %f",si);
    getch();
}
```

### Output :

```
Enter the principle : 1000
Enter the time : 1
Enter the interest rate: 10
The simple interest is : 100.000000
```

**WAP to two number find the cube of first number, square of second number and then add those result to find the new result.**

**Source Code :**

```
#include<stdio.h>
#include<conio.h>
void main()
{
    clrscr();
    float a,b,cube,square,result;
    printf("Enter the two numbers:");
    scanf("%f%f",&a,&b);
    cube=a*a*a;
    printf("The cube of the first number is : %f \n",cube);
    square=b*b;
    printf("The square of the second number is : %f\n",square);
    result=cube+square;
    printf("The sum of cube and square is : %f",result);
    getch();
}
```

**Output :**

```
Enter the two numbers: 2 3
The cube of the first number is : 8.000000
The square of the second number is : 9.000000
The sum of cube and square is : 17.000000
```

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**WAP to check odd/even**

**Source Code :**

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

**Output :**

```
Enter a number : 5
Odd
```



## WAP to input 3 numbers and find the middle number.

### Source Code :

```
#include<stdio.h>
int main()
{
    float a,b,c;
    printf("Enter any three numbers : ");
    scanf("%f%f%f",&a,&b,&c);
    if (a>b && a<c || a<b && a>c)
    {
        printf("Middle Number : %f",a);
    }
    else if (b>a && b<c || b<a && b>c)
    {
        printf("Middle Number : %f",b);
    }
    else
    {
        printf("Middle Number : %f",c);
    }
    return 0;
}
```

### Output :

```
Enter any three numbers : 5 4 3
Middle Number : 4.000000
```

**WAP to input electricity units and find the billing amount as follows:**

<b>Electricity Units</b>	<b>Price Per Unit</b>
For first 20 units	Rs. 0
For next 100 units	Rs. 12
For next 100 units	Rs. 11
For above 220 units	Rs. 10

**Source Code :**

```
#include<stdio.h>
int main()
{
    int unit,amt;
    printf("Enter the electricity units consumed : ");
    scanf("%d",&unit);
    if (unit<=20)
    {
        amt=0;
    }
    else if (unit<=120)
    {
        amt=0+12*(unit-20);
    }
    else if (unit<=220)
    {
        amt=0+12*100+11*(unit-120);
    }
    else
    {
        amt=0+12*100+11*100+10*(unit-220);
    }
}
```

```
printf("Total Billing Amount : Rs. %d",amt);  
return 0;  
}
```

### **Output :**

Enter the electricity units consumed : 235

Total Billing Amount : Rs. 2450

### **WAP to check vowel / consant.**

### **Source Code :**

```
#include<stdio.h>  
int main()  
{  
    char a;  
    printf("Enter a letter :");  
    scanf("%c",&a);  
    switch(a)  
    {  
        case 'a':  
        case 'e':  
        case 'i':  
        case 'o':  
        case 'u': printf("Vowel");  
        break;  
        default : printf("Consonant");  
    }  
    return 0;  
}
```

## Output :

Enter a letter :u

Vowel

**WAP to input two numbers and then input the operator (+, -, \*, /) and find the result using switch.**

## Source Code :

```
#include<stdio.h>
int main()
{
    int a,b,d;
    char c;
    printf("Enter any two numbers : ");
    scanf("%d%d",&a, &b);
    printf("Enter operator (+, -, *, /):");
    scanf(" %c",&c); /* Space before %c */
    switch(c)
    {
        case '+':
            printf("Sum is : %d ",a+b);
            break;
        case '-':
            printf("Difference is : %d ",a-b);
            break;
        case '*':
            printf("Product is : %d ",a*b);
            break;
        case '/':
            printf("Division is : %d ",a/b);
```

```
break;
default : printf("Enter Again");
}
return 0;
}
```

### Output :

Enter any two numbers : 15 5

Enter operator (+, -, \*, /):/

Division is : 3

**WAP to create a menu driven program to add/subtract/multiply/divide two numbers using switch.**

### Source Code :

```
#include<stdio.h>
int main()
{
int a,b,c,choice;
printf("Enter the two numbers:");
scanf("%d%d",&a,&b);
printf("1. Add \n 2. Subtract \n 3. Multiply \n 4. Divide : \n");
printf("Enter your choice:");
scanf("%d",&choice);
switch (choice)
{
case 1: c=a+b;
printf("The result is : %d",c);
break;
case 2: c=a-b;
```

```
printf("The result is : %d",c);  
break;  
case 3: c=a*b;  
printf("The result is : %d",c);  
break;  
case 4: c=a/b;  
printf("The result is : %d",c);  
break;  
default:printf("Enter again:");  
}  
return 0;  
}
```

### **Output :**

Enter the two numbers:2 4

1. Add
2. Subtract
3. Multiply
4. Divide :

Enter your choice:3

The result is : 8

**WAP to display all numbers 100 to 200 that end with 0 or 1.**

**Source Code :**

```
#include<stdio.h>
int main()
{
    int i;
    for(i=100;i<=200;i++)
    {
        if(i%10==0 || i%10==1)
        {
            printf("%d ",i);
        }
    }
    return 0;
}
```

**Output :**

100 101 110 111 120 121 130 131 140 141 150 151 160 161 170 171 180 181 190 191 200

**WAP to display the following series:**

\*  
\*\*  
\*\*\*  
\*\*\*\*  
\*\*\*\*\*

**Source Code :**

```
#include<stdio.h>
int main()
{
    int i,j;
    for(i=1;i<=5;i++)
    {
        for(j=1;j<=i;j++)
        {
            printf("*");
        }
        printf("\n");
    }
    return 0;
}
```



**WAP to display the following series:**

\*  
\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*

**Source Code :**

```
#include<stdio.h>
int main()
{
    int i,j,k,sp=3;
    for(i=1;i<=7;i=i+2)
    {
        for(k=1;k<=sp;k++)
        {
            printf(" ");
        }
        for(j=1;j<=i;j++)
        {
            printf("*");
        }
        printf("\n");
        sp--;
    }
    return 0;
}
```

**WAP to display the following series:**

5  
45  
345  
2345  
12345

**Source Code :**

```
#include<stdio.h>
int main()
{
    int i,j;
    for(i=5;i>=1;i--)
    {
        for(j=i;j<=5;j++)
        {
            printf("%d", j);
        }
        printf("\n");
    }
    return 0;
}
```

**WAP to display the following series:**

1  
212  
32123  
4321234  
543212345

**Source Code :**

```
#include<stdio.h>
int main()
{
    int i,j;
    for(i=1;i<=5;i++)
    {
        for(j=1;j<=5-i;j++)
        {
            printf(" ");
        }
        for(j=i;j>=1;j--)
        {
            printf("%d", j);
        }
        for(j=2;j<=i;j++)
        {
            printf("%d", j);
        }
        printf("\n");
    }
    return 0;
}
```

**WAP to display the following series:**

\*\*\*\*\*

\*\*\*\*\*

\*\*\*

\*

**Source Code :**

```
#include<stdio.h>
int main()
{
int i,j,k,sp=0;
for(i=7;i>=1;i=i-2)
{
for(k=1;k<=sp;k++)
{
printf(" ");
}
for(j=1;j<=i;j++)
{
printf("*");
}
printf("\n");
sp++;
}
return 0;
}
```

**WAP to display the following series:**

1  
10  
101  
1010  
10101

**Source Code :**

```
#include<stdio.h>
int main()
{
int i,j;
for(i=1;i<=5;i++)
{
for(j=1;j<=i;j++)
{
printf("%d",j%2);
}
printf("\n");
}
return 0;
}
```

**WAP to input a number and count the number of digits.**

**Source Code:**

```
#include<stdio.h>
int main()
{
    int n,b;
    printf("Enter any number:");
    scanf("%d",&n);
    while(n>0)
    {
        b++;
        n = n/10;
    }
    printf("No. of digits = %d", b);
}
```

**Output**

```
Enter any number: 300
No. of digits = 3
```

**WAP to display all prime numbers between 100 to 200.**

**Source Code:**

```
#include<stdio.h>
int main()
{
int n,i,x;
for(n=100;n<=200;n++)
{
x=0;
for(i=2;i<=n/2;i++)
{
if(n%i==0)
{
x=1;
break;
}
}
if(x==0)
printf("%d ",n);
}
return 0;
}
```

**Output**

101 103 107 109 113 127 131 137 139 149 151 157 163 167 173 179 181 191 193 197 199

**WAP to display all palindrome numbers from 100 to 500.**

**Source Code:**

```
#include<stdio.h>
int main()
{
    int i,j,a;
    for(i=1;i<=4;i++)
    {
        for(j=0;j<=9;j++)
        {
            a = (100*i)+(10*j)+i;
            printf("%d ", a);
        }
    }
    return 0;
}
```

**Output**

101 111 121 131 141 151 161 171 181 191 202 212 222 232 242 252 262 272 282 292 303 313 323 333 343  
353 363 373 383 393 404 414 424 434 444 454 464 474 484 494



**WAP to input numbers in an array of size 'N' and find the sum of even and odd numbers separately.**

**Source Code :**

```
#include<stdio.h>
int main()
{
    int a[100],i,b=0,c=0,n;
    printf("Enter the value of n: ");
    scanf("%d",&n);
    printf("\nEnter %d numbers :",n);
    for(i=0;i<n;i++)
    {
        scanf("%d",&a[i]);
        if(a[i]%2==0)
            b=b+a[i];
        else
            c=c+a[i];
    }
    printf("\nSum of even numbers : %d",b);
    printf("\nSum of odd numbers : %d",c);
    return 0;
}
```

**Output :**

```
Enter the value of n: 5
Enter 5 numbers :1 2 3 4 5
Sum of even numbers : 6
Sum of odd numbers : 9
```

**WAP to input numbers in an array and find the greatest and smallest number.**

**Source Code :**

```
#include<stdio.h>
int main()
{
    int a[100],i,b,c,n;
    printf("Enter the value of n:");
    scanf("%d",&n);
    printf("Enter %d numbers :",n);
    for(i=0;i<n;i++)
    {
        scanf("%d",&a[i]);
    }
    b=a[0];
    for(i=0;i<n;i++)
    {
        if(a[i]>b)
            b=a[i];
    }
    c=a[0];
    for(i=0;i<n;i++)
    {
        if(a[i]<c)
            c=a[i];
    }
    printf("Greatest Number : %d",b);
    printf("\nSmallest Number : %d",c);
    return 0;
}
```

**Output :**

Enter the value of n:5

Enter 5 numbers :1 5 2 3 4

Greatest Number : 5

Smallest Number : 1

ASHESH NEUPANE

**WAP to sort the elements of an array in descending order.**

**Source Code :**

```
#include<stdio.h>
int main()
{
    int a[100],i,j,temp,n;
    printf("Enter the value of n: ");
    scanf("%d",&n);
    printf("Enter %d numbers: ",n);
    for(i=0;i<n;i++)
    {
        scanf("%d",&a[i]);
    }
    for(i=0;i<n;i++)
    {
        for(j=i+1;j<n;j++)
        {
            if(a[i]<a[j])
            {
                temp=a[j];
                a[j]=a[i];
                a[i]=temp;
            }
        }
    }
    printf("Array after sorting in descending order : \n");
    for(i=0;i<n;i++)
    {
        printf("%d ",a[i]);
    }
}
```

```
}  
return 0;  
}
```

**Output :**

Enter the value of n: 5

Enter 5 numbers: 1 2 3 4 5

Array after sorting in descending order :

5 4 3 2 1

## WAP to find sum of two matrices.

### Source Code :

```
#include<stdio.h>
int main()
{
    int a[2][2],b[2][2],c[2][2],i,j;
    printf("Enter the first matrix:\n");
    for(i=0;i<2;i++)
    {
        for(j=0;j<2;j++)
        {
            scanf("%d",&a[i][j]);
        }
    }
    printf("Enter the second matrix:");
    for(i=0;i<2;i++)
    {
        for(j=0;j<2;j++)
        {
            scanf("%d",&b[i][j]);
        }
    }
    printf("The resultant matrix is : \n");
    for(i=0;i<2;i++)
    {
        for(j=0;j<2;j++)
        {
            c[i][j]=a[i][j]+b[i][j];
            printf("%d ",c[i][j]);
        }
    }
}
```

```
}  
printf("\n");  
}  
return 0;  
}
```

### Output:

Enter the first matrix:

1 2

3 4

Enter the second matrix:

2 3

4 5

The resultant matrix is :

3 5

7 9

## WAP to multiply two matrices.

### Source Code :

```
#include<stdio.h>
int main()
{
    int a[2][2],b[2][2],c[2][2],i,j,k;
    printf("Enter the first matrix : \n");
    for(i=0;i<2;i++)
    {
        for(j=0;j<2;j++)
        {
            scanf("%d",&a[i][j]);
        }
    }
    printf("Enter the second matrix: \n");
    for(i=0;i<2;i++)
    {
        for(j=0;j<2;j++)
        {
            scanf("%d",&b[i][j]);
        }
    }
    for(i=0;i<2;i++)
    {
        for(j=0;j<2;j++)
        {
            c[i][j]=0;
            for(k=0;k<2;k++)
            {
```



```
        c[i][j]+=a[i][k]*b[k][j];
    }
}

printf("The resultant matrix is : \n");
for(i=0;i<2;i++)
{
    for(j=0;j<2;j++)
    {
        printf("%d ",c[i][j]);
    }
    printf("\n");
}
return 0;
}
```

### Output:

Enter the first matrix :

7 5

6 3

Enter the second matrix:

2 1

5 1

The resultant matrix is :

39 12

27 9

**Create a function void check (int n) that checks whether given number is odd or even.**

**Source Code :**

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

**Output :**

```
Enter any number : 5
Odd
```

**Create a function int small (int a , int b) that finds the smaller numbers between two numbers.**

**Source Code :**

```
#include<stdio.h>
#include<conio.h>
int small(int a , int b);
void main()
{
    int a,b;
    printf("Enter two numbers:");
    scanf("%d%d",&a,&b);
    printf("Smaller number is : %d",small(a,b));
    getch();
}
int small(int a , int b)
{
    if(a<b)
    return a;
    else
    return b;
}
```

**Output :**

```
Enter two numbers: 2 5
Smaller number is : 2
```

**Create a function that takes one integer argument and finds the sum of its digits.**

**Source Code :**

```
#include<stdio.h>
void sum(int n);
void main()
{
    int n;
    printf("Enter any number:");
    scanf("%d",&n);
    sum(n);
}
void sum(n)
{
    int r,sum=0;
    while(n>0)
    {
        r=n%10;
        sum=sum+r;
        n=n/10;
    }
    printf("Sum is : %d",sum);
}
```

**Output :**

```
Enter any number: 1234
Sum is : 10
```

**Create a function that takes an int array as argument and returns the smallest value in the array.**

**Source Code :**

```
#include<stdio.h>
int small(int a[]);
void main()
{
    int a[5],i;
    printf("Enter any 5 numbers:");
    for(i=0;i<5;i++)
    {
        scanf("%d",&a[i]);
    }
    printf("Smallest Number : %d",small(a));
}
int small(int a[])
{
    int sm=a[0],i;
    for(i=0;i<5;i++)
    {
        if(a[i]<sm)
            sm=a[i];
    }
    return sm;
}
```

**Output:**

Enter any 5 numbers:5 7 2 6 3

Smallest Number : 2

**WAP to find the factorial of a number using recursive function.**

**Source Code :**

```
#include<stdio.h>
int fact(int n);
void main()
{
    int n;
    printf("Enter a number:");
    scanf("%d",&n);
    printf("Factorial is: %d",fact(n));
}
int fact(n)
{
    if(n==1)
    return 1;
    else
    return n*fact(n-1);
}
```

**Output:**

```
Enter a number:5
Factorial is: 120
```

**WAP to display the first 10 numbers in a Fibonacci series using recursive function.**

**Source Code :**

```
#include<stdio.h>
int fibo(int n);
void main()
{
    int i;
    for(i=1;i<10;i++)
    {
        int r=fibo(i);
        printf("%d\t",r);
    }
}
int fibo(int n)
{
    if(n==0)
        return 0;
    else if(n==1)
        return 1;
    else
        return fibo(n-1)+fibo(n-2);
}
```

**Output:**

1	1	2	3	5	8	13	21	34
---	---	---	---	---	---	----	----	----

Write a program to input a word and count the number of vowels on it.

**Source Code :**

```
#include<stdio.h>
#include<string.h>
int main()
{
    char a[100];
    int count=0,i;
    printf("Enter a word:");
    scanf("%s",&a);
    for(i=0;i<strlen(a);i++)
    {
        if(a[i]=='a' || a[i]=='e' || a[i]=='i' || a[i]=='o' || a[i]=='u' ||a[i]=='A' || a[i]=='E' || a[i]=='I' || a[i]=='O' ||
a[i]=='U')
            count++;
    }
    printf("Number of vowels: %d",count);
    return 0;
}
```

**Output :**

```
Enter a word:highapproach
Number of vowels: 4
```



**WAP to input 3 words and print the shortest word.**

**Source Code :**

```
#include<stdio.h>
#include<string.h>
int main()
{
    char a[100],b[100],c[100];
    int x=0,y=0,z=0,i;
    printf("Enter any three words:");
    scanf("%s%s%s",&a,&b,&c);
    for(i=0;i<strlen(a);i++)
    {
        x++;
    }
    for(i=0;i<strlen(b);i++)
    {
        y++;
    }
    for(i=0;i<strlen(c);i++)
    {
        z++;
    }
    if(x<y && x<z)
    printf("%s is smallest",a);
    else if(y<x && y<z)
    printf("%s is smallest",b);
    else
    printf("%s is smallest",c);
    return 0;
}
```

}

**Output :**

Enter any three words: Ashesh Bishowraj Amitkumar

Ashesh is smallest

ASHESH NEUPANE

**WAP to input a word and check whether it is palindrome or not.**

**Source Code :**

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main()
{
    char a[20],b[20];
    clrscr();
    printf("Enter a word:");
    scanf("%s",&a);
    strcpy(b,a);
    if(strcmpi(b,strev(a))==0)
    printf("Palindrome");
    else
    printf("not palindrome");
    getch();
}
```

**Output :**

```
Enter a word: Level
Palindrome
```

**Write a program to print the following series:**

N  
NE  
NEP  
NEPA  
NEPAL

**Source Code :**

```
#include<stdio.h>
int main()
{
    char a[]="NEPAL";
    int i,j;
    for(i=0;i<=4;i++)
    {
        for(j=0;j<=i;j++)
        {
            printf("%c",a[j]);
        }
        printf("\n");
    }
    return 0;
}
```

**Write a program to print the following series:**

N  
NEP  
NEPAL

**Source Code :**

```
#include<stdio.h>
int main()
{
    char a[]="NEPAL";
    int i,j,k,sp=2;
    for(i=0;i<=4;i=i+2)
    {
        for(k=0;k<sp;k++)
        {
            printf(" ");
        }
        for(j=0;j<=i;j++)
        {
            printf("%c",a[j]);
        }
        printf("\n");
        sp--;
    }
    return 0;
}
```

**Write a program to print the following series:**

KATHMANDU  
KATHMAN  
KATHM  
KAT  
K

**Source Code :**

```
#include<stdio.h>
int main()
{
    char a[]="KATHMANDU";
    int i,j,k,sp=0;
    for(i=8;i>=0;i=i-2)
    {
        for(k=1;k<=sp;k++)
        {
            printf(" ");
        }
        for(j=0;j<=i;j++)
        {
            printf("%c",a[j]);
        }
        printf("\n");
        sp++;
    }
    return 0;
}
```

**Write a program to find the greater between two numbers by the use of pointer.**

**Source Code :**

```
#include<stdio.h>
int main()
{
    int a,b;
    int *p=&a,*q=&b;
    printf("Enter any two numbers:");
    scanf("%d%d",p,q);
    if(*p>*q)
    printf("%d is greater",*p);
    else
    printf("%d is greater",*q);
    return 0;
}
```

**Output :**

```
Enter any two numbers:2 5
5 is greater
```

**WAP to show both pass by value and pass by reference.**

**Source Code :**

```
#include<stdio.h>
int test(int a,int *p);
void main()
{
    int a=5,b=10;
    printf("Before calling test,a=%d b=%d\n",a,b);
    test(a,&b);
    printf("After calling test,a=%d b=%d\n",a,b);
}
int test(int a,int *p)
{
    a=a+5;
    *p=*p+5;
    printf("Inside test, a=%d b=%d\n",a,*p);
}
```

**Output :**

```
Before calling test,a=5 b=10
Inside test, a=10 b=15
After calling test,a=5 b=15
```



**Create a structure to store name, address, salary of a person and display the person details.**

**Source Code :**

```
#include<stdio.h>
#include<string.h>
struct person
{
    char name[20],address[20];
    int salary;
};
void main()
{
    struct person p;
    printf("Enter the name, address and salary:");
    scanf("%s%s%d",p.name,p.address,&p.salary);
    printf("\nName:%s\t Address:%s\t Salary:%d",p.name,p.address,p.salary);
}
```

**Output :**

Enter the name, address and salary:Raghu Kathmandu 28000

Name:Raghu Address:Kathmandu Salary:28000

**Create an array of structure to store name, address, salary of 10 persons and display the details of highest paid person.**

**Source Code :**

```
#include<stdio.h>
#include<string.h>
struct person
{
    char name[20],address[20];
    int salary;
};
void main()
{
    struct person p[10];
    int highest,i;
    printf("Enter name, address and salary:");
    for(i=0;i<10;i++)
    {
        scanf("%s%s%d",p[i].name,p[i].address,&p[i].salary);
    }
    highest=p[0].salary;
    for(i=0;i<10;i++)
    {
        if(p[i].salary>highest)
            highest=p[i].salary;
    }
    for(i=0;i<10;i++)
    {
        if(p[i].salary==highest)
            printf("\n Highest Salary Paid Employee Details:\n Name : %s Address : %s Salary : %d",p[i].name,p[i].address,p[i].salary);
    }
}
```

}

}

### Output :

Enter name, address and salary:

Aashutosh KTM 25000

Parbat Jhapa 27000

Ashesh KTM 75000

Nishant Pokhara 25000

Abhishek Bhojpur 50000

Nikesh Birgunj 30000

Maneek Gulmi 32000

Raghu Butwal 32500

Dibinsh KTM 35000

Mandeep KTM 32000

Highest Salary Paid Employee Details:

Name : Ashesh Address : KTM Salary : 75000

**Create an array of structure to store name, address, salary of 5 persons and sort the records in ascending order.**

**Source Code :**

```
#include<stdio.h>
#include<string.h>
struct person
{
    char name[20],address[20];
    int salary;
};
void main()
{
    struct person p[5],temp;
    int i,j;
    printf("Enter name, address and salary:");
    for(i=0;i<5;i++)
    {
        scanf("%s%s%d",p[i].name,p[i].address,&p[i].salary);
    }
    for(i=0;i<5;i++)
    {
        for(j=i+1;j<5;j++)
        {
            if(strcmpi(p[i].name,p[j].name)>0)
            {
                temp=p[i];
                p[i]=p[j];
                p[j]=temp;
            }
        }
    }
}
```

```
    }  
}  
printf("Person Detail After Sorting:\n");  
for(i=0;i<5;i++)  
{  
    printf("%s %s %d\n",p[i].name,p[i].address,p[i].salary);  
}  
}
```

### Output :

Enter name, address and salary:

Nishant Pokhara 20000

Raghu KTM 25000

Prashant BKT 20000

Ashesh KTM 30000

Parbat Jhapa 15000

Person Detail After Sorting:

Ashesh KTM 30000

Nishant Pokhara 20000

Parbat Jhapa 15000

Prashant BKT 20000

Raghu KTM 25000

**Write a program to copy the content of file "tu.txt" into "university.txt".**

**Source Code :**

```
#include<stdio.h>
#include<string.h>
int main()
{
    FILE *ptr1=fopen("tu.txt","r");
    FILE *ptr2=fopen("university.txt","w");
    char a[100];
    if(ptr1==NULL || ptr2==NULL)
        printf("Unable to open file");
    else
    {
        while(fgets(a, sizeof(a), ptr1) != NULL)
        {
            fprintf(ptr2, "%s",a);
        }
        fclose(ptr1);
        fclose(ptr2);
        printf("Content Copied Successfully");
    }
    return 0;
}
```

**Output :**

Content Copied Successfully

**A data file “number.txt” contains some numbers. WAP to read the numbers and store all even numbers into “even.txt” and all odd numbers into “odd.txt”.**

**Source Code :**

```
#include<stdio.h>

int main()
{
    FILE *ptr1=fopen("number.txt","r");
    FILE *ptr2=fopen("even.txt","w");
    FILE *ptr3=fopen("odd.txt","w");
    int num;
    if(ptr1==NULL || ptr2==NULL || ptr3==NULL)
        printf("Unable to open file");
    else
    {
        while(!feof(ptr1))
        {
            fscanf(ptr1,"%d",&num);
            if(num%2==0)
                fprintf(ptr2,"%d",num);
            else
                fprintf(ptr3,"%d",num);
        }
        fclose(ptr1);
        fclose(ptr2);
        fclose(ptr3);
        printf("Task Completed Successfully");
    }
    return 0;
}
```

**Output :**

Task Completed Successfully

ASHESH NEUPANE



**Write a program to input a line of text, store it in a file and then read from file and display its contents.**

**Source Code :**

```
#include<stdio.h>
int main()
{
    char a;
    char b[100];
    FILE *ptr1=fopen("abc.txt","w");
    if(ptr1==NULL)
    printf("Unable to open file");
    else
    {
        printf("Enter a line of text:");
        gets(b);
        fputs(b,ptr1);
        fclose(ptr1);
    }
    FILE *ptr=fopen("abc.txt","r");
    if(ptr==NULL)
    printf("Unable to open file");
    else
    {
        while(!feof(ptr))
        {
            a=fgetc(ptr);
            printf("%c",a);
        }
        fclose(ptr);
    }
}
```

```
}  
    return 0;  
}
```

**Output :**

Enter a line of text:My name is Ashesh Neupane

My name is Ashesh Neupane

**A data file contains name,address,salary of some person. WAP to input any address and show the records matching that address.**

**Source Code :**

```
#include<stdio.h>
#include<string.h>
int main()
{
    FILE *ptr=fopen("record.txt","r");
    char name[20],address[20],address1[20];
    int salary;
    if(ptr==NULL)
        printf("Unable to open file");
    else
    {
        printf("Enter address to search:");
        scanf("%s",&address1);
        while(!feof(ptr))
        {
            fscanf(ptr, "%s %s %d\n",&name,&address,&salary);
            if(strcmpi(address,address1)==0)
                printf("%s %s %d \n",name,address,salary);
        }
        fclose(ptr);
    }
    return 0;
}
```

**A data file contains name,address,salary of some person. WAP to increase salary of all persons by 15%.**

**Source Code :**

```
#include<stdio.h>
int main()
{
    FILE *ptr=fopen("record.txt","r");
    FILE *ptr1=fopen("temp.txt","w");
    char name[20],address[20];
    int salary,newsalary;
    if(ptr==NULL || ptr1==NULL)
    printf("Unable to open file");
    else
    {
        while(!feof(ptr))
        {
            fscanf(ptr,"%s %s %d\n",&name,&address,&salary);
            newsalary=salary+(0.15*salary);
            fprintf(ptr1,"%s %s %d\n",name,address,newsalary);
        }
        fclose(ptr);
        fclose(ptr1);
        remove("record.txt");
        rename("temp.txt","record.txt");
    }
    return 0;
}
```

**Create a menu driven program to store and display records (name, address, salary of a person)**

**1. Add Record**

**2. Display Record**

**Enter your choice:**

**Source Code :**

```
#include<stdio.h>
#include<process.h>
#include<string.h>
void addrecord();
void displayrecord();
int main()
{
    int choice;
    for(;;)
    {
        printf("\n\n");
        printf("1.Add Record\n2.Display Record\n");
        printf("Enter your choice: ");
        scanf("%d",&choice);
        switch(choice)
        {
            case 1:addrecord();
            break;
            case 2:displayrecord();
            break;
            default: printf("Invalid choice:"); return 0;
        }
    }
}
```

```

}
void addrecord()
{
    char name[20],address[20];
    int salary;
    FILE *ptr=fopen("person.txt","a");
    if(ptr==NULL)
    {
        printf("Unable to open file");
    }
    else
    {
        printf("Enter name,address,salary: ");
        scanf("%s%s%d",&name,&address,&salary);
        fprintf(ptr,"%s %s %d\n",name,address,salary);
        fclose(ptr);
    }
}

```

```

void displayrecord()
{
    char name[20],address[20];
    int salary;
    FILE *ptr=fopen("person.txt","r");
    if(ptr==NULL)
    {
        printf("Unable to open file");
    }
    else

```

```
{
while(!feof(ptr))
{
fscanf(ptr,"%s %s %d\n",&name,&address,&salary);
printf("%s %s %d\n",name,address,salary);
}

fclose(ptr);
}
}
```

**Write a program to display Tribhuvan University inside a rectangle.**

**Source Code :**

```
#include<conio.h>
#include<graphics.h>
void main()
{
    clrscr();
    int gd=DETECT,gm;
    initgraph(&gd,&gm,"C:\\\\TURBOC3\\bgi");
    rectangle(200,150,500,300);
    settxtstyle(1,0,1);
    outtextxy(250,225,"Tribhuvan University");
    getch();
    closegraph();
}
```



**WAP to draw a square and a circle and fill a pattern in both of them.**

**Source Code :**

```
#include<conio.h>
#include<graphics.h>
void main()
{
    clrscr();
    int gd=DETECT,gm;
    initgraph(&gd,&gm,"C:\\\\TURBOC3\\\\bgi");
    rectangle(100,100,200,200);
    setfillstyle(BKSLASH_FILL,RED);
    floodfill(105,105,WHITE);
    circle(300,300,70);
    setfillstyle(LINE_FILL,GREEN);
    floodfill(305,305,WHITE);
    getch();
    closegraph();
}
```

**WAP to input x coordinate, y coordinate, radius and draw a circle.**

**Source Code :**

```
#include<stdio.h>
#include<conio.h>
#include<graphics.h>
void main()
{
    clrscr();
    int gd=DETECT,gm,x,y,r;
    printf("Enter the x-coordinate, y-coordinate and radius of circle:");
    scanf("%d%d%d",&x,&y,&r);
    initgraph(&gd,&gm,"C:\\TURBOC3\\bgi");
    circle(x,y,r);
    getch();
    closegraph();
}
```

**WAP to draw 10 concentric circles with different colors.**

**Source Code :**

```
#include<dos.h>
#include<conio.h>
#include<graphics.h>
void main()
{
    clrscr();
    int gd=DETECT,gm,i;
    initgraph(&gd,&gm,"C:\\\\TURBOC3\\\\bgi");
    for(i=1;i<=10;i++)
    {
        setcolor(i);
        circle(200,150,i*10);
        delay(500);
    }
    getch();
    closegraph();
}
```