

WAP that accepts the marks of 5 subjects and finds the sum and percentage marks obtained by the student

Code:

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int M1, M2, M3, M4, M5, sum, per;
    printf ("Enter the marks of 5 subjects\n");
    scanf ("%f %f %f %f %f", &M1, &M2, &M3, &M4, &M5);
    Sum = M1 + M2 + M3 + M4 + M5;
    Per = Sum/5;
    printf ("Sum of Marks = %.d \n", Sum);
    printf ("percentage obtained = %.d", per);
    getch();
}
```

Date:

WAP that calculate the Simple interest and compound interest. The principal amount, Rate and time are entered by keyboard.

CODE:

```
#include <stdio.h>
#include <conio.h>
#include <math.h>
void main()
{
    float P,R,T ,ST,CI ;
    printf ("Enter Amount, Rate and Time respectively : ");
    scanf ("%f %f %f" , &P , &R , &T );
    SI = (P * R * T)/100 ;
    CI = ( P * (pow ( 1 + (R/100) , T )) ) ;
    printf ("Simple Interest = %.2f \n" , ST ) ;
    printf ("Compound Interest = %.2f \n" , CI ) ;
    getch();
}
```

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Date:

WAP that calculates area and circumference of a circle

CODE :

```
#include <stdio.h>
#include <conio.h>
void main()
{
    float r, area, cu ;
    printf ("Enter the radius :");
    scanf ("%f", &r);
    area = 3.14 * r * r ;
    cu = 2 * 3.14 * r ;
    printf ("Area = %f \n", area);
    printf ("Circumference = %f", cu);
    getch();
}
```

OUTPUT :

Enter the radius : 5.5

area = 9.4.985001

Circumference = 34.540001

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Date:

WAP that accepts the temperature in centigrade and converts into fahrenheit using formula.

CODE:

```
#include <stdio.h>
#include <iostream.h>
void main()
{
    float c, f;
    clrscr();
    printf ("Enter the temperature in centigrade:");
    Scanf ("%f", &c);
    f = (9.0 / 5.0) * c + 32;
    printf ("temperature in fahrenheit=%f", f);
    getch();
}
```

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OUTPUT

Enter the temperature in centigrade : 54  
temperature in fahrenheit = 129.199997

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Date:

WAP that Swap Values of two variables  
using 3<sup>rd</sup> variable.

CODE :

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int a,b,c;
    printf ("Enter two numbers : ");
    scanf ("%d %d", &a, &b);
    printf ("Before Swap:\n");
    printf ("a = %d\n", a);
    printf ("b = %d", b);
    c=a ;
    a=b ;
    b=c ;
    printf ("After Swap\n");
    printf ("a = %d\n", a);
    printf ("b = %d", b);
    getch();
}
```

OUTPUT

WAP that checks whether two numbers entered by user are equal or not.

CODE:

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int a, b;
    clrscr();
    printf ("Enter the value of a and b:");
    scanf ("%d %d", &a, &b);
    if (a == b)
    {
        printf ("Two numbers are equal");
    }
    else
    {
        printf ("Two numbers are not equal");
    }
    getch();
```

OUT PUT:

enter the numbers : 5 5  
b

WAP to find greatest of 3 numbers

CODE:

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int a, b, c;
    clrscr();
    printf ("Enter three numbers : ");
    scanf ("%d %d %d", &a, &b, &c);
    if (a > b)
    {
        if (a > c)
            printf ("%d is largest", a);
        else
            printf ("%d is largest", c);
    }
    else if (b > c)
        printf ("%d is largest", b);
```

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else

{

printf ("%s d is largest ", b);

}

getch();

}

Date:

WAP to find whether a given number is even or odd.

CODE:

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int a;
    clrscr();
    printf ("Enter any number :");
    scanf ("%d", &a);
    if (a % 2 == 0)
    {
        printf ("Number you entered is even");
    }
    else
    {
        printf ("Number you entered is odd");
    }
    getch();
}
```

WAP that tells whether a given year is leap year or not.

CODE :

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int y;
    clrscr();
    printf ("Enter year:");
    scanf ("%d", &y);
    if (y % 4 == 0)
    {
        if (y % 100 != 0)
        {
            printf ("%d is leap year", y);
        }
        else
        {
            if (y % 400 == 0)
            {
                printf ("%d is leap year", y);
            }
            else
            {
                printf ("%d is not leap year", y);
            }
        }
    }
}
```

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else

{

    printf ("%d is not leap year");  
    y

getch();

}

Date:

WAP that accepts marks of five Subjects and find percentage and print grades according to following criteria:

Between 90 - 100% : Print A

80 - 90 % : Print B

60 - 80 % : Print C

Below 60 % : Print D

### CODE :-

```
#include < stdio.h >
#include < conio.h >
void main()
{
    float per;
    int M1, M2, M3, M4, M5, Sum, per;
    printf ("Enter the marks of 5 subjects \n");
    scanf ("%d %d %d %d %d", &M1, &M2, &M3,
           &M4, &M5);
    Sum = M1 + M2 + M3 + M4 + M5;
    per = Sum / 5;
    printf ("Percentage obtained = %.2f", per);
    printf ("\n");
    if (per > 90 && per < 100)
    {
        printf ("Grade A");
    }
    else if (per > 80 && per < 90)
    {
        printf ("Grade B");
    }
}
```

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else if (per > 60 & per < 80)

{

    printf ("Grade C");

}

else

{

    printf ("Grade D");

}

getch();

{

Date:

WAP that takes two operands and one operator from user perform the operation and prints the result by using switch stmt.

CODE %

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int a, b, c ;
    char op ;
    printf ("Enter one number, operator (eg *, +, -, /, '%'),\nSecond number : ");
    scanf ("%d %c %d", &a, &op, &b);
    Switch (op)
    {
        Case '+': c = a+b;
        break;
        Case '-': c = a-b;
        break;
        Case '/': c = a/b;
        break;
        Case '*': c = a*b;
        break;
        Case '%': c = a % b;
        break;
        default: printf ("Invalid input");
    }
    printf ("%d %c %d", a, op, b, c);
    getch();
}
```

Date:

WAP to print the sum of all numbers up to given number.

CODE :

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int n, sum, i;
    clrscr();
    printf ("Enter the number upto which you want sum");
    scanf ("%d", &n);
    for (i=1; i<=n; i++)
    {
        sum += i;
    }
    printf ("Sum of numbers upto %d is %d", n, sum);
    getch();
}
```

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Date:

WAP to find the factorial of a given number

CODE :-

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int n, f = 1; i;
    clrscr();
    printf ("Enter the number whose factorial you
Want :");
    scanf ("%d", &n);
    for ( i=1; i<=n; i++)
    {
        f = f * i;
    }
    printf ("Factorial of number %d is %d", n, f);
    getch();
}
```

Date:

WAP to print sum of even numbers and odd numbers from 1 to n numbers.

Code:

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int n, even = 0, i, odd = 0;
    clrscr();
    printf ("Enter the number upto which you
            want sum of even and odd numbers:");
    Scanf ("%d", &n);
    for (i=1; i<=n; i++)
    {
        if (i % 2 == 0)
        {
            even += i;
        }
        else
        {
            odd += i;
        }
    }
    printf ("Sum of odd numbers: %d", odd);
    printf ("Sum of even numbers are: %d", even);
    getch();
}
```

Date:

WAP to check whether the number is prime or not

CODE :

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int n, i, count = 0;
    clrscr();
    printf ("Enter the number you want to check:");
    scanf ("%d", &n);
    for ( i=1; i<=n; i++)
    {
        if (n % i == 0)
        {
            count++;
        }
        if (count == 2)
        {
            printf ("number you entered is prime");
        }
        else if (count == 1)
        {
            printf ("1 is neither prime nor composite");
        }
        else
        {
            printf ("number you entered is composite");
        }
    }
    getch();
```

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Date:

WAP to find the sum of digits of entered number

CODE :

#include <stdio.h>

#include <conio.h>

void main()

{

long int i, n, m, d, sum = 0;

clrscr();

printf ("Enter any number whose sum of digits  
you want :");

scanf ("%ld", &n);

m = n;

while (m != 0)

{

d = m % 10;

Sum + = d;

m = m / 10;

}

printf ("Sum of digits of number %d is: %d", n, sum);

getch();

3

Date:

WAP to find reverse of a number

CODE :

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

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

```
void main()
```

{

```
long int n, m, rev=0;
```

```
int d;
```

```
clrscr();
```

```
printf ("Enter any number whose reverse you want?")
```

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

```
m=n;
```

```
while (m!=0)
```

{

```
    d = m % 10;
```

```
    rev = (rev * 10) + d;
```

```
    m = m / 10;
```

}

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

```
getch();
```

Date:

WAP to print Armstrong numbers from 1 to 100.

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

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

```
#include <math.h>
```

```
void main()
```

{

```
    int i, j, K, C, Sum, d;
```

```
    for (i=1; i<=100; i++)
```

{

```
        C = 0; Sum = 0;
```

```
        for (j = i, j != 0; j = j/10)
```

{

```
            C++;
```

}

```
        for (K = i; K != 0; K = K/10)
```

{

```
            d = K % 10;
```

```
            Sum = Sum + pow (d, C);
```

}

```
        if (sum == i)
```

{

```
            printf ("%d is a Armstrong number", i);
```

}

}

```
getch();
```

{

WAP. to convert binary number into decimal.

CODE:

```
#include <stdio.h>
#include <conio.h>
#include <math.h>
void main()
{
    int c, n, sum=0, e, d=-1;
    printf ("Enter the binary number eg. 10101\n");
    Scanf ("%1.d", &c);
    for (n=c; n!=0; n=n/10)
    {
        e=n%10;
        d++;
        Sum = Sum + (e * pow (2, d));
    }
    printf ("Binary number %d into decimal is", c);
    printf ("%1.d", Sum);
    getch();
}
```

Date:

WAP that simply takes elements of array from user and finds the sum of these elements

CODE:

```
#include < stdio.h>
#include < conio.h>
void main()
{
    int a[20], i, n, sum = 0;
    clrscr();
    printf ("Enter number of elements you want in array\n");
    Scanf ("%d", &n);
    printf ("enter elements : \n");
    for (i=0; i<n; i++)
    {
        printf ("element at %dth index = ", i);
        Scanf ("%d", &a[i]);
    }
    printf ("array is : \n");
    for (i=0; i/n; i++)
    {
        printf ("%d ", a[i]);
    }
    printf ("\n");
    for (i=0; i<n; i++)
    {
        sum += a[i];
    }
    printf ("sum of elements of above array is : %d", sum);
    getch();
}
```

3

Date:

WAP to find minimum and maximum element of array.

code :-

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

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

```
void main()
```

```
{
```

```
int a[50], b[50], c[50], n, i;
```

```
clrscr();
```

```
printf ("Enter number of elements you want in array : |n|");
```

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

```
printf ("Enter elements of 1st array : |n|");
```

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

```
{
```

```
printf ("element at %dth index = ", i);
```

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

```
}
```

```
printf ("1st array is : |n|");
```

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

```
{
```

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

```
}
```

```
printf ("|n|");
```

```
printf ("Enter elements of 2nd array : |n|");
```

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

```
{
```

```
printf ("Enter element at %dth index : ", i);
```

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

```
}
```

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printf ("1m");

printf ("2nd array is :1m");

for (i=0; i&lt;n; i++)

{

y

printf ("%d", b[i]);

y

printf ("1m");

printf (" sum of above two array is :1m");

for (i=0; i&lt;n; i++)

{

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

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

y

getch();

y

Date:

WAP to find minimum and Maximum element of the array.

CODE :

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

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

```
void main()
```

```
{
```

```
int a[50], n, i, largest = a[0];
```

```
clrscr();
```

```
printf ("enter number of elements you want in  
the arrays \n");
```

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

```
printf ("Enter elements :\n");
```

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

```
{
```

```
printf ("element at %d-th index = ", i);
```

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

```
}
```

```
printf ("Array is :\n");
```

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

```
{
```

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

```
}
```

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

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

```
{
```

```
if (a[i] > largest)
```

```
{
```

```
largest = a[i];
```

```
}
```

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Date:

int Smallest = a[0];

for (i=1; i<n; i++)

{

if (a[i] < smallest)

{

Smallest = a[i];

}

}

printf ("%d is largest\n", largest);

printf ("%d is smallest", smallest);

getch();

}

Date:

WAP to search an element in array, using linear search:

CODE:

```
# include < stdio.h>
# include < conio.h>
void main()
{
    int a[50], n, i, m;
    clrscr();
    printf ("enter number of elements you want:"); n;
    scanf ("%d", &n);
    printf ("enter elements:");
    for (i=0; i<n; i++)
    {
        printf ("element at %dth index = ", i);
        scanf ("%d", &a[i]);
    }
    printf ("Array is:");
    for (i=0; i<n; i++)
    {
        printf ("%d", a[i]);
    }
    printf ("\n");
    printf ("enter the element you want to search:");
    scanf ("%d", &m);
    for (i=0; i<n; i++)
    {
        if (a[i] == m)
        {
            printf ("%d is found at %dth index", a[i], i);
        }
    }
    getch();
}
```

Date:

WAP to add add and multiply two Matrix of order  $m \times m$

Code:

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

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

```
void main()
```

```
{
```

```
int n, a[m][m], i, j, b[m][m], c[m][m], d[m][m];  
clrscr();
```

```
printf ("Enter the order of Matrix ");
```

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

```
printf ("Enter the entries of 1st matrix ");
```

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

```
{
```

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

```
{
```

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

```
y
```

```
z
```

```
printf ("Enter the entries of 2nd Matrix ");
```

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

```
{
```

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

```
{
```

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

```
y
```

```
z
```

for (i=0; i<m; i++)

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{  
    for ( j=0 ; j<m; j++)

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

$$d[i][j] = 0$$

{

    for ( K=0 ; K<m ; K++)

{

$$d[i][j] += a[i][K] * b[K][j];$$

}

}

printf ("Sum of first and second Matrix \n");

for (i=0 ; i<n ; i++)

{

    for ( j=0 ; j<m ; j++)

{

        printf ("%d\t", a[i][j]);

}

    printf ("\n");

}

printf ("Product of 1st and 2nd matrix \n");

for (i=0 ; i<m ; i++)

{

    for (j=0 ; j<m ; j++)

{

        printf ("%d\t", d[i][j]);

}

    printf ("\n");

}

getch();

3

Date:

WAP to sort the elements of the array  
in ascending order using bubble sort  
technique.

CODE :-

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int n, a[n], i, j;
    printf ("Enter the no. of elements in array : ");
    scanf ("%d", &n);
    printf ("Enter the elements : ");
    for (i=0; i<n; i++)
    {
        scanf ("%d", &a[i]);
    }
    for (j=0; j<n; j++)
    {
        for (i=j+1; i<n; i++)
        {
            if (a[i]<a[j])
            {
                t = a[j];
                a[j] = a[i];
                a[i] = t;
            }
        }
    }
    printf ("Elements in ascending order : ");
}
```

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

{

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

}

```
getch();
```

y

WAP to find sum of diagonal elements  
of  $n \times m$  matrix

CODE:

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

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

```
void main()
```

```
{
```

```
int n, a[n][n], i, j,
```

```
printf ("Enter the order of matrix");
```

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

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

```
{
```

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

```
{
```

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

```
}
```

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

```
{
```

```
        c = c + a[i][i];
```

```
}
```

```
    printf ("Sum of diagonal elements = %d", c);
```

```
getch();
```

```
}
```

WAP. to Swap two elements using concept of pointers

CODE :

```
#include <stdio.h>
#include <conio.h>
void Swap (int *, int *);
void main()
{
    int a, b;
    printf ("Enter any two numbers : ");
    Swap (&a, &b);
    getch();
}

void Swap (int *x, int *y)
{
    printf ("In Before Swap : ");
    printf ("Address of x = %d", *x, *y);
    *x = *x + *y
    *y = *x - *y
    *x = *x - *y
    printf ("In After Swap : ");
    printf ("Address of x = %d", *x, *y);
}
```