**1.Bubble sort**

#include <iostream>

using namespace std;

int main()

{

int n;

cout<<"Enter the total no : "<<endl;

cin>>n;

int a[n];

cout<<"Enter the elements into array : "<<endl;

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

cin>>a[i];

int i,j,temp;

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

{

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

{

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

{

temp=a[i];

a[i]=a[j];

a[j]=temp;

}

}

}

cout<<"The sorted array is : "<<endl;

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

{

cout<<a[i]<<"\t";

}

return 0;

}

**2.Prime numbers**

#include <iostream>

using namespace std;

int main()

{

int n,flag,i,j;

cout<<"Enter the range: "<<endl;

cin>>n;

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

{

flag=0;

for(j=2;j<i;j++)

{

if(i%j==0)

{

flag=1;

break;

}

}

if(flag==0)

{

cout<<"\t"<<i;

}

}

return 0;

}

**3.Quadratic equation**

#include <iostream>

#include<math.h>

using namespace std;

int main()

{

float a,b,c,d;

float x1,x2;

cout<<"Enter the coeffiecients a,b,c: ";

cin>>a>>b>>c;

d=(b\*b)-(4\*a\*c);

if(a==0)

{

cout<<"Roots can't be found: "<<endl;

exit(0);

}

if(d==0)

{

cout<<"Roots are equal"<<endl;

x1=x2=(-b)/(2\*a);

cout<<"x1= "<<x1<<" x2= "<<x2;

}

else if(d>0)

{

cout<<"Roots are real and distinct"<<endl;

x1=((-b)+sqrt(d))/(2\*a);

x2=((-b)-sqrt(d))/(2\*a);

cout<<"x1= "<<x1<<" x2= "<<x2;

}

else

{

cout<<"Roots are real and imaginary"<<endl;

x1=(-b)/(2\*a);

x2=sqrt(-d)/(2\*a);

cout<<"x1+ix2="<<x1<<"+i"<< x2<<endl<<"x1-ix2="<<x1<<"-i"<<x2<<endl;

}

return 0;

}

**4.Reverse a number**

#include<iostream>

Int main()

{

Int n,r,ans=0;

Cout<<”Enter the number to revrse: <<endl;

Cin>>n;

While(n!=0)

{

r=n%10;

ans=ans\*10+r;

r=r/10;

}

Cout<<”Resverse no is “<<ans<<endl;

return 0;

}

**5.Highest marks student**

#include <iostream>

using namespace std;

struct student{

int usn,marks[3];

char name[10];

}s[100];

int main()

{

int n,i,j,h\_marks=0,h\_id,total,usn;

cout<<"Enter the number of students : "<<endl;

cin>>n;

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

{

cout<<"Enter the name: "<<endl;

cin>>s[i].name;

cout<<"Enter the usn: "<<endl;

cin>>s[i].usn;

cout<<"Enter the marks in 3 subejcts: "<<endl;

cin>>s[i].marks[0]>>s[i].marks[1]>>s[i].marks[2];

total=s[i].marks[0]+s[i].marks[1]+s[i].marks[2];

if(total>h\_marks)

{

h\_marks=total;

h\_id=i;

}

}

cout << "Highest Grade student is : "<<s[h\_id].name<<" total marks: "<<h\_marks<<endl;

cout<<"Enter the student usn to find: "<<endl;

cin>>usn;

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

{

if(s[i].usn==usn)

{

cout<<"\nName: "<<s[i].name<<"\nUsn: "<<s[i].usn<<endl;

}

}

return 0;

}

**6.Student Grade**

#include <iostream>

using namespace std;

class student{

public:

int usn,marks[3];

char name[10];

}s[100];

int main()

{

int n,i,j,h\_marks=0,h\_id,total,usn;

cout<<"Enter the number of students : "<<endl;

cin>>n;

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

{

cout<<"Enter the name: "<<endl;

cin>>s[i].name;

cout<<"Enter the usn: "<<endl;

cin>>s[i].usn;

cout<<"Enter the marks in 3 subejcts: "<<endl;

cin>>s[i].marks[0]>>s[i].marks[1]>>s[i].marks[2];

total=s[i].marks[0]+s[i].marks[1]+s[i].marks[2];

if(total>h\_marks)

{

h\_marks=total;

h\_id=i;

}

}

cout << "Highest Grade student is : "<<s[h\_id].name<<" total marks: "<<h\_marks<<endl;

cout<<"Enter the student usn to find: "<<endl;

cin>>usn;

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

{

if(s[i].usn==usn)

{

cout<<"\nName: "<<s[i].name<<"\nUsn: "<<s[i].usn<<endl;

}

}

return 0;

}

**7.Display specified student detail using class**

#include <iostream>

using namespace std;

class student{

public:

int usn,marks[3];

char name[10];

}s[100];

int main()

{

int n,i,j,usn;

cout<<"Enter the number of students : "<<endl;

cin>>n;

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

{

cout<<"Enter the name: "<<endl;

cin>>s[i].name;

cout<<"Enter the usn: "<<endl;

cin>>s[i].usn;

cout<<"Enter the marks in 3 subejcts: "<<endl;

cin>>s[i].marks[0]>>s[i].marks[1]>>s[i].marks[2];

}

cout<<"Enter the student usn to find: "<<endl;

cin>>usn;

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

{

if(s[i].usn==usn)

{

cout<<"\nName: "<<s[i].name<<"\nUsn: "<<s[i].usn<<endl;

}

}

return 0;}

**8.Employee class**

#include <iostream>

using namespace std;

class employee

{

public:

int id;

float salary;

char name[10];

}e[100];

int main()

{

int n,h\_id;

float h\_salary=0;

cout<<"Enter the no of employee: ";

cin>>n;

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

{

cout<<"Enter the employee id: \n";

cin>>e[i].id;

cout<<"Enter the name: \n";

cin>>e[i].name;

cout<<"Enter the salary: \n";

cin>>e[i].salary;

if(e[i].salary>h\_salary)

{

h\_salary=e[i].salary;

h\_id=i;

}

}

cout<<"Highest salaried employee :\n"<<"Name : "<<e[h\_id].name<<"\nSalary : "<<e[h\_id].salary<<endl;

return 0;

}

**9.Matrix multiplication**

#include <iostream>

using namespace std;

int main()

{

int m,n,p,q;

cout<<"\nEnter the order of matrix : A ";

cin>>m>>n;

cout<<"\nEnter the order of matrix : B ";

cin>>p>>q;

if(m!=p)

{

cout<<"Matrix multiplication not possible"<<endl;

exit(0);

}

int A[m][n],B[p][q],C[m][q];

cout<<"Enter matrix A"<<endl;

int i,j,k;

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

{

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

{

cin>>A[i][j];

}

}

cout<<"Enter matrix B"<<endl;

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

{

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

{

cin>>B[i][j];

}

}

cout<<"Matrix A:"<<endl;

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

{

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

{

cout<<A[i][j]<<" ";

}

cout<<"\n";

}

cout<<"Matrix B:"<<endl;

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

{

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

{

cout<<B[i][j]<<" ";

}

cout<<"\n";

}

//Multiplication takes place:

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

{

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

{

C[i][j]=0;

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

{

C[i][j]=C[i][j]+A[i][k]\*B[k][j];

}

}

}

cout<<"Resultant Matrix:"<<endl;

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

{

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

{

cout<<C[i][j]<<" ";

}

cout<<"\n";

}

}