**Euclids:-**

#include<iostream>

using namespace std;

int main()

{

int b,c;

cout<<"Enter 2 numbers:"<<endl;

cin>>b;

cin>>c;

int d;

while(b!=0){

int rem=b%c;

int q=b/c;

cout<<b<<"="<<c<<"\*"<<q<<"+"<<rem<<endl;

b=c;

c=rem;

}

cout<<"GCD(b,c)="<<c<<endl;

}

**Extended Euclids:-**

#include <iostream>

using namespace std;

int main() {

int b, c;

cout<<"Enter 2 numbers:" << endl;

cin>>b>>c;

int x0=1, x1=0,y0=0,y1=1;

int a=b,b1=c;

while (b1!= 0){

int q=a/b1;

int r=a%b1;

int tempX=x0-q\*x1;

int tempY=y0-q\*y1;

a=b1;

b1=r;

x0=x1;

y0=y1;

x1=tempX;

y1=tempY;

}

cout<<"gcd("<<b<<", "<<c<<") = "<<a<<endl;

cout<<b<< "\*("<<x0<< ") + "<<c<< "\*("<<y0<<") = "<<a<< endl;

}