```
#include<stdio.h>
#include<math.h>
int main()
{
   int v1[10],v2[10],n,i,v3[10],j,v4[10],sum=0;                  //assigning inputs
   float magnitude,angle,a1,b1,c1;
   printf("Enter elements of vector a : ");
   for(i=0;i<2;i++)                                    //for loop to scan input
   {
      scanf("%d",&v1[i]);                                 //scanning inputs
   }
   printf("Enter elements of vector b : ");
    for(i=0;i<2;i++)
   {     scanf("%d",&v2[i]);
   }
   printf("Addition of these two vectors are : ");
   for(i=0;i<2;i++)
   {
     v3[i]=v1[i]+v2[i];
     printf("%d ",v3[i]);
   }
    magnitude=sqrt(pow(v3[0],2)+pow(v3[1],2));             //formula for finding magnitude
     printf("\nMagnitude of c vector is %f\n",magnitude);  //printing magnitude
     for(i=0;i<2;i++)
     {
        v4[i]=v1[i]*v2[i];
        sum=sum+v4[i];
     }
     a1=sqrt(pow(v1[0],2)+pow(v1[1],2));
     b1=sqrt(pow(v2[0],2)+pow(v2[1],2));
     c1=a1*b1;
      angle=sum/c1;                                      //formula for angle
      printf("angle between the vector is cos θ = %f",angle);  //printing angle
    }
```