```
#include<stdio.h>
int main()
{
int r,c,p,q,k,a[50][50],b[50][50],sum[50][50],i,j,cal;
printf("1.addition\n2.subtraction\n3.multiflication\nENTER YOUR CHOICE:");
scanf("%d",&cal);
printf("enter the number of rows and columns for: A(between 1 to 50):");
scanf("%d%d",&r,&c);
printf("enter the number of rows and columns for: B(between 1 to 50):");
scanf("%d%d",&p,&q);
printf("\nenter element of 1st matrix:\n");
for(i=0; i<r; ++i)
for(j=0; j<c; ++j)
{
printf("enter element a%d%d:",i+1,j+1);
scanf("%d", &a[i][j]);
}
printf("enter elements of 2nd matrix:\n");
for(i=0; i<p; ++i)
for(j=0; j<q; ++j)
{
printf("enter element b%d%d:",i+1,j+1);
scanf("%d",&b[i][j]);
}
switch(cal)
{
case 1:
//adding two matrices
```

```
for(i=0; i<r; ++i)
for(j=0; j<c; ++j)
{
sum[i][j]=a[i][j]+b[i][j];
}
//printing the result
printf("\n sum of two matrices:\n");
for(i=0; i<r; ++i)
for(j=0; j<c; ++j)
{
printf("%d\t",sum[i] [j]);
if(j==c-1)
{
printf("\n");
}
}
break;
case 2:
//subtraction two matrices
for(i=0; i<r; ++i)
for(j=0; j<c; ++j)
{
sum[i][j]=a[i][j]-b[i][j];
}
//printing the result
printf("\n subtraction of two matrices:\n");
for(i=0; i<r; ++i)
for(j=0; j<c; ++j)
```

```
{
printf("%d\t",sum[i][j]);
if(j==c-1)
{
printf("\n");
}
}
break;
case 3:
//multiplication of two matrices
for (i = 0; i < r; i++)
{
for (j = 0; j < q; j++)
{
for (k = 0; k < p; k++)
{
sum[i][j] += a[i][k] * b[k][j];
}
}
}
//printing the result
printf("The product of the two matrices is: \n");
for (i = 0; i < r; i++)
{
for (j = 0; j < q; j++)
{
printf("%d\t", sum[i][j]);
}
```

```
printf("\n");
}
break;
//for wrong input
default:
printf("you entered wrong input");
}
return 0;
}
```