

PROGRAM 15

PROGRAM FOR MULTIPLICATION OF TWO MATRICES

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int a[10][10],b[10][10],c[10][10];
    int i,j,k,r1,r2,c1,c2;
    clrscr();
    printf("input the order of matrix A\n");
    scanf("%d%d",&r1,&c1);
    printf("input the order of matrix B\n");
    scanf("%d%d",&r2,&c2);
    if(c1!=r2)
    {
        printf("multiplication not possible");
        getch();
    }
    printf("enter elements of matrix A\n");
    for(i=0;i<r1;i++)
    {
        for(j=0;j<c1;j++)
        {
            scanf("%d",&a[i][j]);
        }
    }
    printf("enter elements of matrix B\n");
    for(i=0;i<r2;i++)
    {
        for(j=0;j<c2;j++)
        {
            scanf("%d",&b[i][j]);
        }
    }
    printf("elements of matrix A are\n");
    for(i=0;i<r1;i++)
    {
        printf("\n");
        for(j=0;j<c1;j++)
        {
            printf("%d",a[i][j]);
            printf("\t");
        }
    }
}
```

```

printf("elements of matrix B are\n");
for(i=0;i<r2;i++)
{
printf("\n");
for(j=0;j<c2;j++)
{
printf("%d",b[i][j]);
printf("\t");
}
}
for(i=0;i<r1;i++)
{
for(j=0;j<c2;j++)
{
c[i][j]=0;
for(k=0;k<c1;k++)
{
c[i][j]=c[i][j]+a[i][k]*b[k][j];
}
}
}
printf("multiplication of matrix is\n");
for(i=0;i<r1;i++)
{
printf("\n");
for(j=0;j<c2;j++)
{
printf("%d",c[i][j]);
printf("\t");
}
}
getch();
}

```

ROLL NO. =12252