



# **SNS COLLEGE OF TECHNOLOGY**

**Coimbatore-35.**

**An Autonomous Institution**

**COURSE NAME : 23CST101 PROBLEM SOLVING AND C PROGRAMMING**

**I YEAR/ I SEMESTER**

**UNIT-III ARRAYS AND STRINGS**

**Topic: Strings**

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# Matrix Multiplication



```
#include<stdio.h>
#include<conio.h>
void main()
{
int a[9][9],b[9][9],c[9][9];
int i,j,k,p,m,q,n;
clrscr();
printf(" Enter the order of Matrix A\n");
scanf("%d%d",&p,&q);
printf(" Enter the order of Matrix B\n");
scanf("%d%d",&m,&n);
if(q==m)
{
printf(" Enter the elements of Matrix A\n");
for(i=0;i<p;i++)
```



# Matrix Multiplication

```
{
for(j=0;j<q;j++)
{
scanf("%d",&a[i][j]);
}
}
printf(" Enter the elements of Matrix B\n");
for(i=0;i<m;i++)
{
for(j=0;j<n;j++)
{
scanf("%d",&b[i][j]);
}
}
}
```



# Matrix Multiplication

```
for(i=0;i<p;i++)
{
for(j=0;j<m;j++)
{
c[i][j] = 0; for(k=0;k<m;k++)
{
c[i][j] = c[i][j] + (a[i][k]*b[k][j]);
}
}
}
printf("The Multiplication of Matrix A and Matrix B\n");
for(i=0;i<p;i++)
```



# Matrix Multiplication

```
{  
for(j=0;j<n;j++)  
{  
printf("%d\t",c[i][j]);  
}  
printf("\n");  
printf(" Invalid order so Multiplication not possible\n");  
getch();  
}
```



# Matrix Multiplication

## Output:

Enter the order of Matrix A

2 2

Enter the order of Matrix B

2 2

Enter the elements of Matrix A

1 2

1 2

Enter the elements of Matrix B

1 2

1 2

The Multiplication of Matrix A and Matrix B

3 6

3 6

