LAB-9

Warshall's Algorithm-

CODE-

```
#include<stdio.h>

void warshalls();

int a[10][10], p[10][10],i,j,k,n;

void main()

{

printf("Enter number of vertices\n");

scanf("%d",&n);

printf("Enter adjacency matrix\n");
```

```
for(i=1;i<=n;i++)

{

for(j=1;j<=n;j++)

{

scanf("%d",&a[i][j]);

}

}

warshalls();

printf("Path Matrix\n");

for(i=1;i<=n;i++)
```

```
{

for(j=1;j<=n;j++)

{

printf("%d",p[i][j]);

}

printf("\n");

}

}
void warshalls()

{

for(i=1;i<=n;i++)
```

```
{

for(j=1;j<=n;j++)

{

p[i][j]=a[i][j];

}

}

for(k=1;k<=n;k++)

{

for(i=1;i<=n;i++)

{
```

```
for(j=1;j<=n;j++)

{

if((p[i][j]!=1) && (p[i][k]==1 && p[k][j]==1))

p[i][j]=1;

}

}

}

}
```

OUTPUT-


Enter number of vertices
4
Enter adjacency matrix
0 1 0 1
0 0 0 1
0 0 0 0
1 1 1 1
Path Matrix
1111
1111
0000
1111
...Program finished with exit code 0
Press ENTER to exit console.