**PROGRAM -11**

**Implement Warshall’s algorithm using dynamic programming(Transitive Closure)**

#include <stdio.h>

int n, a[10][10], p[10][10];

void path()

{

int i, j, k;

for (i = 0; i < n; i++)

for (j = 0; j < n; j++)

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

for (k = 0; k < n; k++)

for (i = 0; i < n; i++)

for (j = 0; j < n; j++) if (p[i][k] == 1 && p[k][j] == 1)

p[i][j] = 1;

}

void main()

{

int i, j;

printf("Enter the number of nodes:");

scanf("%d", &n);

printf("\nEnter the adjacency matrix:\n");

for (i = 0; i < n; i++)

for (j = 0; j < n; j++)

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

path();

printf("\nThe path matrix is shown below\n");

for (i = 0; i < n; i++)

{

for (j = 0; j < n; j++)

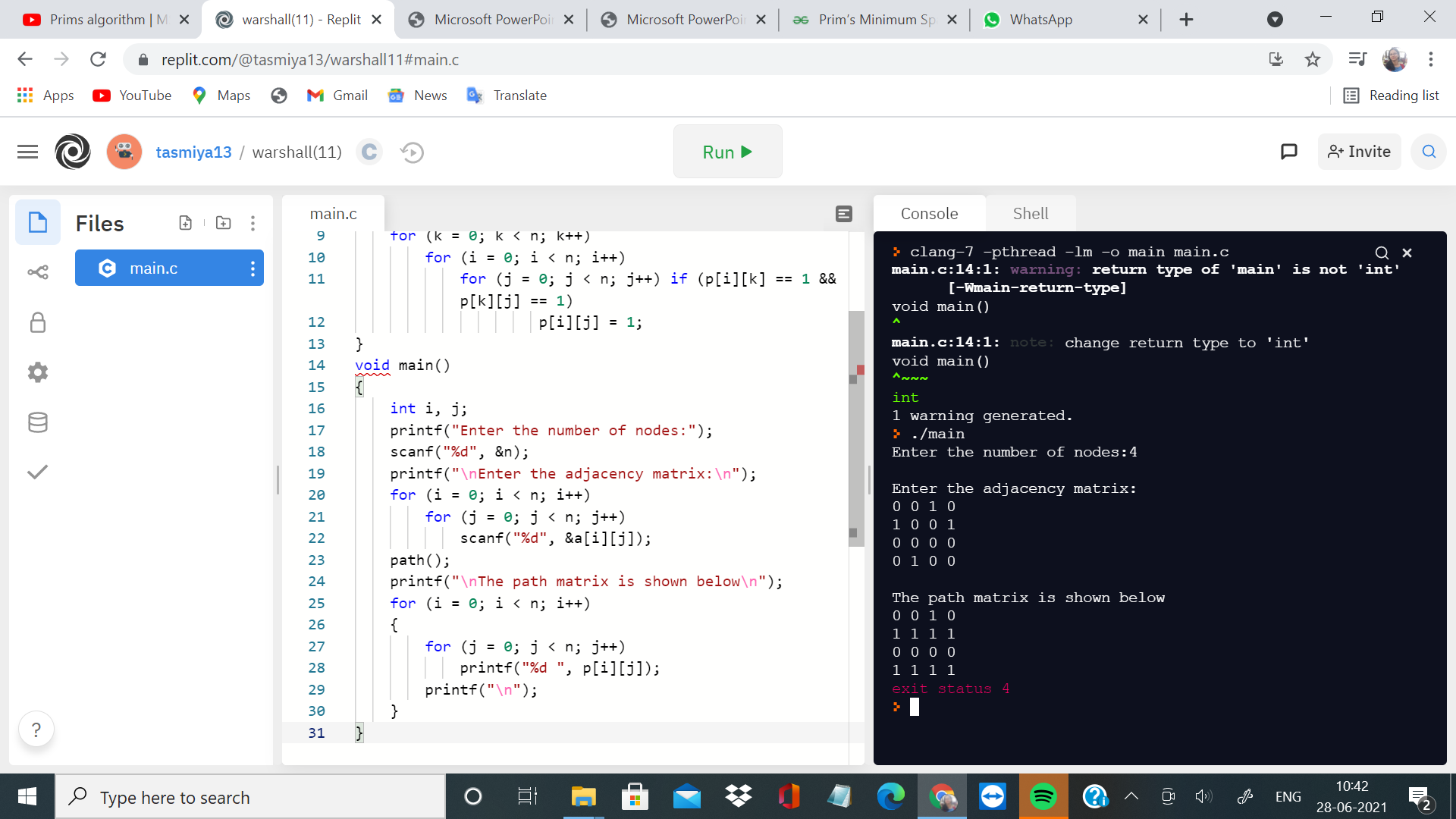
printf("%d ", p[i][j]);

printf("\n");

}

}

**OUTPUT:**

****