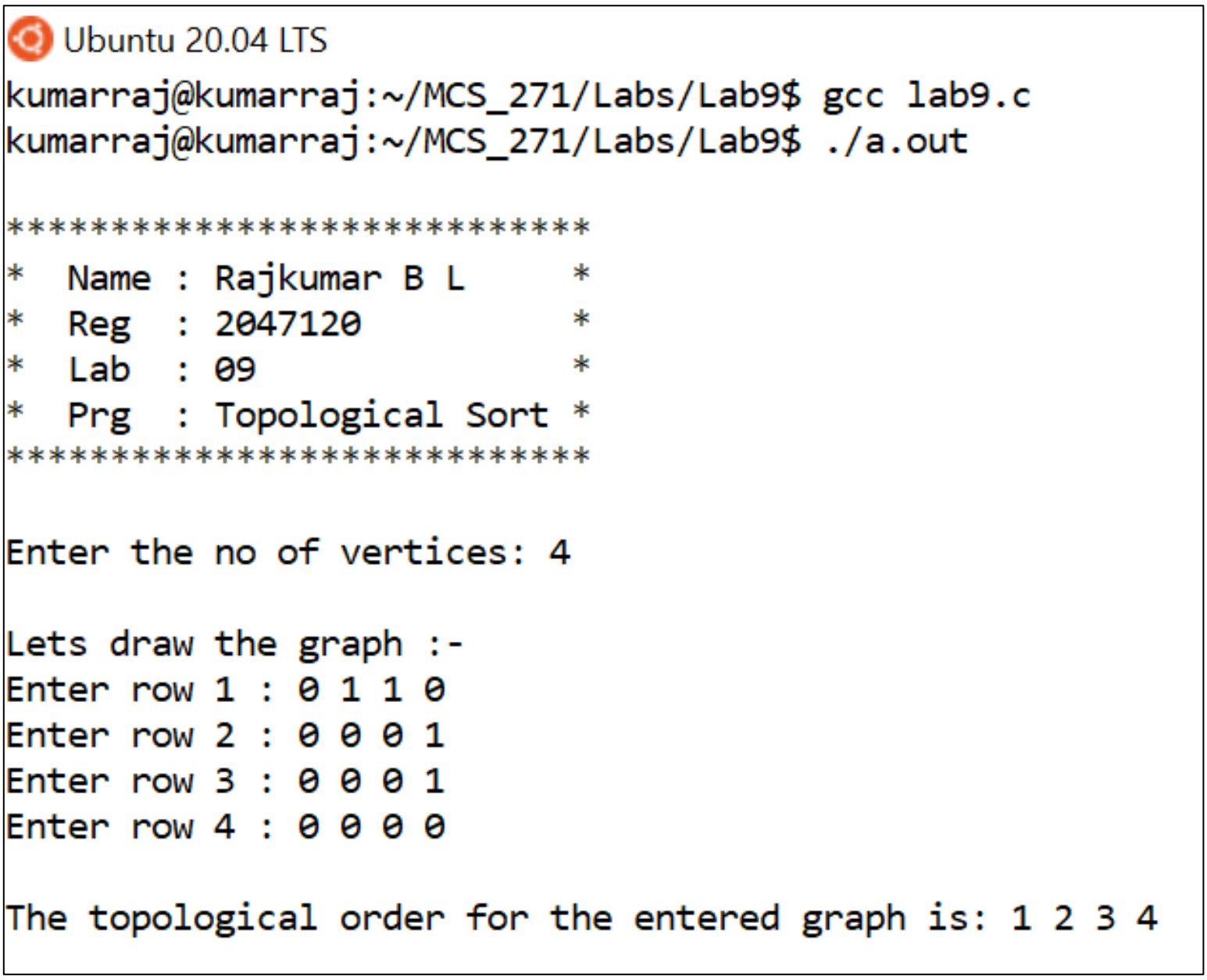
Name : Rajkumar B L
Reg.No : 2047120
Course : MCS 271 Data Structure (Lab 09 – Topological Sort)

Output:

```c
/*********************
 * Name : Rajkumar B L
 * Reg  : 2047120
 * Lab  : 09
 * Program : Topological Sort
 * ******************/

#include <stdio.h>

int main()
{

    printf("\n*************************\n*  Name : Rajkumar B L     *\n*  Reg  : 2047120
 *\n*  Lab  : 09              *\n*  Prg  : Topological Sort *\n*************************\n\n");

    int i, j, k, n, a[10][10], indeg[10], flag[10], count = 0;

    printf("Enter the no of vertices:");

    scanf("%d", &n);

    printf("Lets draw the graph :\n");

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

        printf("Enter row %d : ", i + 1);

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

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

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

```
        indeg[i] = 0;

        flag[i] = 0;
    }

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

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

            indeg[i] = indeg[i] + a[j][i];

    printf("The topological order for the entered graph is: ");

    while (count < n)
    {

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

            if ((indeg[k] == 0) && (flag[k] == 0))
            {

                printf("%d ", (k + 1));

                flag[k] = 1;
            }

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

                if (a[i][k] == 1)

                    indeg[k]--;
            }
        }

        count++;
    }
    printf("\n\n");
    return 0;
}
```

Output:


Ubuntu 20.04 LTS
kumarraj@kumarraj:~/MCS_271/Labs/Lab9$ gcc lab9.c
kumarraj@kumarraj:~/MCS_271/Labs/Lab9$ ./a.out
****
* Name : Rajkumar B L *
* Reg : 2047120 *
* Lab : 09 *
* Prg : Topological Sort *
****
Enter the no of vertices: 4
Lets draw the graph :-
Enter row 1 : 0 1 1 0
Enter row 2 : 0 0 0 1
Enter row 3 : 0 0 0 1
Enter row 4 : 0 0 0 0
The topological order for the entered graph is: 1 2 3 4