**231701054 srinivasan s**

**Experiment 02 solve problem using depth first search**

**Aim:**

To write a program to solve any problem using depth first search.

**Code:**

**def dfs(graph,no,vi=None):**

**if vi is None:**

**vi=set()**

**vi.add(no)**

**print(no,end=' ')**

**for ne in graph[no]:**

**if ne not in vi:**

**dfs(graph,ne,vi)**

**n=int(input("enter the number of nodes: "))**

**d={int(input("enter node: ")):list(map(int,input("enter the numbers: ").split()))for \_ in range(n)}**

**graph=d**

**a=int(input("enter the number to start from: "))**

**dfs(graph,a,d)**

**output:**

**enter the number of nodes: 5**

**enter node: 0**

**enter the numbers: 1 2**

**enter node: 1**

**enter the numbers: 0 2**

**enter node: 2**

**enter the numbers: 0 1 3 4**

**enter node: 3**

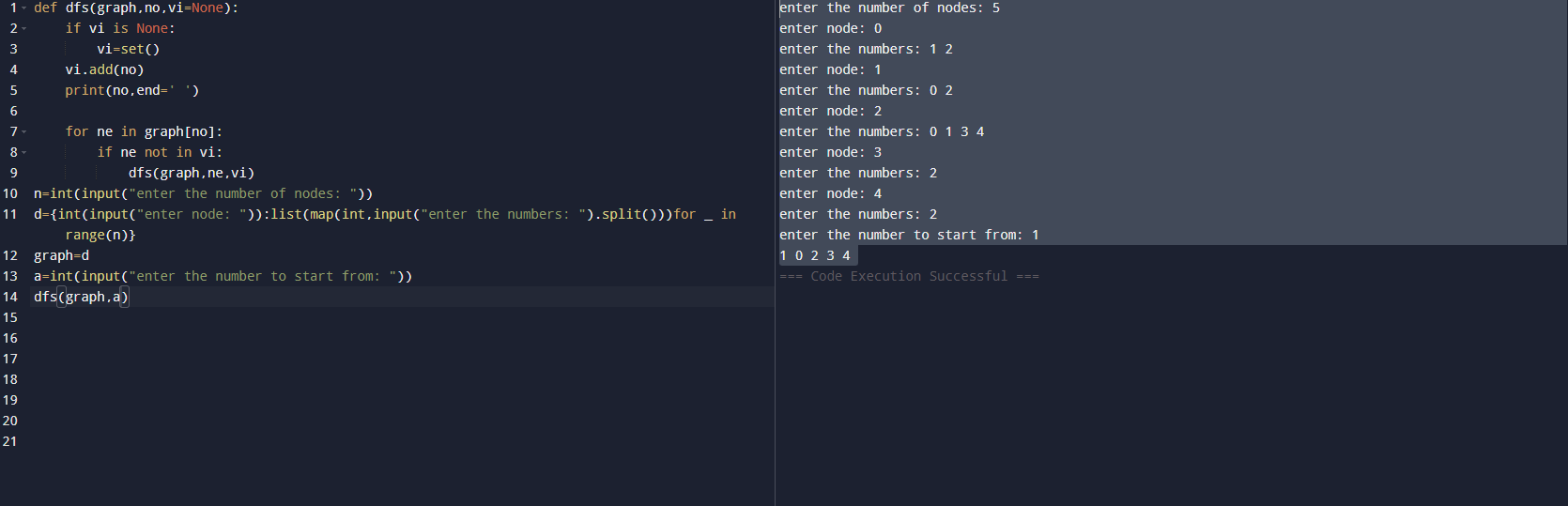
**enter the numbers: 2**

**enter node: 4**

**enter the numbers: 2**

**enter the number to start from: 1**

**1 0 2 3 4**

****