

```
class graph:
    def __init__(self, nodes):
```

```
        self.v = nodes nodes
```

```
        self.edges = []
```

```
        self.graph = defaultdict(list)
```

```
    def add edges(self, x, y):
```

```
        self.graph[x].append(y)
```

```
    def DFS(self, target, depth, vis, ans):
```

```
        if ans == target:
```

```
            ans.append(ans)
```

```
            return True
```

```
        if depth < 0:
```

```
            return False
```

```
            ans.append(ans)
```

```
        for i in self.graph[ans]:
```

```
            if (self.DFS(i, target, depth - 1, ans)):
```

```
                return True
```

```
        return False
```

```
    def DFS DFS(self):
```

g.add^{add}edge(0, 1)

g.add^{add}edge(0, 2)

g.add^{add}edge(0, 3)

g.addedge(1, 4)

g.addedge(2, 5)

g.addedge(3, 6)

target = 8;

depth = 6;

src = 0

if g.DFS(src, target, depth) == true:

print("Source can reach target")

else:

print("Source cannot reach target")

print(g.adj)