lab 2

jainsoumya032

28 September 2022

1 BFS

```
🖺 | 🔁 You are signe | x | 🖫 Course: 2022 | x | | 8 | lab 2 - Online | x | | M | Inbox (3,444) | x | | M | My Drive - Gr | x | CO | Untitled Lipyr | x | G | Google Drive | x | Q | Al/lab 1 at m | x | +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \begin{tabular}{ll}  \begin
                            △ Untitled1.ipynb 🖈
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ■ Comment 😃 Share 🌣 🌔
                           File Edit View Insert Runtime Tools Help All changes saved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ✓ RAM Disk Editing ^
                       + Code + Text
  \equiv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ↑ ↓ © □ ‡ 🖟 🗎 :
                         graph = {
    'A' : ['8','C'],
    '8' : ['0', 'E'],
    'c' : ['F'],
    '0' : [],
    'E' : ['F'],
    'F' : []
}
  {x}
  visited = [] # List to keep track of visited nodes.
queue = [] #Initialize a queue
                                           def bfs(visited, graph, node):
  visited.append(node)
  queue.append(node)
                                                while queue:
    s = queue.pop(0)
    print (s, end = " ")
                                                        for neighbour in graph[s]:
   if neighbour not in visited:
     visited.append(neighbour)
   queue.append(neighbour)
  <>
                                           # Driver Code
bfs(visited, graph, 'A')
  \equiv
                                          ABCDEF
                                                                                                                                                                                                                                                                                      ✓ 0s completed at 3:55 PM
                                                                                                                                                           🌿🔫 o 🛱 🧶 🔚 🍓 🗷 🤞
  Type here to search
```

Figure 1: Breath First Search

```
graph = {
  'A' : ['B','C'],
  'B' : ['D', 'E'],
  'C' : ['F'],
  'D' : [],
  'E' : ['F'],
```

```
'F' : []
visited = [] # List to keep track of visited nodes.
queue = []
             #Initialize a queue
def bfs(visited, graph, node):
  visited.append(node)
  queue.append(node)
  while queue:
    s = queue.pop(0)
   print (s, end = " ")
    for neighbour in graph[s]:
      if neighbour not in visited:
        visited.append(neighbour)
        queue.append(neighbour)
# Driver Code
bfs(visited, graph, 'A')
```