

# Team notebook

February 12, 2023

## Contents

### 1 BFS

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```
#include <bits/stdc++.h>
```

```
using namespace std;
```

```
signed main()
```

```
{  
    vector<vector<int>> adj; // adjacency list representation  
    int n; // number of nodes  
    int s; // source vertex
```

```
    queue<int> q;  
    vector<bool> used(n);  
    vector<int> d(n), p(n);
```

```
    q.push(s);  
    used[s] = true;  
    p[s] = -1;  
    while (!q.empty()) {  
        int v = q.front();  
        q.pop();  
        for (int u : adj[v]) {  
            if (!used[u]) {  
                used[u] = true;  
                q.push(u);  
                d[u] = d[v] + 1;  
                p[u] = v;  
            }  
        }  
    }  
    return 0;  
}
```

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