Assignment No-2 Title:Breadth-First Search(BFS)

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***Abstract*—Here i was working Breadth-First Search(BFS) and I solved Problem using C++ language.**

***Index Terms*—Here I mostly used in My report C++ language and Code-block code editor**

I. INTRODUCTION

BFS is a traversing algorithm where you should start traversing from a selected node (source or starting node) and traverse the graph layerwise thus exploring the neighbour nodes (nodes which are directly connected to source node). You must then move towards the next-level neighbour nodes.

II. LITERATURE REVIEW

BFS and its application in finding connected components of graphs were invented in 1945 by Konrad Zuse, in his (rejected) Ph.D. thesis on the Plankalk ul programming language, but this was not published until 1972. It was reinvented in 1959 by Edward F. Moore, who used it to find the shortest path out of a maze,[5][6] and later developed by C. Y. Lee into a wire routing algorithm (published 1961). In 2012 Farhad S. et. al. [4] proposed new resolution for solving N-queens by using combination of DFS (Depth First Search) and BFS (Breadth First Search) techniques.

III. PROPOSED METHODOLOGY

Here i Discuss BFS Algorithm: 1. for each u in V s 2. do color[u] ←WHITE 3. d[u] ←infinity 4. [u] ←NIL 5. color[s] ←GRAY 6. d[s] ←0 7. [s] ←NIL 8. Q ← 9. ENQUEUE(Q, s) 10 while Q is non-empty 11. do u ←DEQUEUE(Q) 12. for each v adjacent to u 13. do if color[v] ←WHITE 14. then color[v] ←GRAY 15. d[v] ←d[u] + 1 16. [v] ←u 17. ENQUEUE(Q, v) 18. DEQUEUE(Q) 19. color[u] ←BLACK

IV. BFS ALGORITHM APPLICATIONS

1.To build index by search index 2. For GPS navigation 3.Path finding algorithms 4.In Ford-Fulkerson algorithm to find maximum flow in a network 5.Cycle detection in an undirected graph In minimum span- ning tree

ACKNOWLEDGMENT

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v

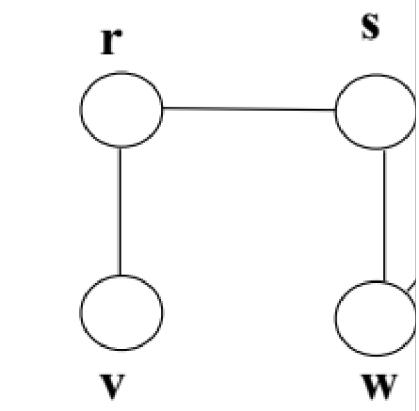

Fig. 1. Exar

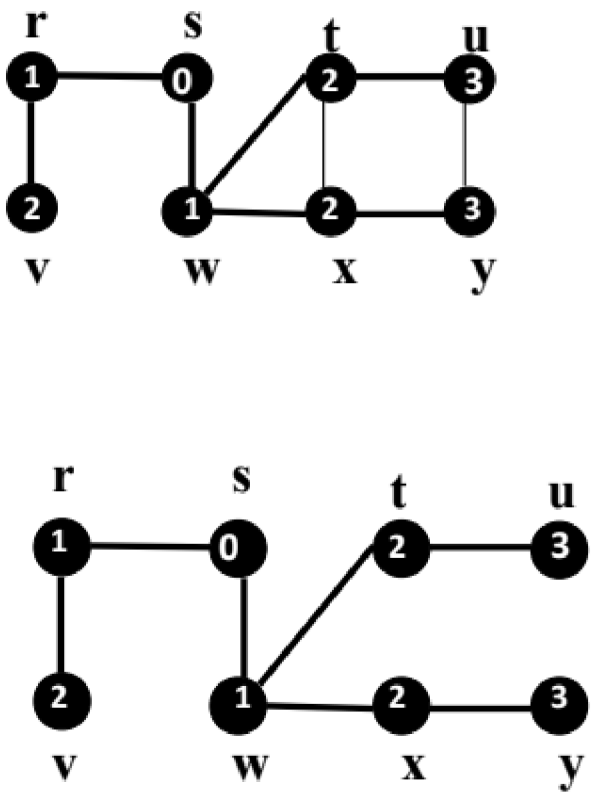

Fig. 2. Example of a figure caption.