EXPERIMENT [21](BFS tree)

CODE:

#include <stdio.h>

#define SIZE 5

int queue[SIZE], front = 0, rear = 0;

int visited[SIZE] = {0};

// Enqueue function

void enqueue(int value) {

queue[rear++] = value;

}

// Dequeue function

int dequeue() {

return queue[front++];

}

int isQueueEmpty() {

return front == rear;

}

int main() {

int graph[SIZE][SIZE] = {

{0, 1, 1, 0, 0},

{1, 0, 1, 1, 0},

{1, 1, 0, 0, 1},

{0, 1, 0, 0, 1},

{0, 0, 1, 1, 0}

};

int startNode = 0;

visited[startNode] = 1;

enqueue(startNode);

printf("BFS Traversal: ");

while (!isQueueEmpty()) {

int current = dequeue();

printf("%d ", current);

for (int i = 0; i < SIZE; i++) {

if (graph[current][i] == 1 && visited[i] == 0) {

enqueue(i);

visited[i] = 1;

}

}

}

return 0;

}

OUTPUT:

