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I hope this is helpful to anybody having trouble understanding computational time complexity for Breadth First Search a.k.a BFS.

```
Queue graphTraversal.add(firstVertex);

// This while loop will run V times, where V is total number of vertices in graph.
while(graphTraversal.isEmpty == false)

    currentVertex = graphTraversal.getVertex();

    // This while loop will run Eaj times, where Eaj is number of adjacent edges to
    while(currentVertex.hasAdjacentVertices)
        graphTraversal.add(adjacentVertex);

    graphTraversal.remove(currentVertex);
```

Time complexity is as follows:

```
V * (O(1) + O(Eaj) + O(1))
V + V * Eaj + V
2V + E(total number of edges in graph)
V + E
```