|  |
| --- |
| **TAD : Graph** |
| **Representation:** Adjacency list |
| **Invariant: { V is a vertex**  ∈ G ˄ x **is a vertex**  ∈ G 🡪 x != v }  **{ V is a list of adjacency of U, then U ∈/ V}** |
| **Primitive operations**   |  |  |  |  | | --- | --- | --- | --- | | **Operation Name** | **Input** | **Output** | **Operation Type** | | **addVertex():** | GRAPH X ELEMENT | GRAPH | MODIFIER | | **removeVertex(vertex):** | GRAPH X ELEMENT | GRAPH | MODIFIER | | **addEdge(sourceVertex, destinationVertex):** | GRAPH X SOURCE\_ELEMENT X DEST\_ELEMENT | GRAPH | MODIFIER | | **removeEdge(sourceVertex, destinationVertex):** | GRAPH X SOURCE\_ELEMENT X DEST\_ELEMENT | GRAPH | MODIFIER | | **BFS(startVertex)** | GRAPH X START\_VERTEX | STRING | ANALYZER | | **DFS(startVertex)** | GRAPH X START\_VERTEX | STRING | ANALYZER | | **Dijkstra(starVertex,finalVertex)** | GRAPH X START\_VERTEX X FINAL\_VERTEX | MAP | ANALYZER | | **Floydwarhsall()** | GRAPH | INT [] [] | ANALYZER | |

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