**Integrative Task #2 Computation and Discrete Structures 1**

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**Configuración de los Escenarios:**

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| **Name** | **Class** | **Scenario** |
| setUp1 | GraphAdjacentList | A simple graph with 4 vertices and 6 edges between vertices. |
| setUp2 | GraphAdjacentList | A simple graph with 4 vertices and without edges |
| setUp3 | GraphAdjacentMatix | A simple graph with 4 vertices and 6 edges between vertices. |
| setUp4 | GraphAdjacentMatrix | A simple graph with 4 vertices and without edges |

**Diseño de Casos de Prueba:**

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| --- | --- | --- | --- | --- |
| **Class** | **Method** | **Scenario** | **Input** | **Expected Result** |
| Graph | AddVertex | setUp1 and setUp3 | We insert a new vertex that havent added, with the key and value. | A new vertex is added to the size of the vertices. |
| Graph | AddEdge | setUp4 and setUp2 | We insert a new edge that havent added, with both keys and weight. | A new edge is added between two vertices. |
| Graph | AddVertex | setUp2 and setUp4 | We insert a vertex already added, with the key and value. | I shouldn't be able to add it either because it doesn't allow it or it throws a message. |
| Graph | AddEdge | setUp1 and setUp3 | We insert an edge already added, with both keys and weight. | I shouldn't be able to add it either because it doesn't allow it or it throws a message. |
| Graph | AddEdge | setUp2 and setUp4 | We insert an edge to two vertices that don't exist, with both keys and weight. | I shouldn't be able to add it either because it doesn't allow it or it throws a message. |
| Graph | RemoveEdge | setUp2 and setUp4 | We eliminate an edge that does not exist, with both keys and weight. | I shouldn't be able to add it either because it doesn't allow it or it throws a message. |
| Graph | RemoveEdge | setUp1 and setUp3 | We eliminate an edge, introduced with both keys and weight | You should be able to delete the edge you want to delete. |
| Graph | RemoveVertex | setUp2 and setUp4 | We eliminate a vertex that does not exist, with the key and value. | I shouldn't be able to add it either because it doesn't allow it or it throws a message. |
| Graph | RemoveVertex | setUp1 and setUp3 | We eliminate a vertex, introduced with the key and value. | You should be able to delete the vertexyou want to delete. |
| Graph | BFS | setUp1 and setUp3 | We introduce the key of the vertex where we want to start the method. | Verify the expected distances from the starting vertex to other specific vertices. |
| Graph | DFS | setUp1 and setUp3 |  | Verify the expected distances from the starting vertex to other specific vertices. |
| Graph | Dijkstra | setUp1 and setUp3 |  |  |
| Graph | Kruskal | setUp1 and setUp3 |  |  |
| Graph | Prim | setUp1 and setUp3 |  |  |
| Graph | Floyd Warshall | setUp1 and setUp3 |  |  |