**GraphAdjList Unit test designs**

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| **Name** | **Class** | **Scenary** |
| Setupscenary1 | **GraphAdjListTest** | 3 nodes added each one of them with a name, an average of people and an average of minutes for them. |
| Setupscenary1 | **GraphAdjListTest** | The first node called “El ciclón” with an average people of 25 people and an average of minutes of 10. |
| Setupscenary1 | **GraphAdjListTest** | The second node called “La cumbre” with an average of people of 40 and an average of minutes of 45. |
| Setupscenary1 | **GraphAdjListTest** | The third node called “Los rápidos” with an average of people of 30 and an average of minutes of 25 |
| SetUpscenary1 | **GraphAdjList** | 3 edges added each one of them with differente weights and a pair of nodes |
| SetUpscenary1 | **GraphAdjList** | The first edge with a weight of 12 and between “El ciclón” and “La cumbre” |
| SetUpscenary1 | **GraphAdjList** | The second called “La cumbre” with an average of people of 40 and an average of minutes of 45. |
| SetUpscenary1 | **GraphAdjList** | The third node called “Los rápidos” with an average of people of 30 and an average of minutes of 25 |

**GraphAdjList Test Case Design**

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| **Test objective:** Validate that a node or vertex is correctly added to the graph | | | | |
| **Class** | **Method** | **Scenary** | **Input Values** | **Result** |
| **GraphAdjListTest** | addVertex | Setupscenary1 | A hash table already created | The node “El ciclón” got added to the hash table |

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| **Test objective:** Verify that an edge is correctly added between 2 nodes of the graph | | | | |
| **Class** | **Method** | **Scenary** | **Input Values** | **Result** |
| **GraphAdjList** | AddEdge | Setupscenary1 | The 2 nodes to be joined by the edge and the weight of the edge | A new edge was added to the list of edges with a weight "weight" and nodes "start" and "end". |

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| **Test objective:** Verify that an edge is correctly added between 2 nodes of the graph | | | | |
| **Class** | **Method** | **Scenary** | **Input Values** | **Result** |
| **GraphAdjList** | AddEdge | Setupscenary1 | The 2 nodes to be joined by the edge and the weight of the edge | A new edge was added to the list of edges with a weight "weight" and nodes "start" and "end". |

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| **Test objective:** Validate that the weights of the shortest paths between a “source” node and the rest of the nodes of the graph are correctly obtained. | | | | |
| **Class** | **Method** | **Scenary** | **Input Values** | **Result** |
| **GraphAdjList** | Dijkstra | Setupscenary1 | A "source" node and an array of keys that identify the rest of the nodes of the graph. | A "DijkstraResults" object containing an array with the path weights between the source node and each of the nodes of the graph. |

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| **Test objective:** Validate that the weight of the shortest path between all nodes of the graph can be obtained. | | | | |
| **Class** | **Method** | **Scenary** | **Input Values** | **Result** |
| **GraphAdjList** | Floyd | Setupscenary1 | N/A | An mxm matrix containing the weight of the shortest path from any node to any of the other nodes in the graph. |