**Formato de escenarios y casos de uso**

**Graph:**

**Configuración de los Escenarios**

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| **Nombre** | **Clase** | **Escenario** |
| setUpStage1 | TestGraph |  |
| setUpStage2 | TestGraph |  |
| setUpStage3 | TestGraph | A New Shortest Path Algorithm using Lists | by Mohammed Kamil Khan |  Analytics Vidhya | Medium |
| setUpStage4 | TestGraph |  |
| setUpStage5 | TestGraph |  |
| setUpStage6 | TestGraph |  |
| setUpStage7 | TestGraph |  |

**Diseño de Casos de Prueba**

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| **Clase** | **Método** | **Escenario** | **Valores de Entrada** | **Resultado** |
| AdjacencyListGraph | BFS() | setUpStage2() | “a” | true. |
| AdjacencyMatrixGraph | BFS() | setUpStage2() | “a” | true |
| AdjacencyListGraph | BFS() | setUpStage4() | “denver” | true |
| AdjacencyMatrixGraph | BFS() | setUpStage4() | “denver” | true |
| AdjacencyListGraph | BFS() | setUpStage7() | “a” | false |
| AdjacencyMatrixGraph | BFS() | setUpStage7() | “a” | false |
| AdjacencyListGraph | DFS() | setUpStage2() | - | 1 |
| AdjacencyMatrixGraph | DFS() | setUpStage2() | - | 1 |
| AdjacencyListGraph | DFS() | setUpStage4() | - | 1 |
| AdjacencyMatrixGraph | DFS() | setUpStage4() | - | 1 |
| AdjacencyListGraph | DFS() | setUpStage7() | - | 3 |
| AdjacencyMatrixGraph | DFS() | setUpStage7() | - | 3 |

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| **Clase** | **Método** | **Escenario** | **Valores de Entrada** | **Resultado** |
| AdjacencyListGraph | dijkstra() | setUpStage1() | source = “a”, destination = “d” | Path p = {“a”, “c”, “b”, “d”}  with distance 9.0 |
| AdjacencyMatrixGraph | dijkstra() | setUpStage1() | source = “a”, destination = “d” | Path p = {“a”, “c”, “b”, “d”}  with distance 9.0 |
| AdjacencyListGraph | dijkstra() | setUpStage2() | source = “a”, destination = “z” | Path p = {"a", "c", "b", "d", "e", "z"} with distance 13.0 |
| AdjacencyMatrixGraph | dijkstra() | setUpStage2() | source = “a”, destination = “z” | Path p = {"a", "c", "b", "d", "e", "z"} with distance 13.0 |
| AdjacencyListGraph | dijkstra() | setUpStage3() | source = “S”, destination = “T” | Path p = {"S", "A", "C", "E", "T"} with distance 10.0 |
| AdjacencyMatrixGraph | dijkstra() | setUpStage3() | source = “S”, destination = “T” | Path p = {"S", "A", "C", "E", "T"} with distance 10.0 |
| AdjacencyListGraph | floydWarshall() | setUpStage1() | - | a map of all paths between each vertex |
| AdjacencyMatrixGraph | floydWarshall() | setUpStage1() | - | a map of all paths between each vertex |
| AdjacencyListGraph | floydWarshall() | setUpStage2() | - | a map of all paths between each vertex |
| AdjacencyMatrixGraph | floydWarshall() | setUpStage2() | - | a map of all paths between each vertex |
| AdjacencyListGraph | floydWarshall() | setUpStage3() | - | a map of all paths between each vertex |
| AdjacencyMatrixGraph | floydWarshall() | setUpStage3() | - | a map of all paths between each vertex |

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| **Clase** | **Método** | **Escenario** | **Valores de Entrada** | **Resultado** |
| AdjacencyListGraph | prim() | setUpStage4() | source = “atlanta” | 3600.0 |
| AdjacencyMatrixGraph | prim() | setUpStage4() | source = “atlanta” | 3600.0 |
| AdjacencyListGraph | prim() | setUpStage5() | source = “a” | 6.0 |
| AdjacencyMatrixGraph | prim() | setUpStage5() | source = “a” | 6.0 |
| AdjacencyListGraph | prim() | setUpStage6() | source = “a” | 24.0 |
| AdjacencyMatrixGraph | prim() | setUpStage6() | source = “a” | 24.0 |
| AdjacencyListGraph | kruskal() | setUpStage4() | - | 3600.0 |
| AdjacencyMatrixGraph | kruskal() | setUpStage4() | - | 3600.0 |
| AdjacencyListGraph | kruskal() | setUpStage5() | - | 6.0 |
| AdjacencyMatrixGraph | kruskal() | setUpStage5() | - | 6.0 |
| AdjacencyListGraph | kruskal() | setUpStage6() | - | 24.0 |
| AdjacencyMatrixGraph | kruskal() | setUpStage6() | - | 24.0 |

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| **Clase** | **Método** | **Escenario** | **Valores de Entrada** | **Resultado** |
| AdjacencyListGraph | addVertex() | setUpStage7() | element = “e”  element = “f” | Vertices added |
| AdjacencyMatrixGraph | addVertex() | setUpStage7() | element = “e”  element = “f” | Vertices added |
| AdjacencyListGraph | addEdge() | setUpStage7() | source = “c”, destination = “d”  source = “b”, destination = “c” | Edges added |
| AdjacencyMatrixGraph | addEdge() | setUpStage7() | source = “c”, destination = “d”  source = “b”, destination = “c” | Edges added |
| AdjacencyListGraph | deleteVertex () | setUpStage7() | element = “d” | Vertex deleted |
| AdjacencyMatrixGraph | deleteVertex() | setUpStage7() | element = “d” | Vertex deleted |
| AdjacencyListGraph | deleteEdge() | setUpStage7() | source = “a”, destination = “b” | Edge deleted |
| AdjacencyMatrixGraph | deleteEdge() | setUpStage7() | source = “a”, destination = “b” | Edge deleted |
| AdjacencyListGraph | searchVertex() | setUpStage7() | element = “a”  element = “b”  element = “c”  element = “d” | Vertex.getElement = “a”  Vertex.getElement = “b”  Vertex.getElement = “c”  Vertex.getElement = “d” |
| AdjacencyMatrixGraph | searchVertex() | setUpStage7() | element = “a”  element = “b”  element = “c”  element = “d” | Vertex.getElement = “a”  Vertex.getElement = “b”  Vertex.getElement = “c”  Vertex.getElement = “d” |
| AdjacencyListGraph | searchEdge() | setUpStage7() | source = “a”, destination = “b” | 1.0 |
| AdjacencyMatrixGraph | searchEdge() | setUpStage7() | source = “a”, destination = “b” | 1.0 |