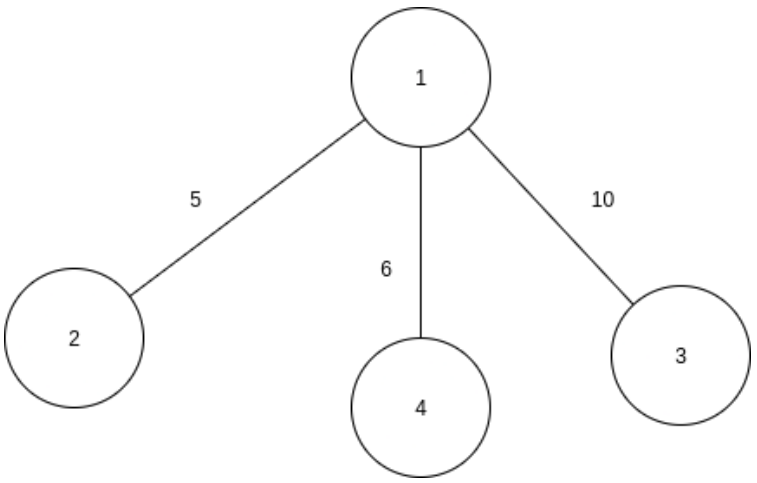
Camilo Campaz Jimenez
Daniel Esteban Jaraba Gabiria
Johan Stiven Ricardo Sibaja

UNIT TEST DESIGNS

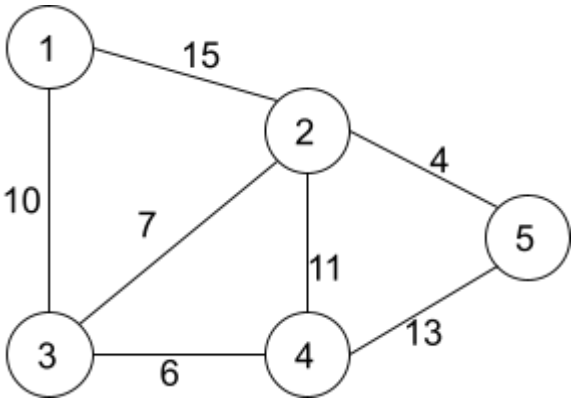
Graph class:

Name	Class	Stage
setup1	Graph	A no directed graph without vertices

Name	Class	Stage
setup2	Graph	Graph graph graph.vertices = {1,2,3,4} graph.directed = false

Name	Class	Stage
setup3	Graph	

Name	Class	Stage
setup4	Graph	Graph graph graph.vertices = {1,2,3} graph.directed = true

Name	Class	Stage
setup5	Graph	

Test goal: Verify if the method addVertice() is able to set new vertices in the graph on a specific context				
Class	**Method**	**Stage**	**Input values**	**Result**
Graph	addVertice()	setup1	key = 1	True, which means that the vertex was added to the graph. This is verify by searching the value of the new vertex in the graph

Test goal: Verify if the method existVertice() is able to set new vertices in the graph on a specific context				
Class	**Method**	**Stage**	**Input values**	**Result**
Graph	existVertice()	setup1	key = 8	True, which means that the value to does not belong to the set of vertices of the graph

Test goal: Verify if the method addEdge() is able to set new edges in the graph on a specific context

Class	Method	Stage	Input values	Result
Graph	addEdge()	setup2	sourceKey =1 endkey =2 weigth = 5	True, which means that if we consult the new values of the edge in the graph we we'll be able to find them

Test goal: Verify if the method addEdge() is able to set new edges in the graph on a specific context				
Class	**Method**	**Stage**	**Input values**	**Result**
Graph	addEdge()	setup4	sourceKey =1 endkey =2 weigth = 5	True, which means that if we consult the new values of the edge in the graph we we'll be able to find them

Test goal: Verify if the method edit() is able to set new values for any vertex o weight in the graph on a specific context				
Class	**Method**	**Stage**	**Input values**	**Result**
Graph	edit()	setup3	key = 1 newValue = 0	False, which means that if we search the old value for the vertex it won't exist since that value was updated

Test goal: Verify if the method edit() is able to set new values for any vertex o weight in the graph on a specific context				
Class	**Method**	**Stage**	**Input values**	**Result**
Graph	edit()	setup3	key = 1 newValue = 20 oldvalue = 10	True, which means that the value selected has been updated

Test goal: Verify if the method prim() is able to find the shortest path				
Class	**Method**	**Stage**	**Input values**	**Result**

Graph	prim()	setup5	key = 1	True, which means that the comparison of the path expected is the same to the path given by the code

Test goal: Verify if the method floyWarshall() is able to find the between each pair of vertices				
Class	**Method**	**Stage**	**Input values**	**Result**
Graph	floyWarshall()	setup3	V = 4 u = 1 v = 3	True, which means that the comparison of the path expected is the same to the path given by the code

Class Manager:

Name	Class	Stage
setup1	Manager	This class has a connected graph with 56 vertices that represent all the MIO stations with its respective weight. All this information is given by a csv file

Test goal: Verify if the method bestRoutel() is able to find the best route from one station to another				
Class	**Method**	**Stage**	**Input values**	**Result**
Manager	bestRoutel()	setup1	value1 = 26 value2 = 43	True, which means that the comparison of the path expected is the same to the path given by the code