a)

MultiGraphADT

It is an interface, provides a template of functions. The Boston Metro will use MultiGraphADT as it doesn’t need to know how it is implemented

Edge

It is an interface, provides a template of functions. Will be used by MultiGraph in a collection.

Node

It is an interface, provides a template of functions. Will be used by MultiGraph in a collection.

MultiGraph

It is a class that will implement the MultiGraphADT. It will provide the implementation of each function. It will create a collection of Edge and Node.

LineSegment

The LineSegment class will implement Edge. Used by the SubwayMap

Station

The Station class will implement Node. Which is connected to SubwayMap

INode

The INode class implements Node, connecting to MultiGraph

IEdge

The IEdge class implements Edge, and also connects to MultiGraph

b)