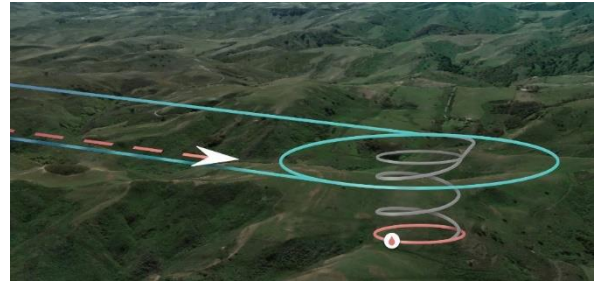


P2: DRONE ROUTER

BACKGROUND

Amazonian Delivery Services is piloting a delivery service in a specified region of the country. To avoid conflicts with other air traffic the FAA has restricted drone flights to defined flight paths between designated waypoints. The flight paths have cost scores—lower values are preferred paths. Moreover, fees are assessed on the total path score, so it is in Amazonian's interest to route drones using the lowest cost path from the warehouse to its destination.



drone

ASSIGNMENT

Create a class, `DroneRouter`, that will determine the best (i.e. minimum cost) path between the distribution center and a specified waypoint. The `DroneRouter` class will implement the `edu.metrostate.ics340.p2.Router` interface (provided).

Feature	Specification	Information
Class	<code>DroneRouter</code> implements <code>edu.metrostate.p2.Router</code>	
Constructors	<code>DroneRouter()</code>	No-argument constructor
Methods	See Javadoc of <code>Router.java</code>	
Input	Text file depicting a directed, weighted graph with format: Waypoint1 Waypoint2 routeCost	Elements: Waypoint1 : String Waypoint2 : String routeCost : int, > 0 Delimiter: whitespace (at least one)
Output	None, besides method return values	
Third Party	Google Guava Library, v. 31.0.1-jre	You should review the Google Guava library for useful classes



PROJECT REQUIREMENTS

	Requirements
Submission	<p>Your submission shall be an exported Eclipse project zip file</p> <ul style="list-style-type: none"> • Project type: Eclipse Java • Project Name: P2_AAAnnnn_DroneRouter, where: <ul style="list-style-type: none"> ○ AAAnnnn is your “student identifier” where: <ul style="list-style-type: none"> ▪ AA: your initials ▪ nnnn: the 4 digits embedded in your StarID <p>The zip file must contain your Java sources</p> <p>Your classes must be in a package named with the following prefix:</p> <pre>edu.metrostate.ics340.p2.AAAnnnn</pre> <p>where AAAnnnn is your student identifier as described above</p> <p>Do not change the package of the provided Router.java file, nor place your classes in its package.</p>
Code	<p>The Constructors and methods defined in the capabilities table will be public, spelled as specified, and with the return type as specified (void otherwise). Do not add any unspecified checked expressions to the method declaration.</p> <p>Your submissions will be tested with an automated testing framework and therefore must adhere to the specification. Also ensure the Eclipse project is running at code Java code level 14.</p> <p>Your code must be free of compile-time errors.</p> <p>Your code must comply with Java coding conventions.</p> <p>You are encouraged to develop any helper methods or classes as you deem fit. It is generally advisable to make them non-public—only specified methods should be public.</p>
	<p>You must also provide a JUnit test class, separate from the main code, implementing your test cases.</p> <p>Your tests should demonstrate how you ensure your work meets the specification.</p> <p>The tests should validate preconditions and boundary cases.</p>