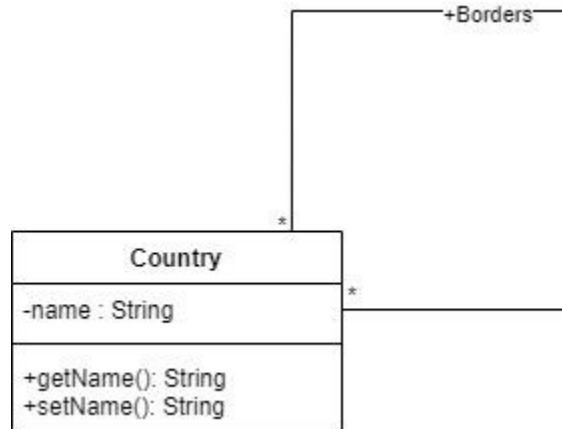


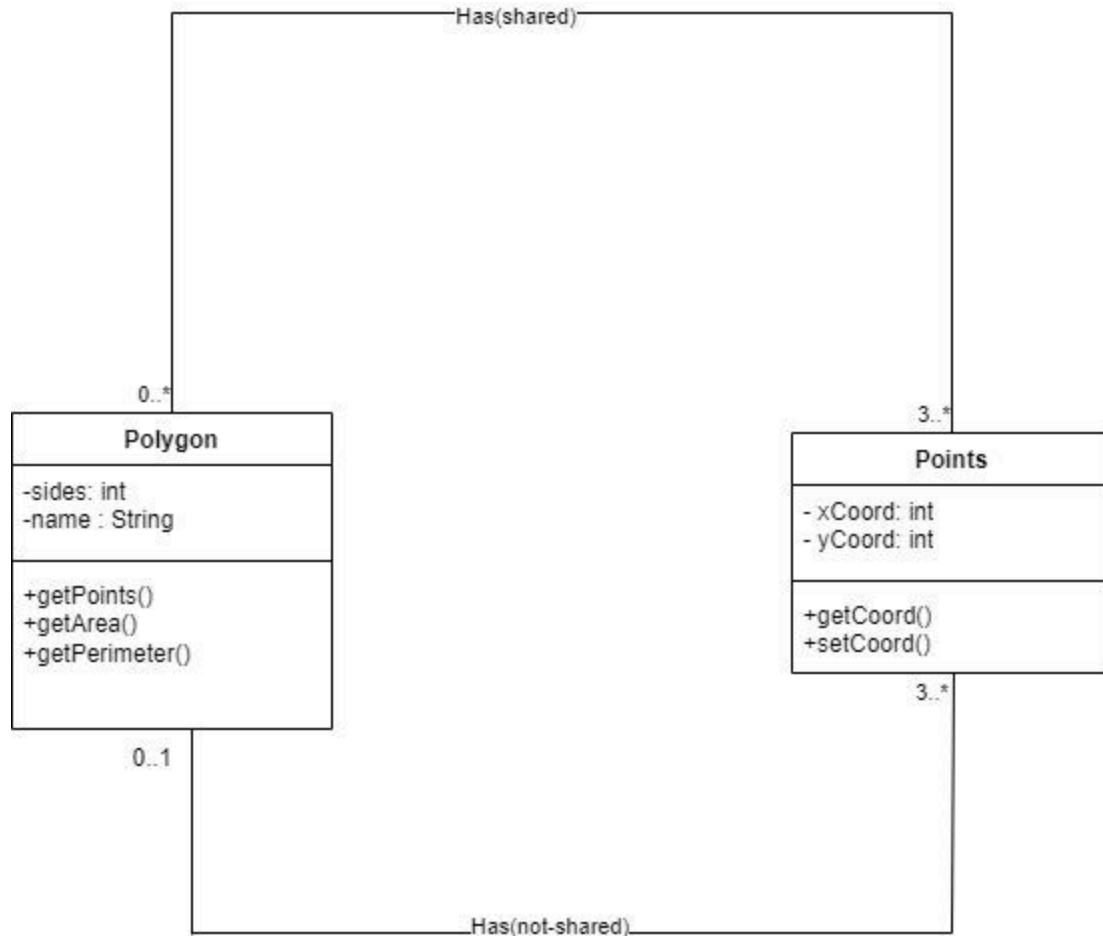
IT313: Software Engineering
Autumn 2024-25
Lab Session: Class Modeling

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Q.1 Prepare a class diagram for the following object diagram that shows a portion of Europe.



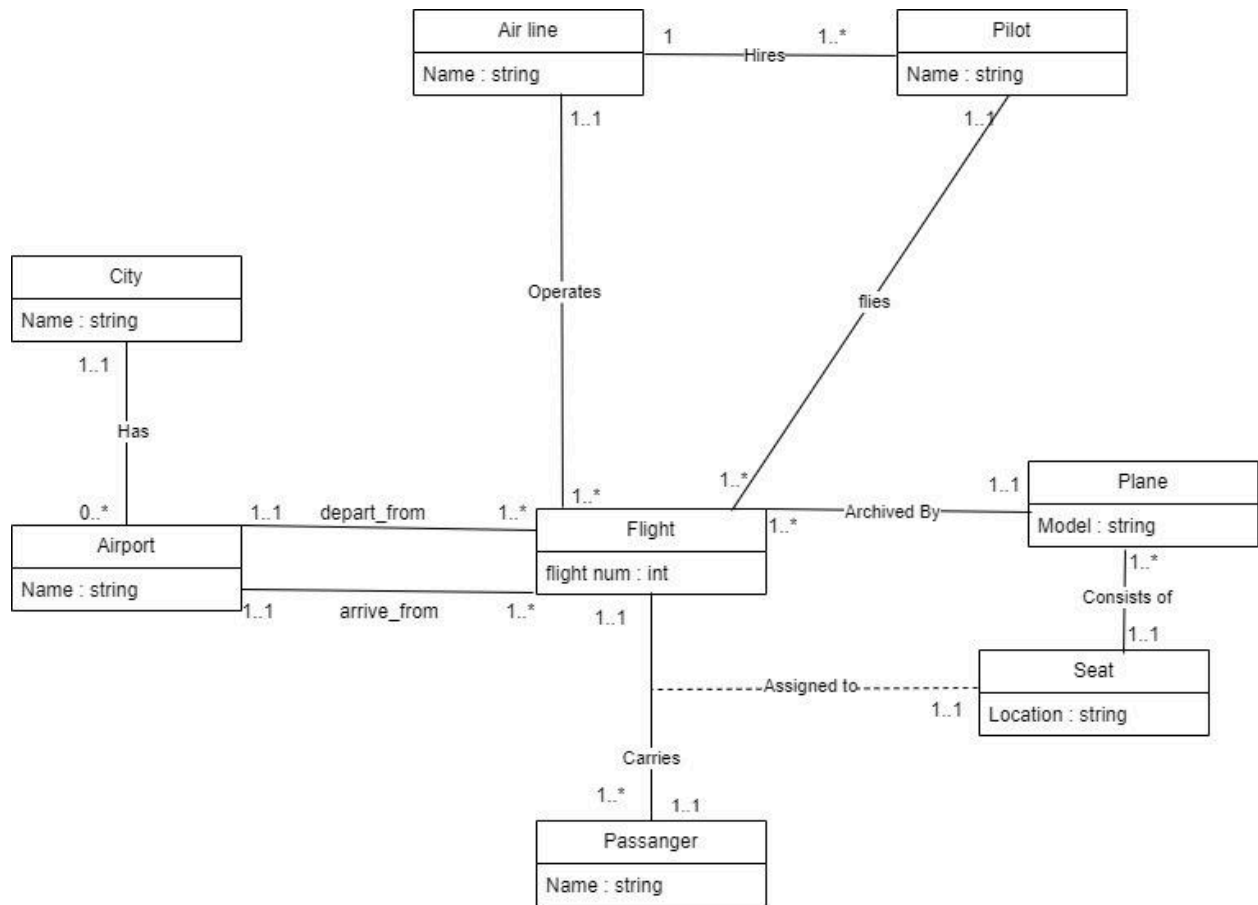
Q.2 Prepare a class diagram for object diagram given in Figure -2. Explain your multiplicity decisions. What is the smallest number of points required to construct a polygon? Does it make a difference whether or not point may be shared between polygons? Your answer should address the fact that points are ordered.



Explanation:

- A polygon has at least three points, so multiplicity from Polygon to Points is `3..*`
- If points are not shared then multiplicity from points to polygon is `0..1` because either point belong to only one polygon or not used in any polygon.
- If point are shared then multiplicity from points to polygon is `0..*` because either point is not used in any polygon or may be used in multiple polygon.

Q.3 Figure 3 is a partially completed class diagram of an air transportation system. Add multiplicities in the diagram. Also add association names to unlabelled associations.



Q.4

