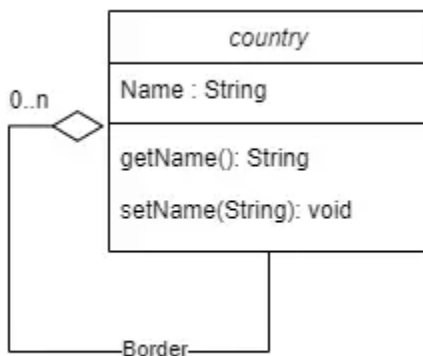


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SOFTWARE ENGINEERING IT313 - LAB4

QUESTION 1:



QUESTION 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.

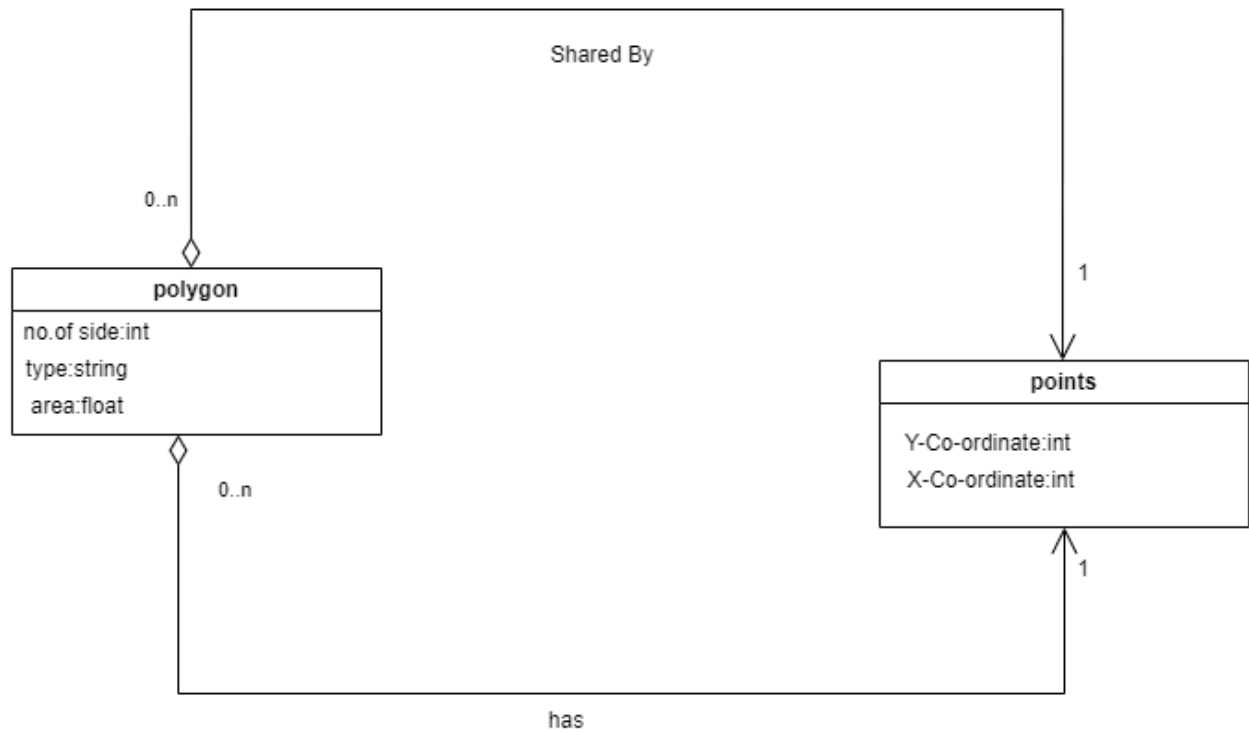
Multiplicity Decisions

Class A to Class B: `1..*` (each instance of Class A needs one or more instances of Class B).

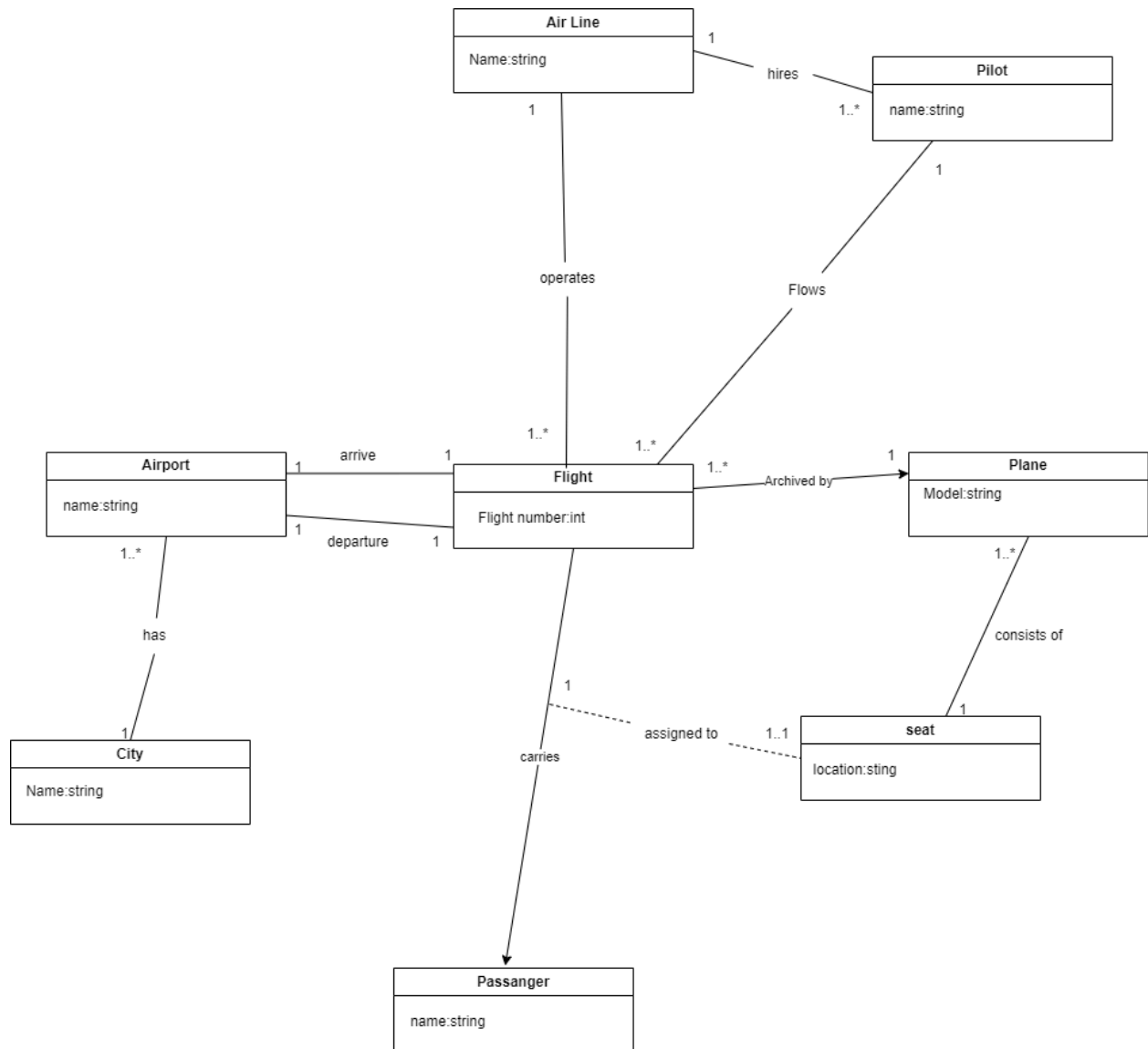
Class B to Class A: `0..*` (each instance of Class B may have zero or more instances of Class A).

Smallest Number of Points for a Polygon

3 points. Sharing points between polygons doesn't change the requirement; each polygon still needs at least 3 distinct points, considering the order matters.



QUESTION 3:



QUESTION 4:Q.4 We want to model a system for management of flights and pilots. An airline operates flights. Each airline has an ID. Each flight has an ID a departure airport and an arrival airport: an airport as a unique identifier. Each flight has a pilot and a co-pilot, and it uses an aircraft of a certain type; a flight has also a departure time and an arrival time. An airline owns a set of aircrafts of different types. An aircraft can be in a working state or it can be under repair. In a particular moment an aircraft can be landed or airborne. A company has a set of pilots: each pilot has an experience level: 1 is minimum, 3 is maximum. A type of aeroplane may need a particular number of pilots, with a different role (e.g.: captain, co-pilot, navigator): there must be at least one captain and one co-pilot, and a captain must have a level 3.

