IT-314 LAB 4
Meet Joshi - 202201065

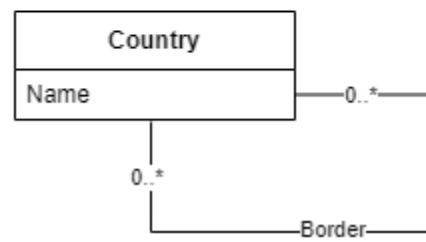—

Software Engineering

Class Diagram
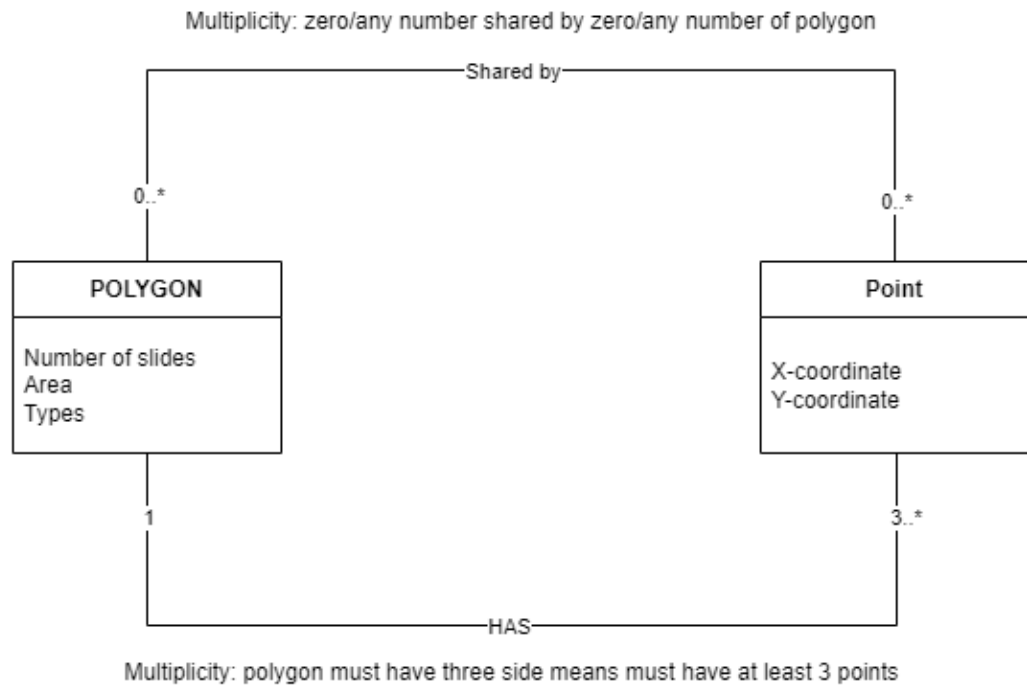
Question 1 :

QUE-1

Country
Name

0..*

0..*

-Border-

Question 2 :

QUE-2

Multiplicity: zero/any number shared by zero/any number of polygon

──────Shared by──────

0..*   0..*

POLYGON
Number of slides Area Types

Point
X-coordinate Y-coordinate

1   3..*

──────HAS──────

Multiplicity: polygon must have three side means must have at least 3 points

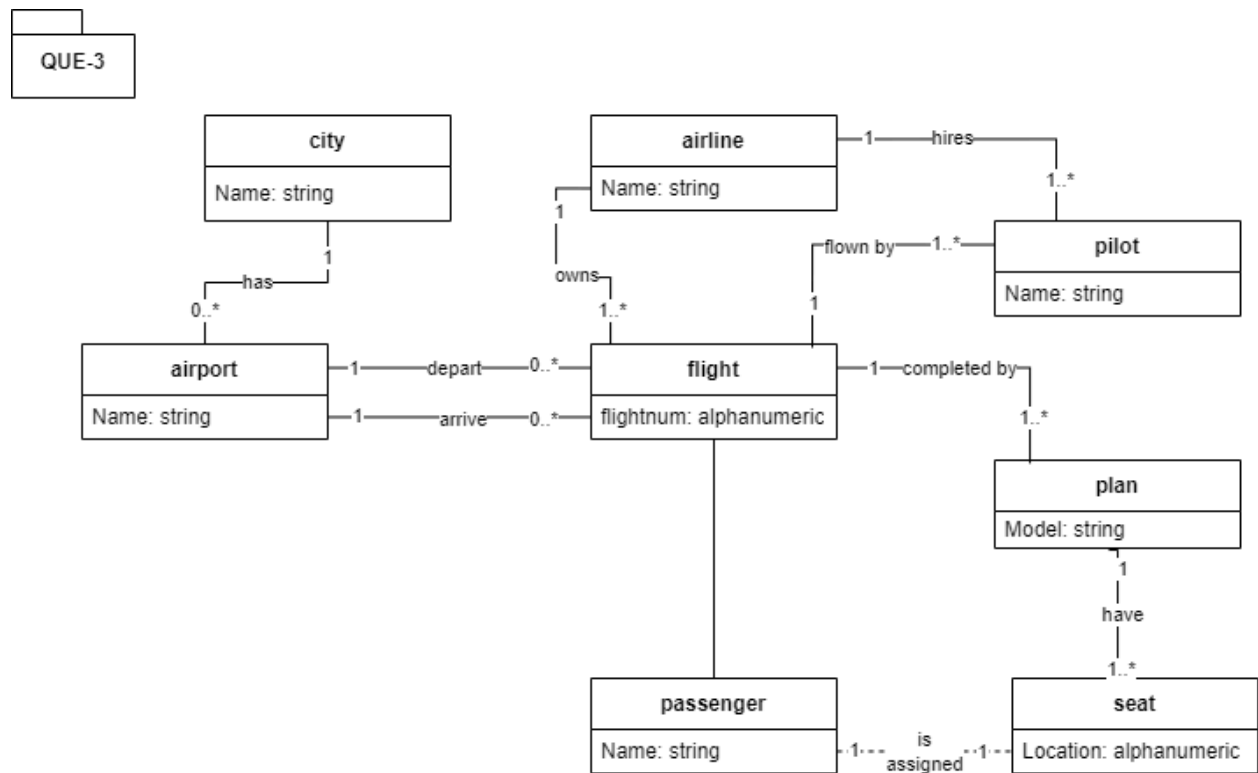The smallest number of points required to construct a polygon is at least 3.

Q. Does it make a difference whether or not points may be shared between polygons?

- Yes it makes a difference.
- If points or polygons share a vertex or sides, whereas if points are not shared, polygon will be distinct.

Q. does the order of the point matters?

- Points must be ordered to define the shape of the polygon.

Question 3:

Question 4:

- **airline**: id, name
- **flight**: id, arrival_time, departure_time
- **airport**: id, name
- **aircraft**: name, repair, landed
- **aircraft type**: name
- **pilot**: id, name
- **pilot 1**, **pilot 2**, **pilot 3**

Relationships:
- airline — offers (1 to 1..*) — flight
- airline — owns (1 to 1..*) — aircraft
- flight — arrives from (1..* to 1) — airport
- flight — departure to (1..* to 1) — airport
- aircraft — used for (1 to 0..*) — flight
- aircraft — type of (1 to 1) — aircraft type
- flight — flown by (1 to 2..*) — pilot
- aircraft type — nevigator of (1..* to 1) — pilot
- aircraft type — co-pilot of (1..* to 1) — pilot
- aircraft type — captain of (1..* to 1) — pilot 3
- pilot generalization: pilot 1, pilot 2, pilot 3 (Experience level)