IT 314 Lab 4 - Class Diagrams
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Question 1 :

Question 2:

Explaining Multiplicity
Zero or any number of points can be shared by 0 or any number of polygons

─Shared By─

0..*

PLOYGON

Number of Sides (type int)

Area (type float)

Type (type String)

0..*

POINT

X-coordinate (type float)
Y-coordinate (type float)

3..*

1

HAS

Explaining Multiplicity
A polygon must have at least three sides, that means that a polygon must have at least 3 points
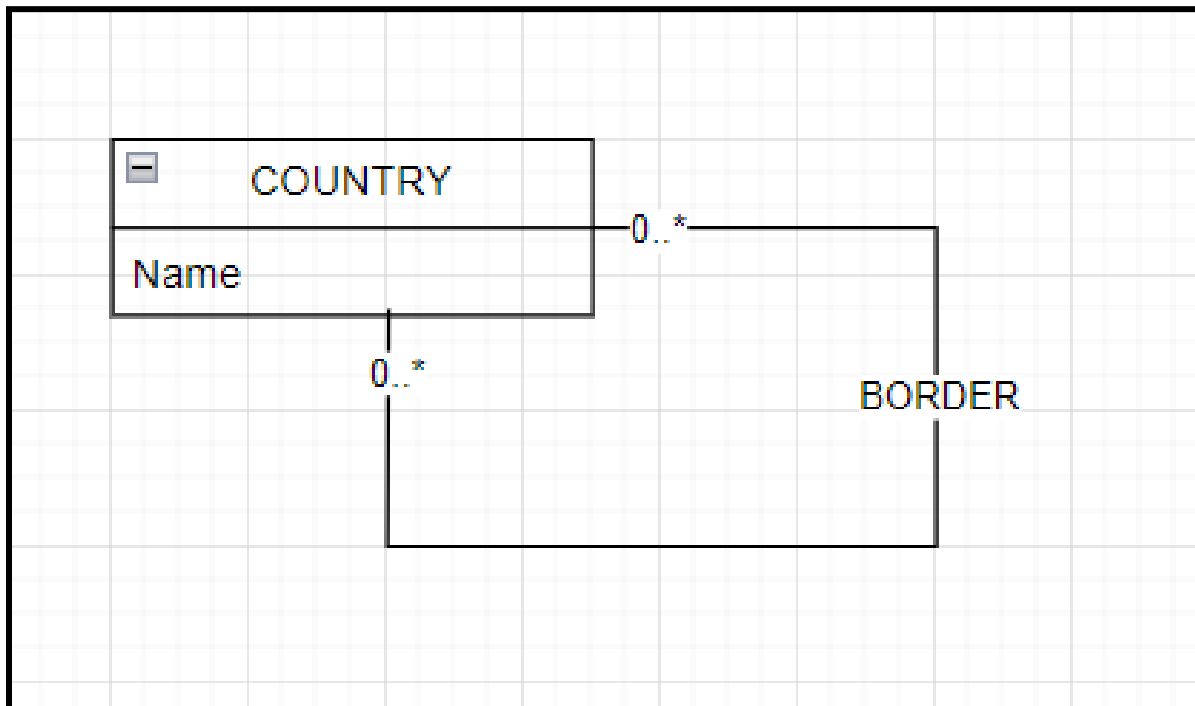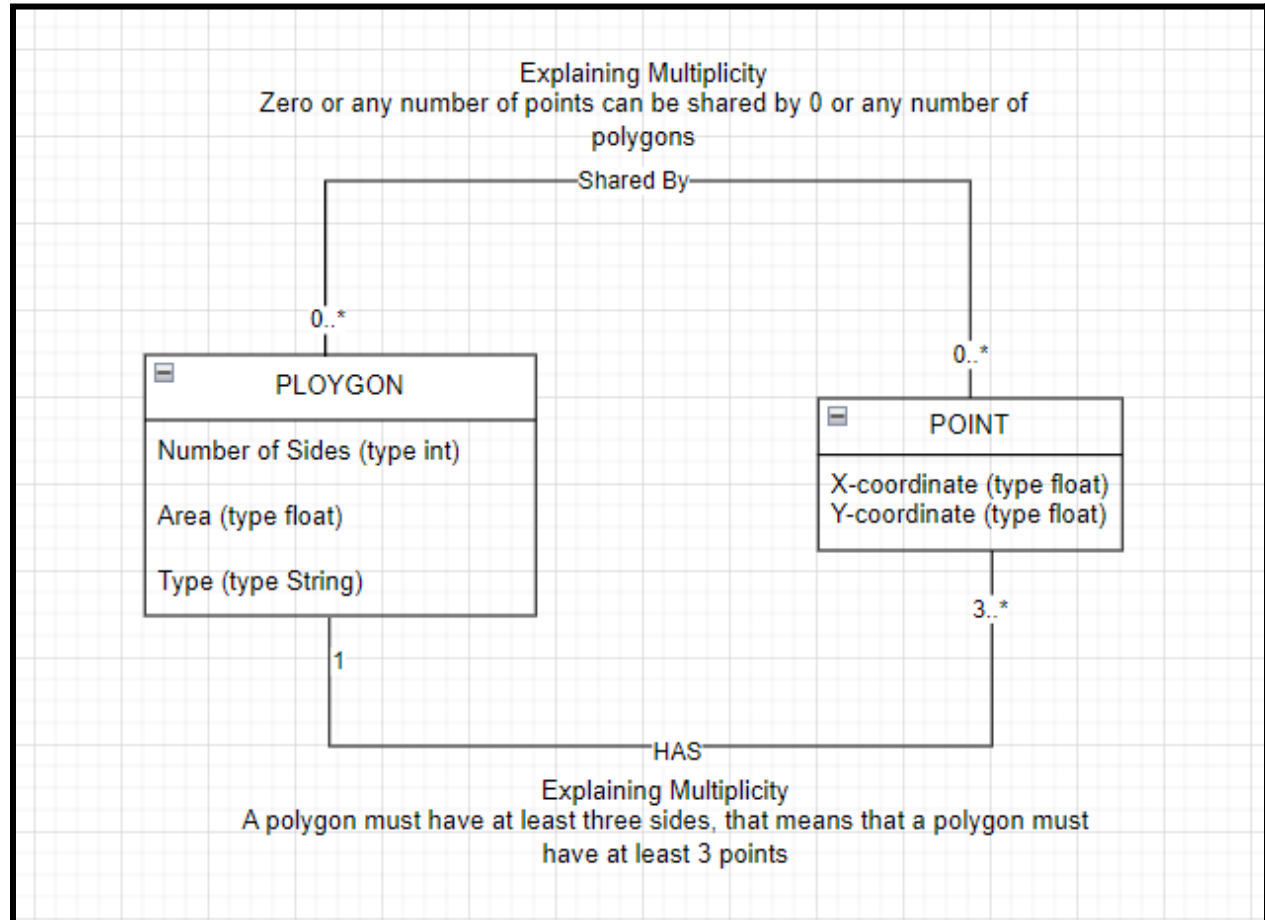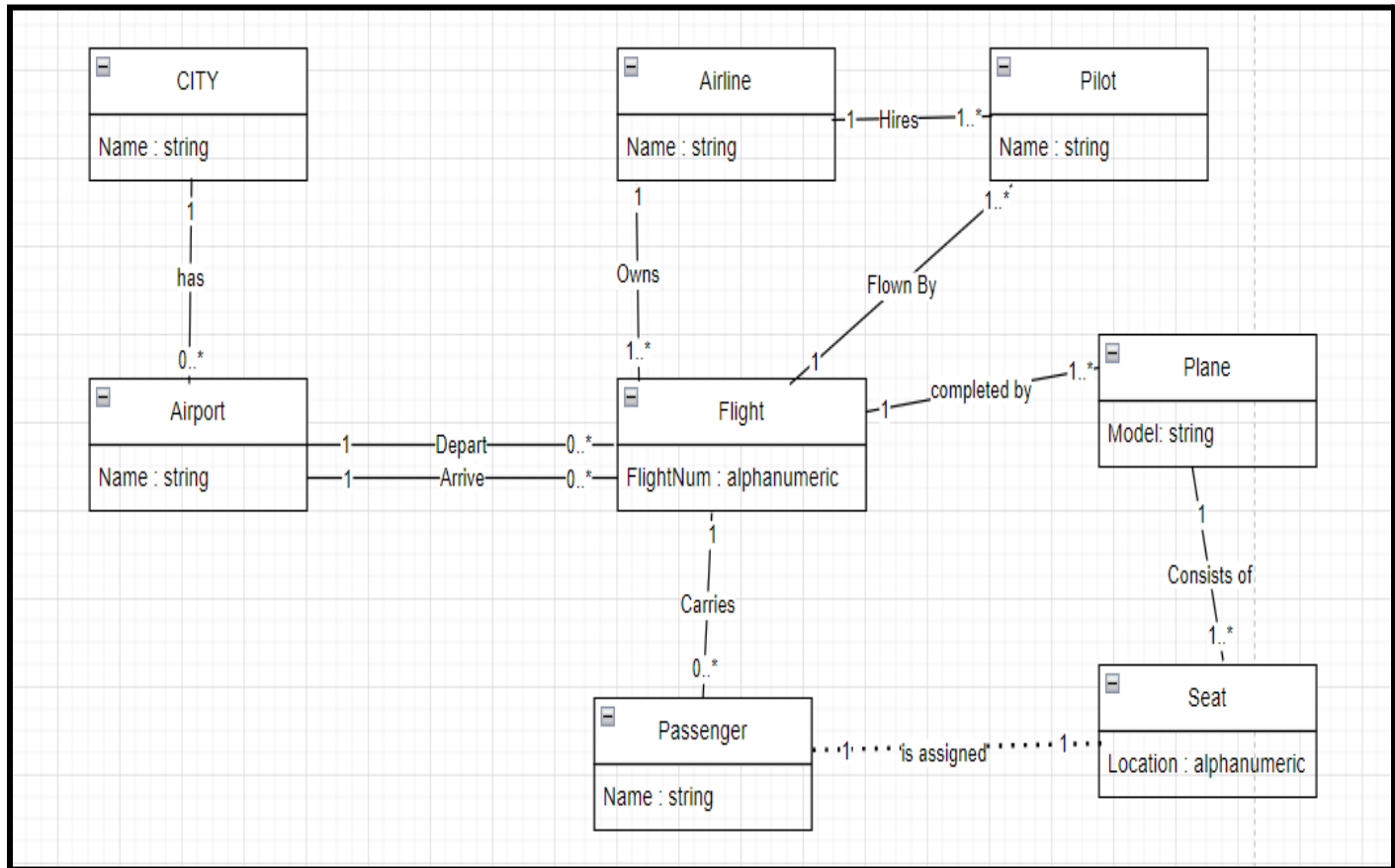
Q: Does it make a difference whether or not points may be shared between polygons? Your answer should address the fact that points are ordered

A: **It does make a difference**, between associativity of the polygon and points class If points are shared then or more polygons will be sharing a vertex or sides, whereas if points are not shared, the polygons will be distinct

Q: Does the order of the points matter?

A: **Yes**, the order of points also matters because it determines how the polygons are constructed.For example, if two polygons share two points in the same sequence, they share an edge. If the order is reversed, they may overlap or create a different boundary.

Question 3:

CITY
Name : string

Airline
Name : string

1—Hires—1..*

Pilot
Name : string

1

has

0..*

1

Owns

1..*

1..*

Flown By

1

Airport
Name : string

1——Depart——0..*
1——Arrive——0..*

Flight
FlightNum : alphanumeric

1

completed by

1..*

Plane
Model: string

1

Consists of

1..*

1

Carries

0..*

Passenger
Name : string

1 ···· "is assigned" ····· 1

Seat
Location : alphanumeric

Question 4: