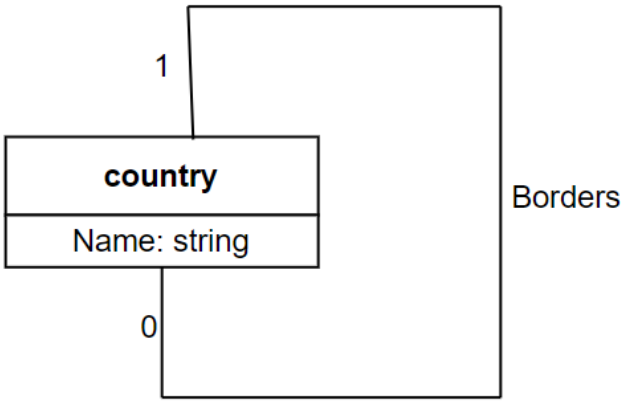
IT-313 (lab-4)

Praneel Vania

202201131

Q1



Q2

Multiplicity Explanation:

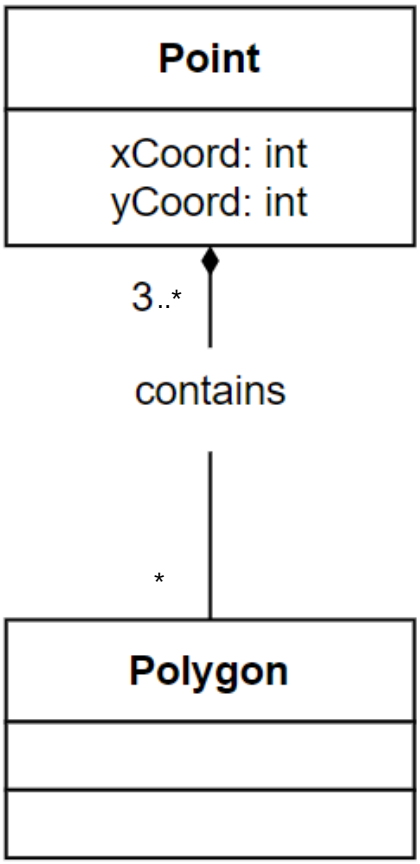
Polygon to Point: A polygon is composed of at least 3 points (indicated by the 1..* cardinality).

A point can be part of multiple polygons, representing a many-to-many relationship.

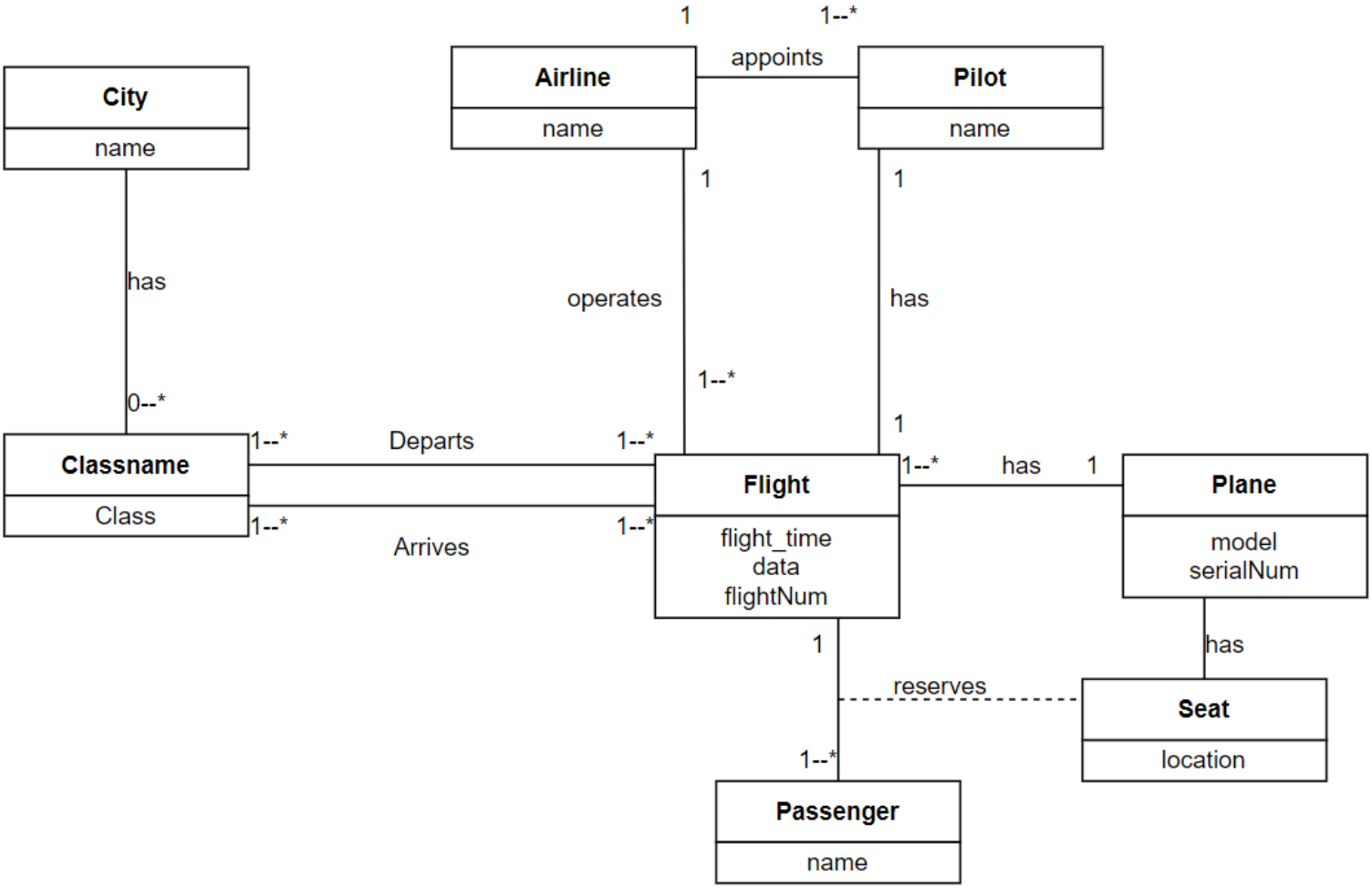
Ordered Points: The connection between Polygon and Point is sequential, meaning the arrangement of the points is important in defining the shape.

Minimum Number of Points:
A polygon requires a minimum of 3 points to form, as at least three vertices are needed to create a closed shape (a triangle).

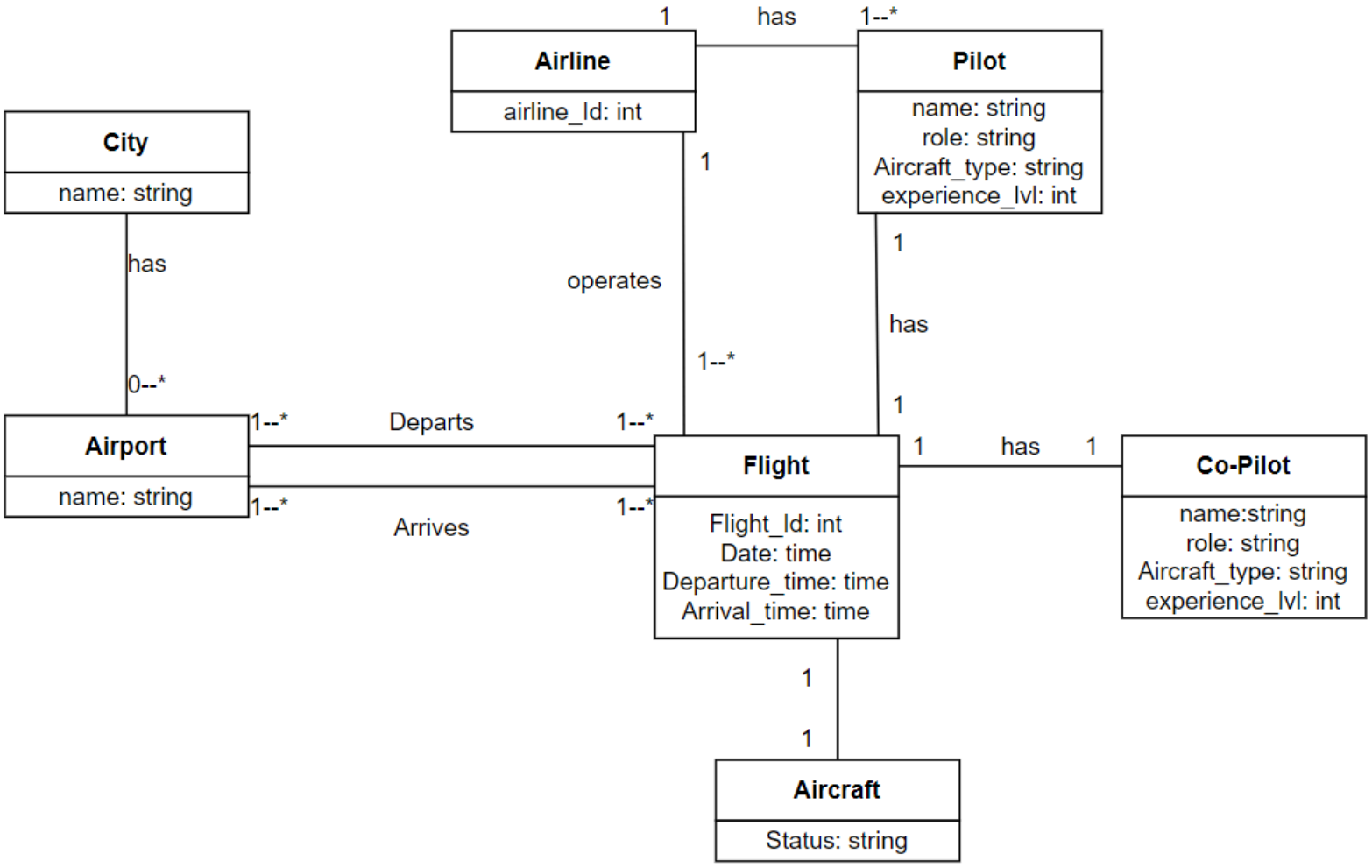
Shared Points Between Polygons:
Yes, points can be shared between polygons (e.g., adjacent polygons in a mesh or grid may share vertices). While this doesn't compromise the polygon's validity, it can influence the exact shape depending on how the points are shared and arranged.


Point
xCoord: int
yCoord: int
3..*
contains
*
Polygon

Q3


1
1--*
City
name
Airline
name
appoints
Pilot
name
1
1
has
operates
has
1--*
0--*
1
1--*
Departs
1--*
1--*
has
1
Classname
Class
Flight
flight_time
data
flightNum
Plane
model
serialNum
1--*
Arrives
1--*
1
has
reserves
Seat
location
1--*
Passenger
name

Q4


1
has
1--*
Airline
airline_Id: int
Pilot
name: string
role: string
Aircraft_type: string
experience_lvl: int
City
name: string
1
operates
1
has
1--*
1
has
0--*
1--*
Departs
1--*
Airport
name: string
1
has
1
Co-Pilot
name:string
role: string
Aircraft_type: string
experience_lvl: int
1--*
Arrives
1--*
Flight
Flight_Id: int
Date: time
Departure_time: time
Arrival_time: time
1
1
Aircraft
Status: string