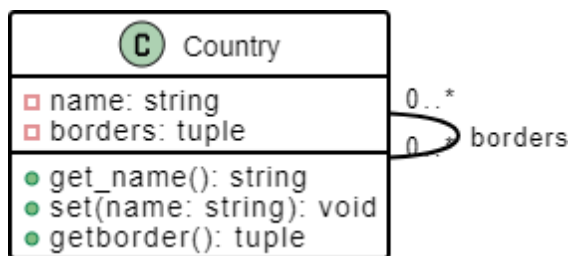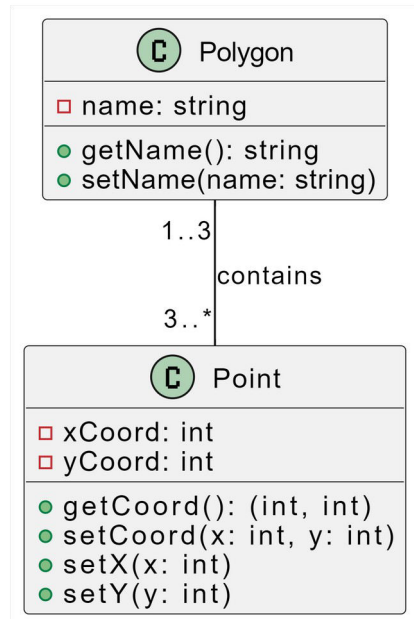# LAB- 4 Software Engineering

Dhruv Suri - 202201110

Q1.

A polygon requires at least three points to form (a triangle). Points can be shared between polygons, which reduces redundancy but we must account for ownership between polygons. In the class diagram, a Polygon must be associated with at least three Points (1..* for Polygon and

Polygon

□ name: string

○ getName(): string
○ setName(name: string)

1..3

contains

3..*

Point

□ xCoord: int
□ yCoord: int

○ getCoord(): (int, int)
○ setCoord(x: int, y: int)
○ setX(x: int)
○ setY(y: int)

3..* for Points).

Flight
- □ id: string
- □ departureTime: DateTime
- □ arrivalTime: DateTime
- ○ departureAirport: Airport
- ○ arrivalAirport: Airport
- ○ pilot: Pilot
- ○ coPilot: Pilot
- ○ aircraft: Aircraft

Airline
- □ id: string

Aircraft
- □ id: string
- □ type: string
- □ state: string
- □ status: string

Pilot
- □ id: string
- □ experienceLevel: int

Airport
- □ id: string

owns 0..*
uses 1
employs 0..*
hasPilot 1
hasCoPilot 1
departs 1
arrives 1