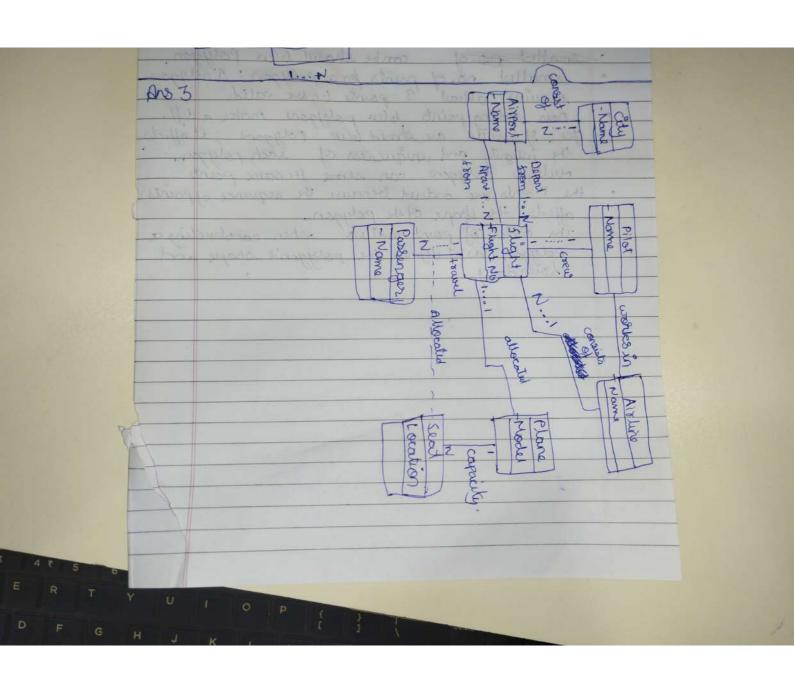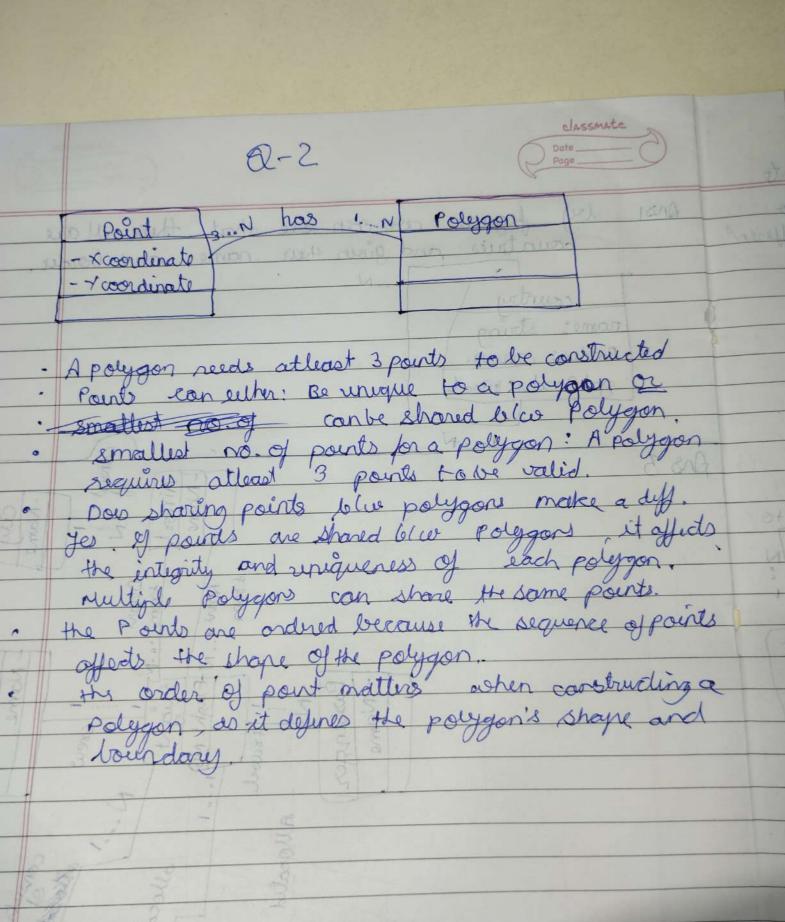Ans1 by figure, we can see that these all are countries and given their name and border.

N

```
country
name: string
Borders: array.
get Border(): Bool
```

N

S

Ans 3

City
- Name

Airport
- Name

consist of

N....1

Depart from 1....N

Arrive 1....N from

Flight
- Flight NO

crew

1.....1

N.....1

consists of allocated

travel

N....1

allocated

Passenger
- Name

Pilot
- Name

works in

Airline
- Name

Plane
- Model

capacity

1

N

Seat
- Location

Q-2

Point	3...N has 1...N	Polygon
- X coordinate		
- Y coordinate		

- A polygon needs atleast 3 points to be constructed
- Points can either: Be unique to a polygon or
- ~~smallest no. of~~ can be shared b/w Polygon.
- smallest no. of points for a polygon : A polygon requires atleast 3 points to be valid.
- Does sharing points b/w polygons make a diff.
  Yes. If points are shared b/w polygons, it affects the integrity and uniqueness of each polygon. Multiple Polygons can share the same points.
- the Points are ordered because the sequence of points affects the shape of the polygon.
- the order of point matters when constructing a Polygon, as it defines the polygon's shape and boundary.

System for management of flights & pilots.

ANS4 Bey text we understood that we have to do inheritance in pilot because their are 3 different level of pilots.

Airline
- Id
- Name

offers — 1...N → **Flight**
- ID type
- arrival
- dep time

arrives to — N...1 → **Airport**
- ID
- NAME

ows — 1...N → **Aircraft**
- Name
- repair
- landed

uses — 1...N

depart from — N...1

Driven By — 1..∞ N

Aircraft-type
- type

is of — 1...N

Navigator of — N...1

copilot of — N...1

Pilot
- Name

caption of — N...1

Pilot level 3
- ...

Pilot level 2

Pilot level 1