

**Student Name:**

**Question 1 (Design ER Diagram) - [10 Points]**

**ShipClass**(name, type, country, numGuns, designYear, weight)

**WarShips**(shipName, className, builtYear)

**Missions**(missionName, date)

**Results**(shipName, missionName, status)

- Ships having the same design belong to the same class. The class information is stored in “ShipClass”. The ship information is stored in “WarShips”
- Each ship may participate in multiple missions. The mission information is stored in “Missions”
- Each ship in a mission has a status as ‘damaged’, ‘sunk’, or ‘ok’ which shows the status of the ship after the mission. This information is stored in “Results”

**Question 2 (Relational Algebra) -[10 Points]**

**Q1: For each mission, report the mission name and the number of sunk ships (ignore missions without sunk ships)**

**Q2: Report the class name that does not have any ships**

**Q3: For ships that were 'ok' in one mission, but later 'sunk' in another, report the ship name and the mission name in which it is sunk**