**Practice Problem Set #2**

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**WW Capital Ship Database**

World War 2 capital ships database contains the following relations:

- **Classes**(class, type, country, numGuns, bore, displacement)
- **Ships**(name, class, launched)
- **Battles**(name, date)
- **Outcomes**(ship, battle, result)

Relation Classes records the name of the class, the type (‘bb’ for battleship or ‘bc’ for battlecruiser), the country that builds the ship, the number of main guns, the bore (diameter of the gun), and the displacement(weight, in tons). Relation Ships records the name of the ship, the name of its class, and the year in which the ship was launched. Relation Battles gives the name and date of battles involving these ships, and relation Outcomes gives the result (sunk, damaged, or ok) for each ship in each battle.

Sample data of these relations are given in Fig.(1,2,3,4):

**SQL Queries**

Write SQL statement for the following queries:

1. Find all ships that have more than 100 guns.
2. List the name, displacement, and number of guns of each ships engaged in the battle of Guadalcanal
3. List all class and number of ships each class had
4. Find the ships sunk in the battle of the Denmark Strait.
5. Find the ships launched prior to 1921
6. Find all the pairs of ships which were launched at same year
7. Find those countries which have only battleships but does not have any battlecruiser.
8. Find those countries whose ships were sunk during the battle named "Denmark Strait"
9. Find the classes that had only one ship as a member of that class

**Car Accident Database**

**Schema**

- **person**(driverid, name, address)
- **car**(license, model, year)
- **accident**(reportnumber, year, location)
- **owns**(driverid, license)
- **participated**(reportnumber, license, driverid, damage_amount)
### SQL Queries

1. Find names of all drivers who do not own any car
2. Find all drivers who did not make any accident
3. Find the year and the location of accidents where the damage_amount is greater than 5000$
4. Find all the drivers name who caused car accident in “Maryland”
5. Find all the cars model which were damaged by accident during last five years (Current year = 2018)
6. Find the number of accidents in which the cars belonging to “John Smith” were involved
7. Find the total number of people who owned cars that were involved in accidents in 2009