

Name & Surname:

Student ID:

CE 223 DATABASE MANAGEMENT SYSTEMS

LAB 5 (PRELIMINARY)

RE-IMPORT THE SHIPS DATABASE SO THAT YOU RESTORE THE DATABASE TO ITS ORIGINAL STATE. IMPLEMENT THE FOLLOWING ON YOUR SCHEMA.

1. Suggest suitable keys for the relations of the ships database.

SQL Table declaration (including suitable data types and null / not null attributes)

--

2. Write the following referential integrity constraints for the ships database. Use your assumptions about keys from previous question, and handle all violations by setting the referencing attribute value to NULL.

- a. Every class mentioned in *Ships* must be mentioned in *Classes*.

SQL Referential integrity constraint

--

- b.** Every battle mentioned in `Outcomes` must be mentioned in `Battles`.

SQL Referential integrity constraint

- 3.** Alter the schemas of the ships database to have the following tuple-based constraints.

- a.** Require that no ship has more than 14 guns.

SQL Query to add the required constraint

- b.** Disallow a ship being in battle before it is launched.

SQL Query to add the required constraint