# SIBD Project – Part 1

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# 1 Boating Management System: E-A Diagram

In the first part of the project, we designed an Entity-Association model diagram able to support a Boating Management System, along with the respective set of Integrity Constraints that are inconsistent with the problem domain, present in Figure 1.
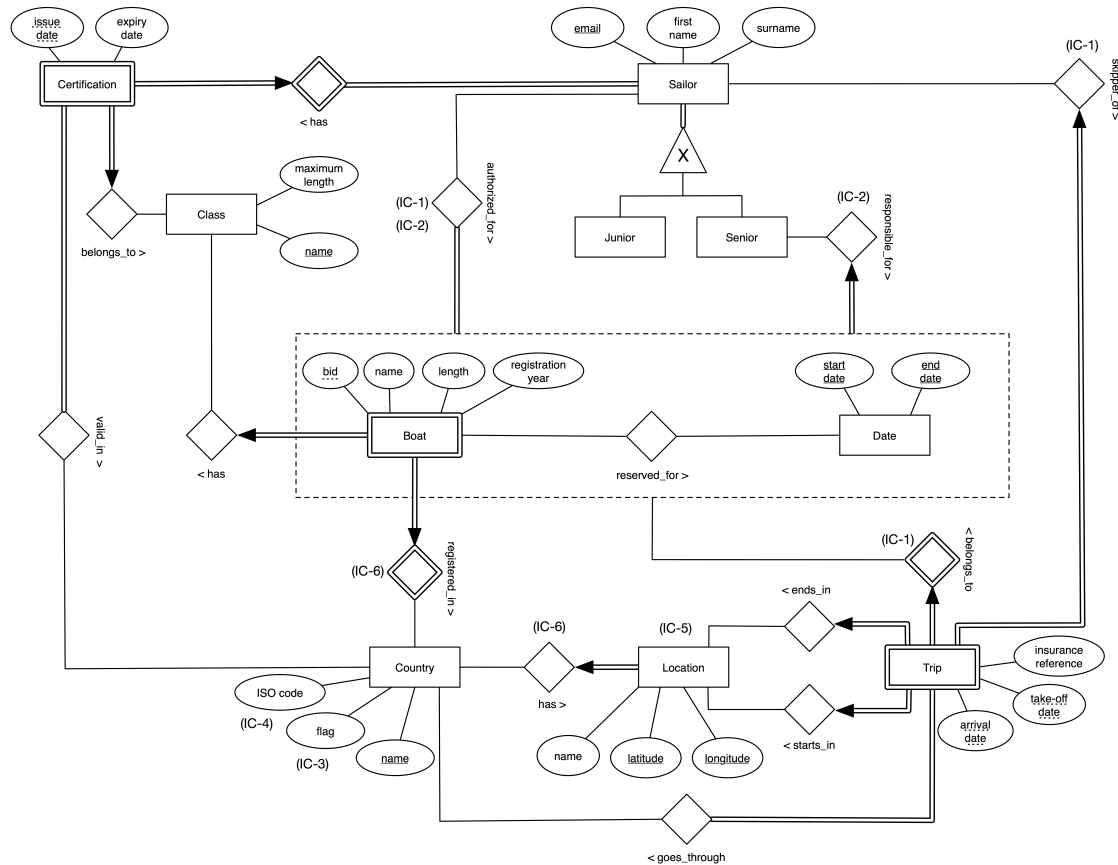


Figure 1: Entity Association Diagram of the Boating Management System and respective Integrity Constraints

**Integrity Constraints:**

(IC-1) The **skipper of** a Trip must be one of the Sailors that are **authorised for** the reservation to which that Trip **belongs**

(IC-2) The **responsible for** a reservation must be **authorised for** that reservation

(IC-3) The **flag** of a Country is unique

(IC-4) The **ISO code** of a Country is unique

(IC-5) Any two Locations must be at least one nautical mile apart

(IC-6) Every Country where a Boat can be **registered** must **have** at least one Location