



INSTITUTO SUPERIOR TÉCNICO

2ND QUARTER 2021/2022

Information Systems and Databases

SIBD Project - Part 2



Project oriented by Prof. Bruno G. Martins

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SHIFT PB05, GROUP 18

December 30, 2021

1 Database Implementation

During the implementation phase the following considerations were taken into consideration:

- In the table “Country”, the “flag” attribute is of TEXT type as it stores the path to the file containing the country’s flag. Therefore, in the INSERT statements a URL was given.
- The entity “Country” is referred to by its ISO Code. Therefore, in all dependant tables, like “Person” and “Boat”, to name a few, the ISO Code attribute was defined as a VARCHAR(3) following the ISO 3166-1 alpha-3 standard ([reference here](#)). Consequently, during the INSERT statements a sequence like “PRT” is expected.
- The “Boat”’s Country National Identifier (CNI) was defined as a VARCHAR(15) as it seemed to be a reasonable data type and size for a boat national identifier.
- The “Boat”’s year of registration was constrained between the current year and the year of 1800, as this covers the range of ships still operation nowadays ([reference here](#)).
- The “Person”’s id_card was chosen to be a NUMERIC value, allowing to constraint the maximum number of digits, in this case 15. This number was chosen as it seemed to be a reasonable one.
- The “Boat”’s MMSI was chosen to be an UNIQUE and NUMERIC value as it is part of a world wide convention ([reference here](#)).
- For every “Location”, the latitude and longitude were constrained to ensure the domain of these variables are respected, therefore having the former varying between -90 and +90 and the former between -180 and 180. We took into consideration the the international convention for numeric coordinates.([reference here](#)).