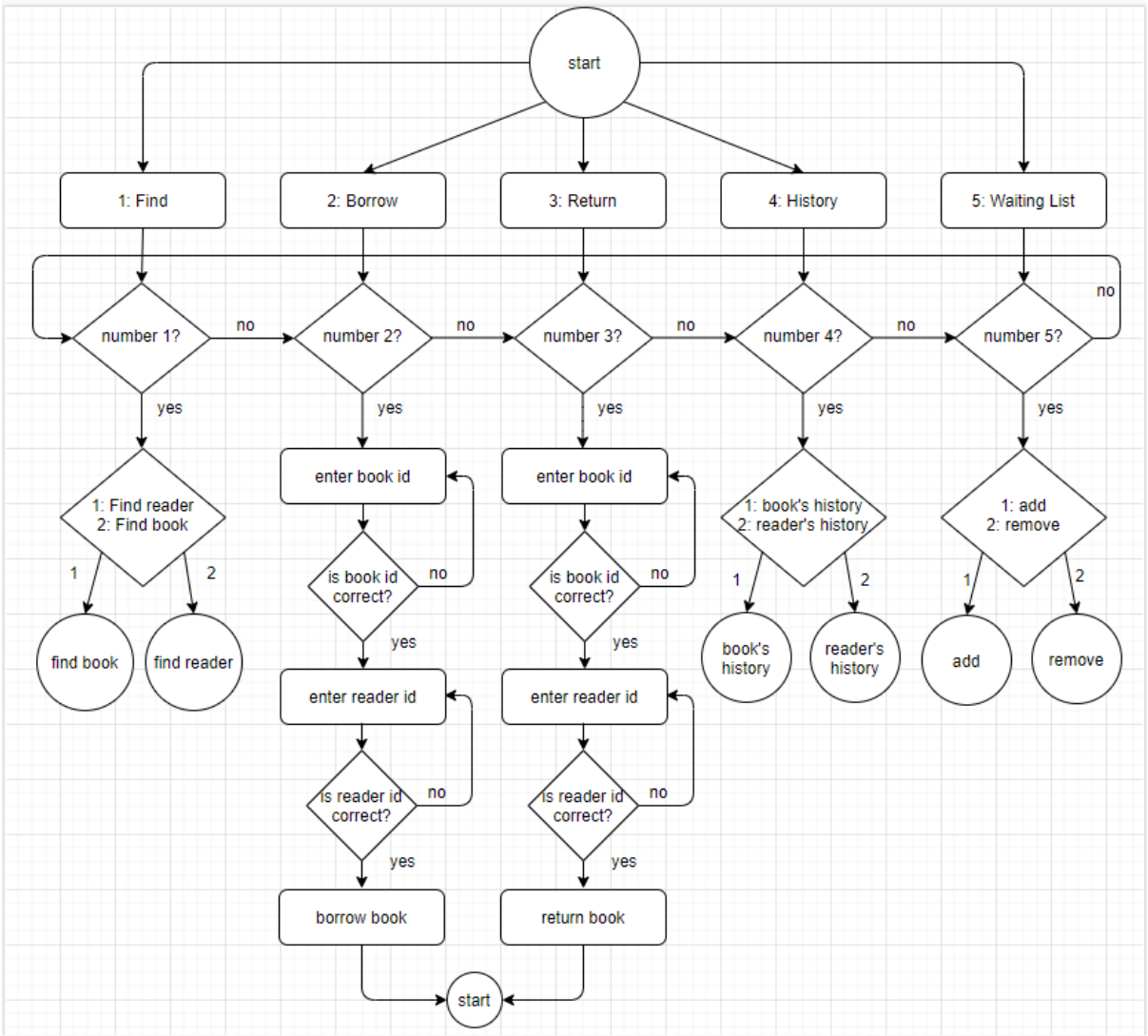
CCT's Library main Algorithm



Files Structure

The files were divided in a way that reminds the use of a relational database; each file corresponds to a table which stores only ids apart from the main two files that store books and readers. All the files are CSV (coma separated values) because while looking for datasets to use as dummy data I came across a website called kaggle which is focused on the teaching and spreading of machine learning and data science.

The majority of datasets that I found there were CSV format so I decided to keep them all with the same format in order to make it as a standard file type to this program. The file names are the following:

- booksCatalog.csv: responsible to keep all the books of the library;
- readersCatalog.csv: responsible to keep all the readers of the library;
- borrowings.csv: stores all the borrows that are currently happening (the record is deleted once the book is returned);
- history.csv: stores all the borrowings of all readers, the records of this file cannot be deleted through the program;
- waitingList.csv: stores all the readers that are waiting for a certain book;

The code is separated onto the following structure:

- Everything that contains Records in it means that it is the object, example: LibraryRecords is the object book;
- Everything that has Data it is responsible of doing all the operations to the respective object, example LibraryData process all the data from LibraryRecords. They can be considered something like a model;
- The Validation and Navigation classes are part of the controller procedures of the program;