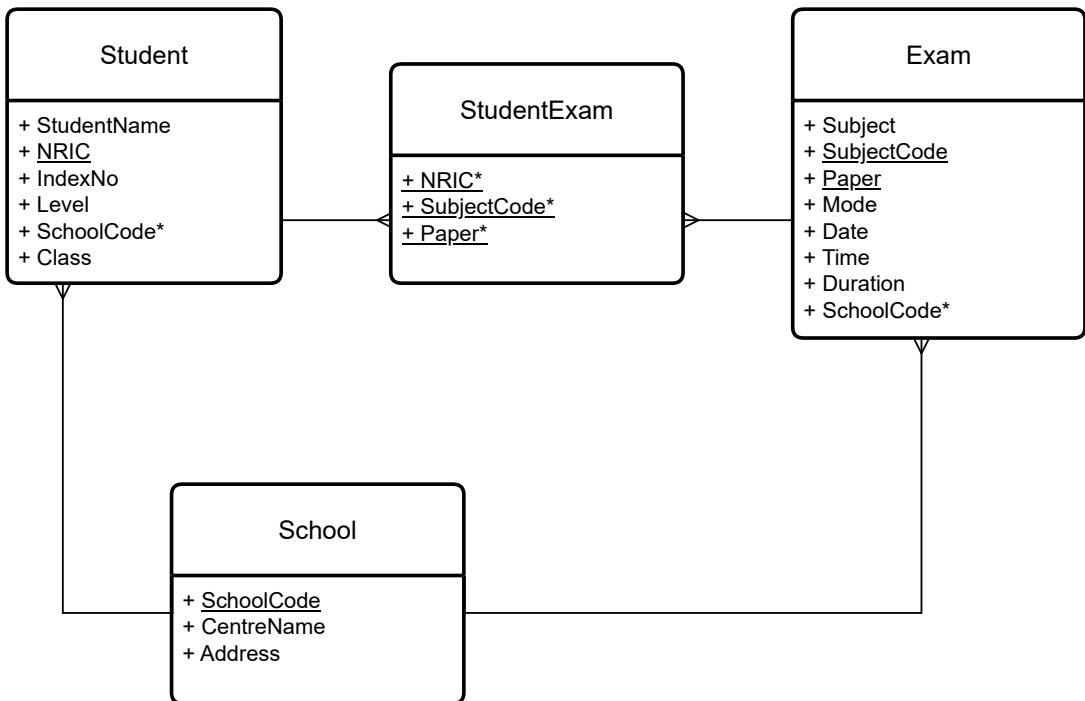


Question 1 Sample Solution

Note that the ERD and table definitions are not based on A-level convention

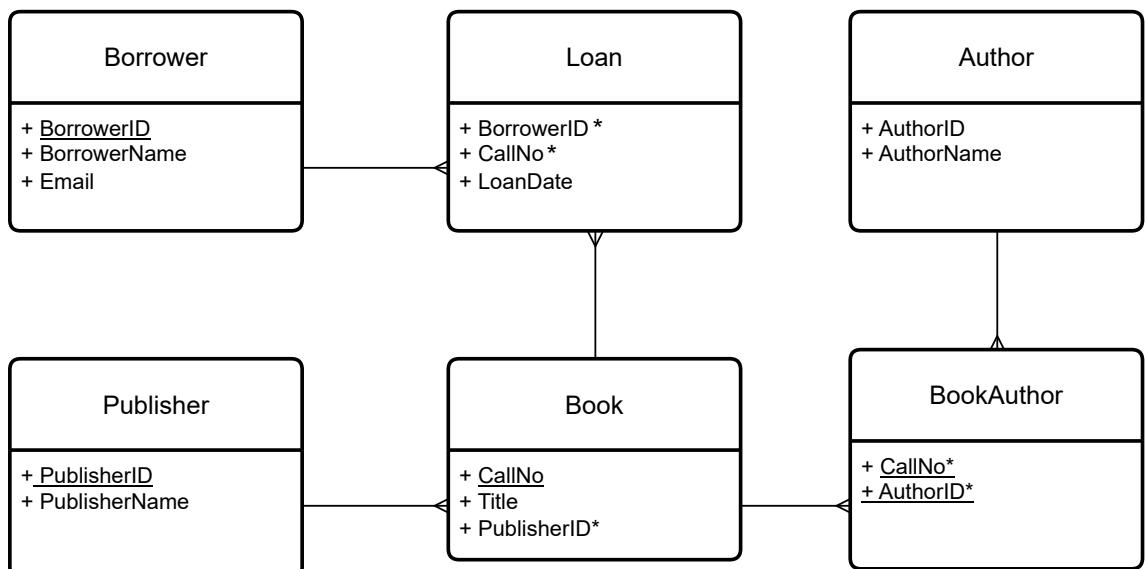


(c) At the time of data entry, these values are not yet available. This can be avoided by implementing database constraints to prevent NULL values from being entered

Question 2 Sample Solution

(a) The PK for this table will need to be (CallNo, BorrowerID, LoanDate) for each record to be identified uniquely. Anomalies can arise when

- borrower registers his name, email in the library but has not borrow any book, the PK cannot be created.
- a borrower has loaned out more than 1 book and needs to change his email address. Only 1 of the record's email is updated successfully, resulting in inconsistent data.
- A book has more than 1 author.



Alternate Solution: Author is an attribute in Book entity. assume a book has only 1 author