

Key Features

Issue Equipment
Student / Secretary



Pay Dues
Student / Secretary



View all Outstanding
Secretary



Return Equipment
Student / Secretary

Check Dues of others
Secretary

View all Available
Secretary

Use Cases

01

Login

Return Equipment

Issue Equipment

Check Availability

Guard Verification

Update Database

Check Dues

Pay Dues

Check Dues of other Student

Add Equipment

Get Valid ID

View Details

View all Outstanding

View all available

View by equipment category



02

Structure of Database

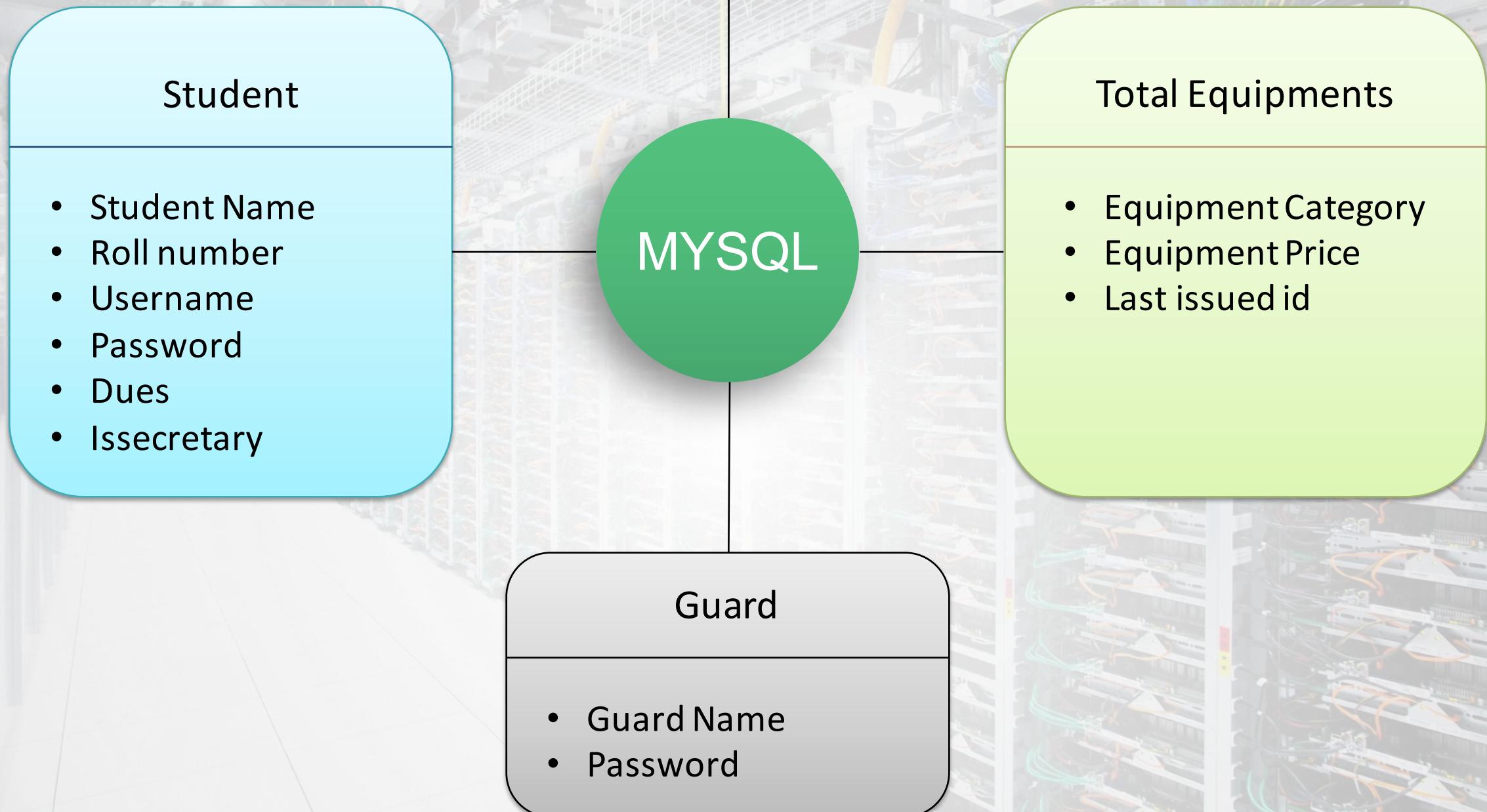
Available Equipments

- Equipment Category
- Equipment ID

MYSQL

Outstanding Equipments

- Equipment Category
- Equipment ID
- Student Name
- Roll Number
- Issue Date
- Return Date



Things that could not be implemented

- Database takes some time to fetch details and to go with the structure already decided it's speed can't be increased.
- Automated testing was not done.
- While issuing and returning equipment time of issue or return was not considered.
- Was not able to hide password while user is entering.

Statistics of Unit Testing and System Testing

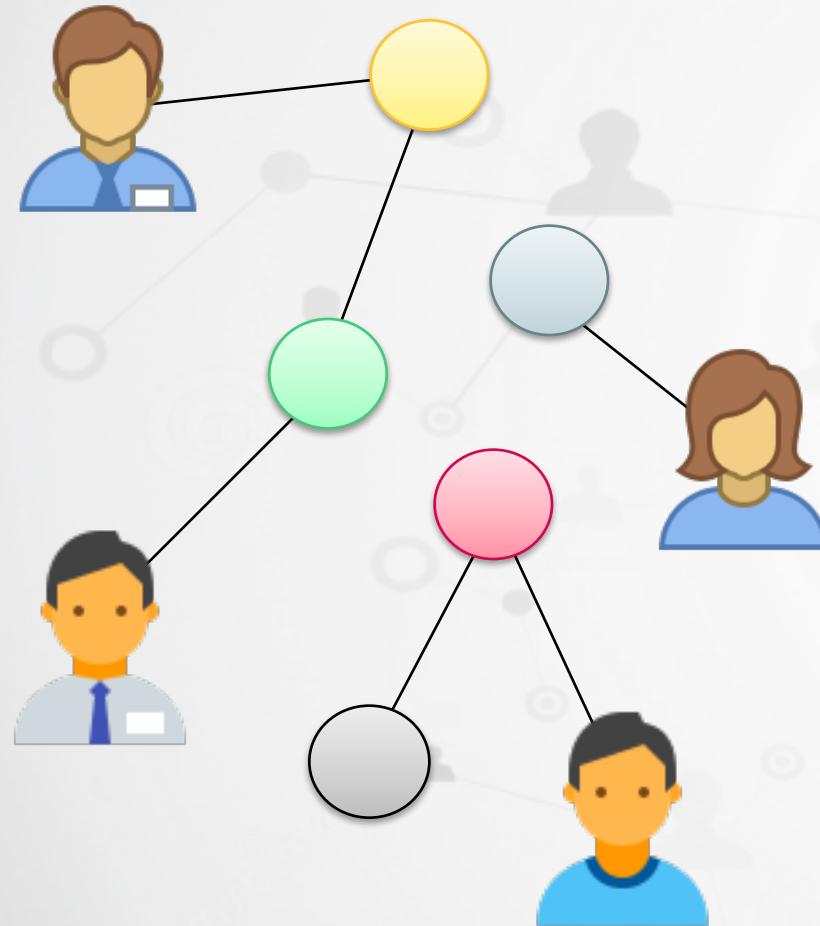
- All the test cases were identified using unit and system testing.
- All the major functions i.e. open function for all controller class were tested.
- Any automated tool was not used.
- Some of the test cases that were missed by us, identified by testing team are as follows :
 1. While entering dues to be paid, string input were not handled.
 2. Option 6 doesn't work in secretary homepage.
 3. Lowercase roll numbers doesn't match.

Letter Dispatch Unit

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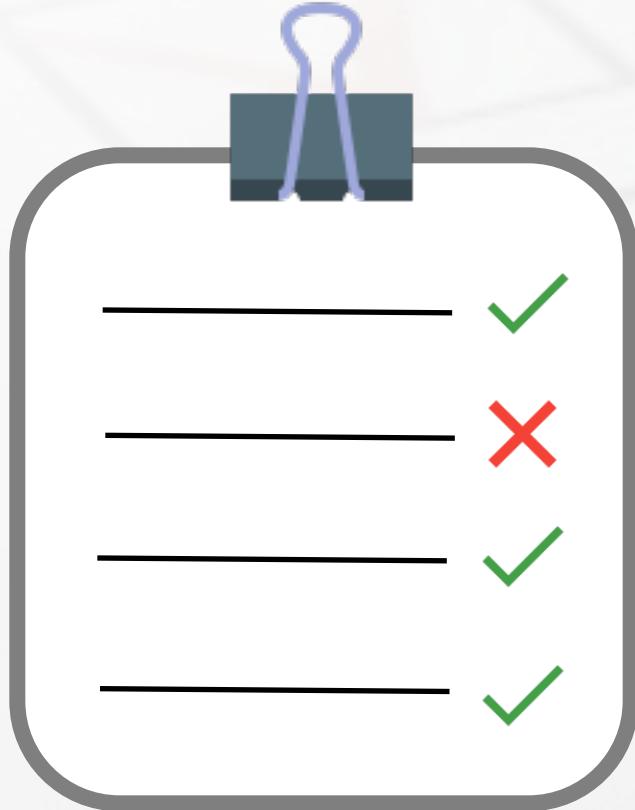


Use Cases



- Add Letter
- Post Letter
- Generate Report
- Complain
- Check Letter Status
- Update Letter Status
- Add new users / update details
- See all users

Statistics of Unit Testing



All functions added in the test report were verified.

Following were the main bugs identified :

1. Issues while changing username.
2. Segmentation fault in some cases.
3. Multiple complaints from same user.
4. Some cases of wrong input.

Conclusions

- For developing any large application for multiple users C++ is not a good option.
- Also development of large applications should be done in same ide if possible, as integration becomes easier.
- Using a database like MYSQL or ORACLE is a quite better option than just using files like txt/csv.
- Code modularization is highly important to make larger programs.

Thank You !