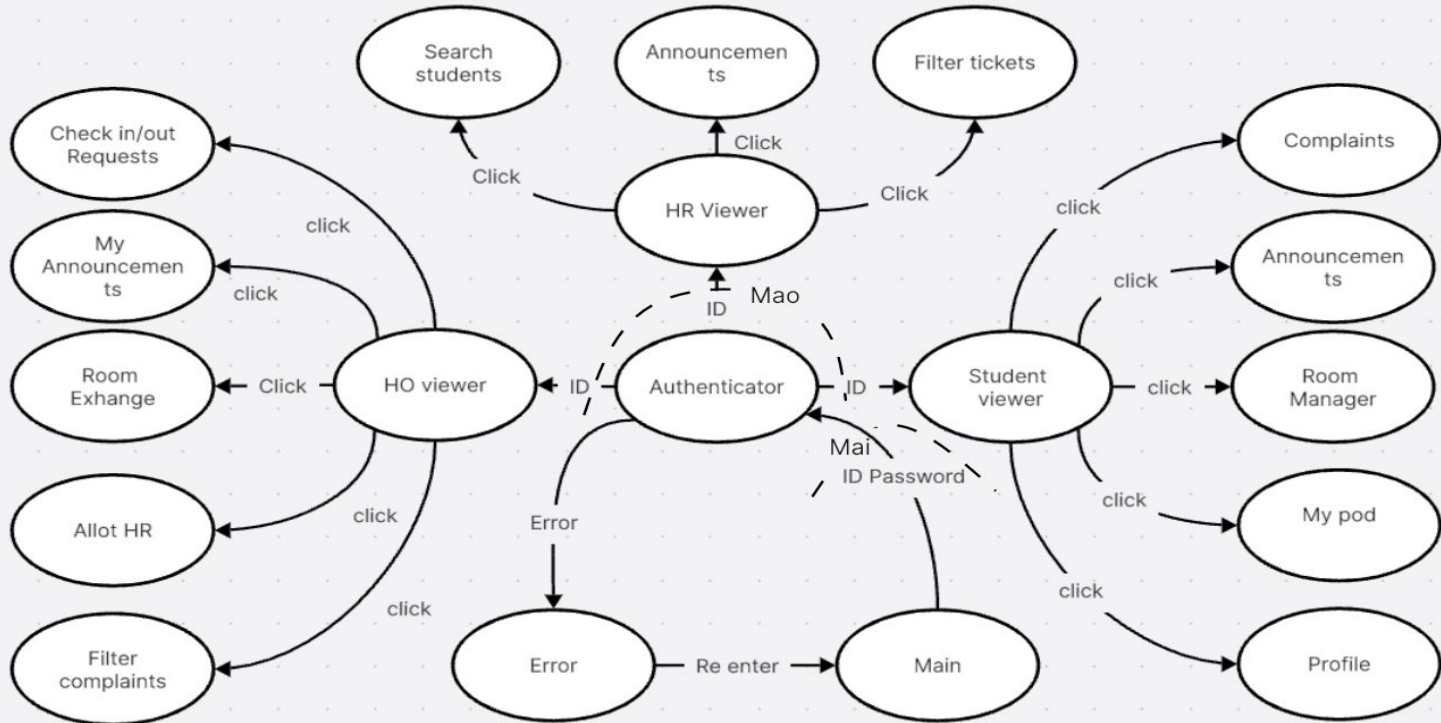


Design and Test Plan Review

Team-12

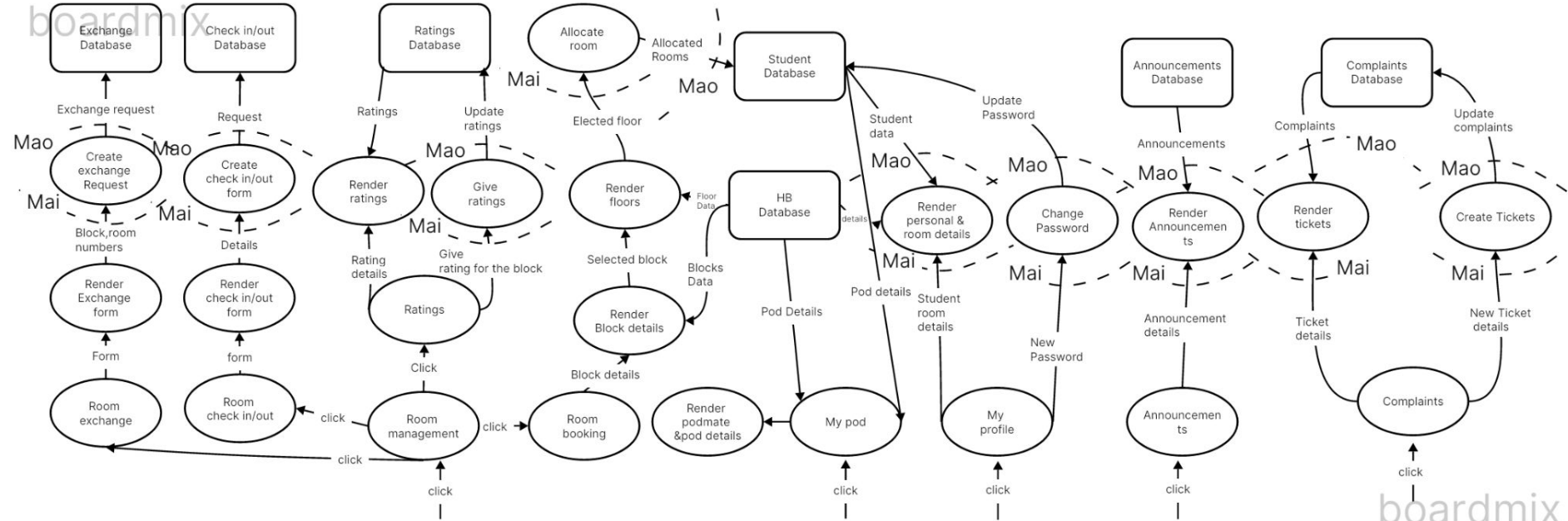
DFD of our System (Main)

boardmix

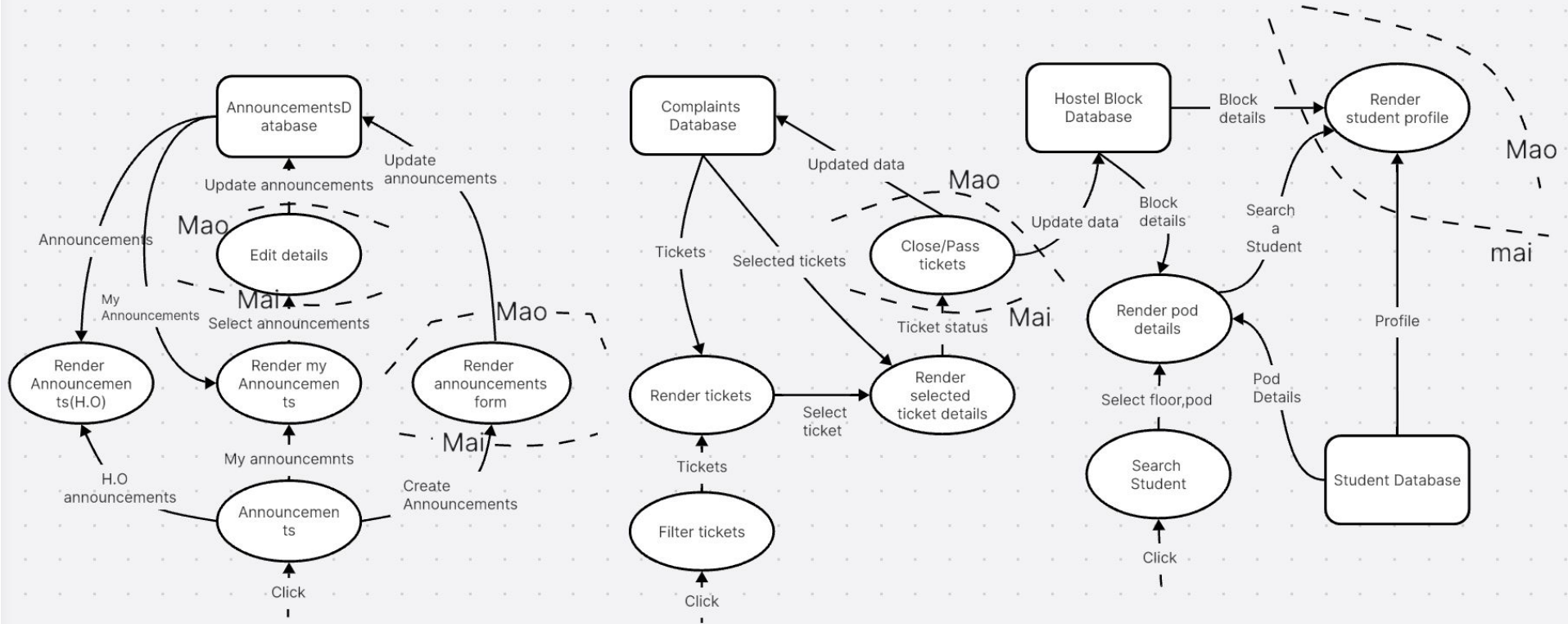


boardmix

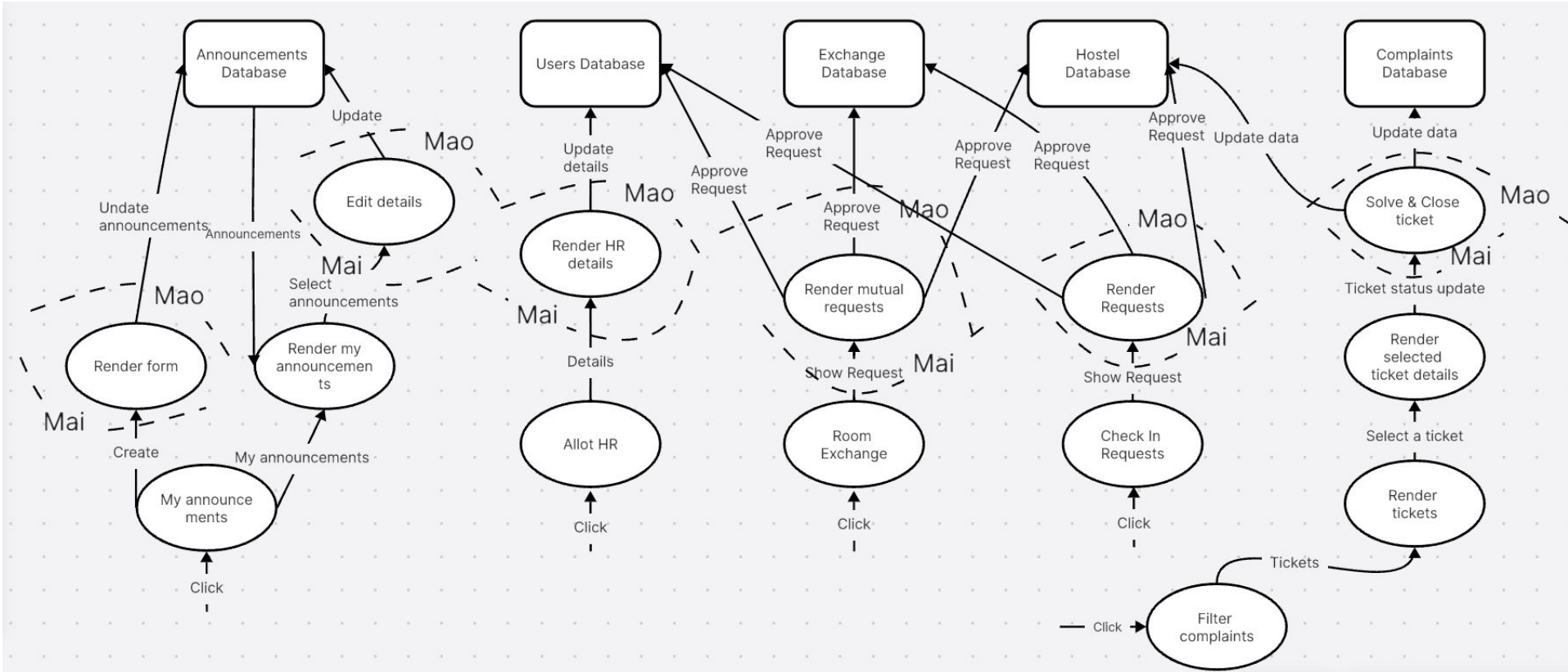
Student view's DFD



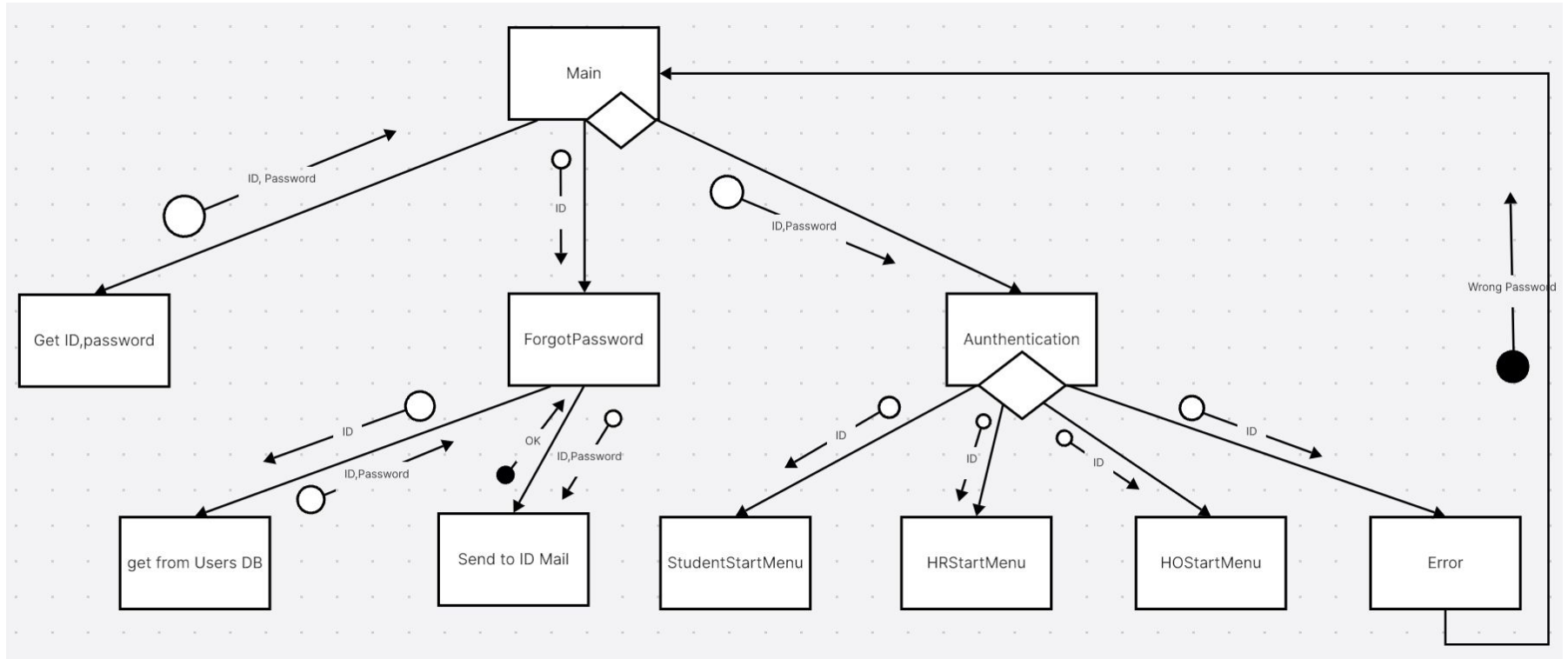
HR's view DFD

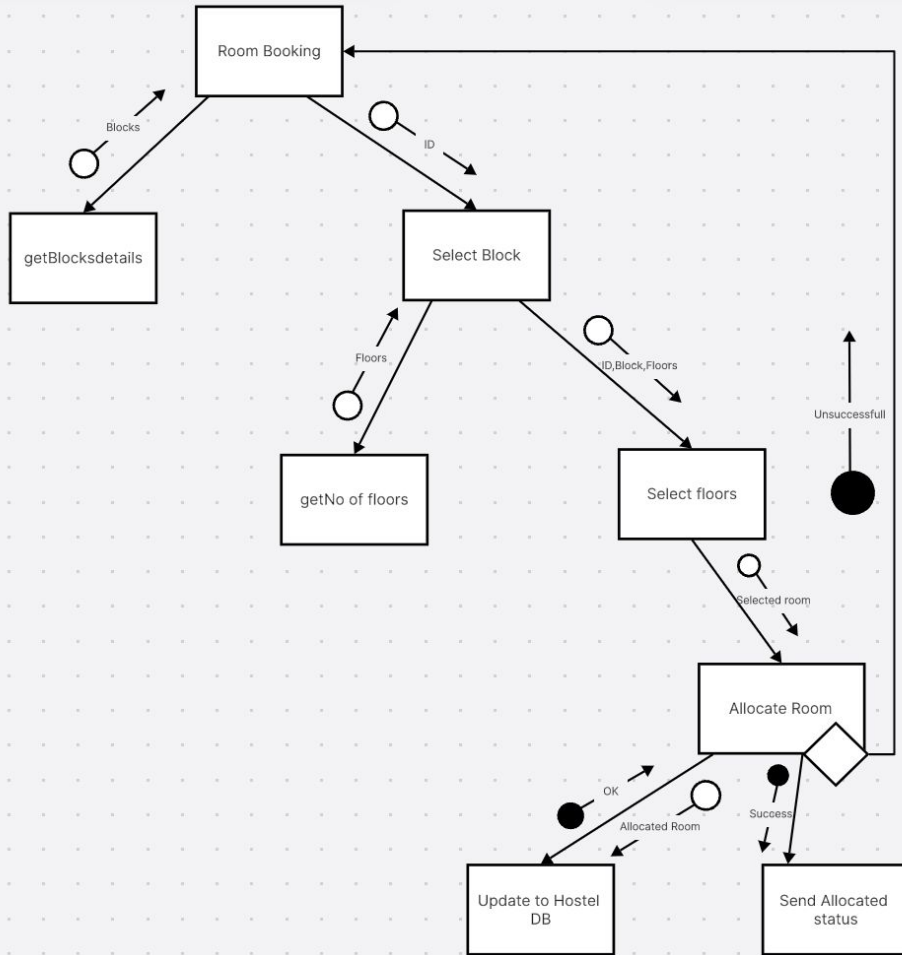


HO's view DFD



Structured Chart of Main(Authentication part)





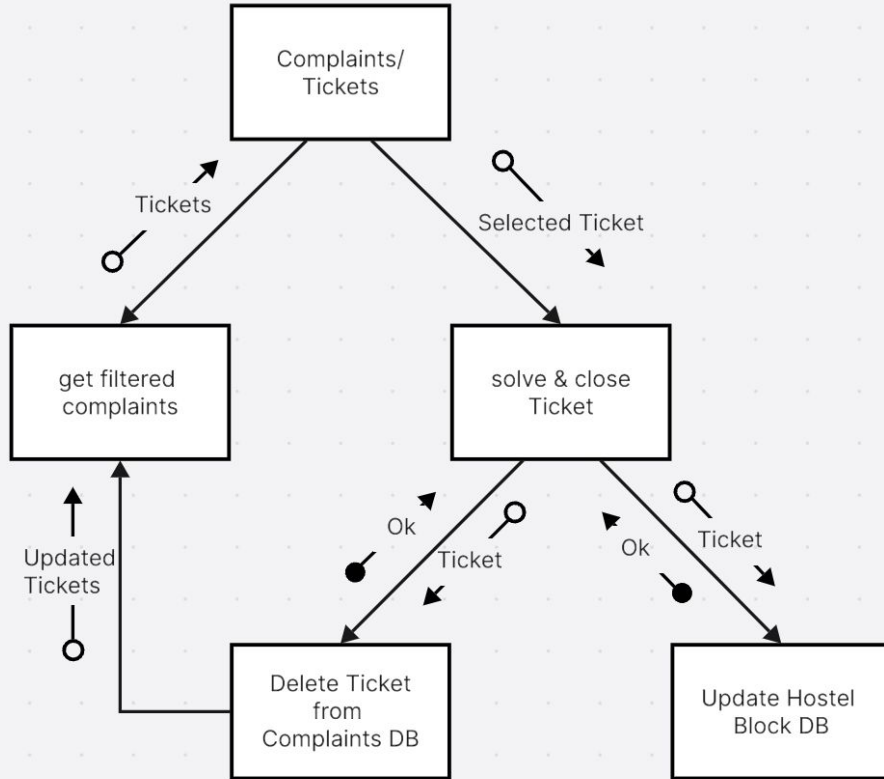
Complex or Error prone Input Module:

- The '**Allocate Room Module**' takes Block and floor number as input, then based on the availability of rooms in that floor it allot the room.
- The problem arises when there are x number of rooms in a floor of given block and more than x users are trying to book the room, then the system should not allow the latest user to book the room. This is a complex process and error prone due to synchronization issues.

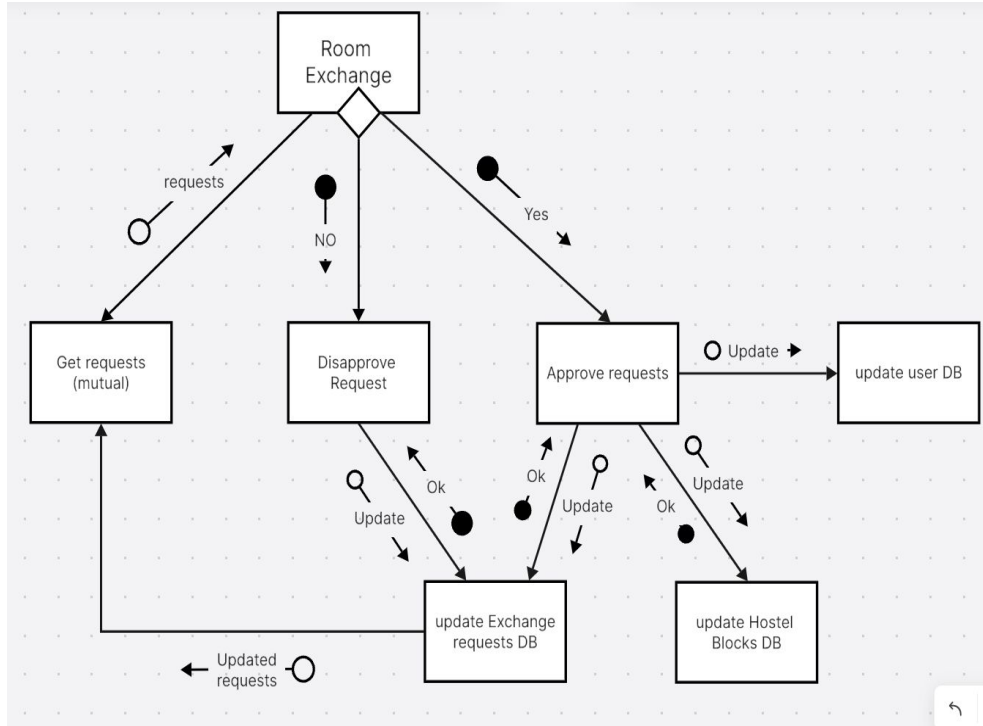
← Student Room Booking
Structured Chart

Complex or Error prone Transformation Module:

- The '**Solve & Close ticket Module**' is more complex and error prone.
- This is because the system should be able to handle the complaints raised by the users and it should modify different facility status accordingly after solving tickets.



← H0 Solve tickets Structured Chart



Complex or Error prone Output Module:

- The '**Get Requests Module**' is more complex and error prone.
- This is because the system should be able to display the mutual requests by searching for requests like "Room A → Room B & Room B → Room A".
- If system finds mutual requests then it will display or else it should not display, which is a complex process.

← H0 Approve Exchanges
Structured Chart

Unit-Test cases:

Main: Authentication

S.No	Input	Expected Output
1.	valid id and correct password	Opens respective home page
2.	valid ID and incorrect	Display "Incorrect Password"
3.	Invalid ID	Display "No Account" message

Student: Fill exchange form

S.No	Input	Expected Output
1.	Filled form, user ID	Check if other request is available, if yes, then make a mutual request. Else just store in database.
2.	Invalid details(empty details)	"Fill valid details" error message

Student: Give Rating

S.No	Input	Expected Output
1.	Room =NULL(Given), On click	Print "Please get a room first or contact Hostel office"
2.	Room=123(Given); Rating: 0-5 On click	Calculate New Rating and update Request to DB.
3.	Room=123(Given); Rating: NULL On click	Don't do anything and if possible prompt for user to enter correct rating

HR: Finalize ticket to pass

S.No	Input	Expected Output
1.	All tickets	Check if other request is available, if yes, then make a mutual request. Else just store in database.
2.	0 tickets	"All problems are solved" display

HO: Edit Announcement

S.No	Input	Expected Output
1.	Edited announcement should have at least one word.	“Announcements updated” message gets displayed.
2.	Edited announcement having 0 words	“Fill the Announcement “

HO: Create Announcement

S.No	Input	Expected Output
1.	Edited announcement should have at least one word.	“Announcements created” message gets displayed.
2.	Edited announcement having 0 words	“Fill the Announcement “

Integration Testing

SNo	Test Description	Input	Expected Result & Order of Integration
1	Integration b/w display announcements,select announcement , edit announcement, update ann DB, filter my announcement, display announcement	announcements	First HR announcements gets filtered, then they will get displayed, after that we select an announcement, we edit that announcement, and then we update to announcement DB and these updated announcements gets filtered and displayed
2	Integration among display tickets,solve close tickets, delete tickets from tickets DB and display tickets	tickets	Displayed tickets will be selected manually, and the solve &close tickets module outputs those tickets. Then these tickets will be sent as input to delete tickets DB module to delete and after that display tickets module displays it

System Testing

- In system testing we have written testing scenario of sub systems comprising of some modules. It is similar to use cases
- System testing explains to steps to test a subsystem and the expected results and also discusses alternate cases in testing of sub system if exists.

System testing for hostel block rating system

Here there is no alternate scenario because in this system user have to anyone of select displayed rating numbers, so there no scope for error scenarios as we are forcing user to give correct input.

Hostel block rating	<ul style="list-style-type: none">• Students are prompted to give a rating for the block in which he/she stays only.• Student gives a rating.	The system calculates the new average and updates the rating of the block.
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Examples

System testing for room exchange approval system

Here the alternate scenario is when HO didn't get any mutual request satisfying room exchange request.

Room exchange approval	<ul style="list-style-type: none">HO is prompted to agree/disagree in exchange for each request shownThen HO agrees to the room exchange request.	The system swaps the room numbers of the students who sent the mutual request.
	<ul style="list-style-type: none">HO is prompted to agree/disagree in exchange for each request shownThen HO disagrees with the room exchange request.	The system prompts that the exchange request is disapproved.
	When the system can't find mutual room exchange requests.	The system waits for the other request to come and then creates the room exchange request.

System testing for room exchange request system

The error scenario is the case which the student is trying to exchange to his own room.

Room exchange request	<ul style="list-style-type: none">Students are prompted to select a block and enter room number.Student then submits the request. (NO multiple requests)	The system validates the room number in the given block. Then create the room exchange request.
	The entered room number is invalid for the selected block.	The system prompts to re-enter the correct room number

Examples

System testing for change password system

Here there are two error causing cases for this system

1. When new password doesn't matches password rules
2. Other is entering wrong password in confirm password

Change password	<ol style="list-style-type: none">1. User clicks on change password2. Enter the new password .3. It should start with capital letter, it should have atleast 8 characters, atleast 1 special character, 2 numbers4. Enter password and confirm password	"Password reset" notification.
	User clicks wrong password in confirm password	<ul style="list-style-type: none">• Error Message showing "Password didn't Match"

System testing of forgot password system

The error scenario is entering wrong password which doesn't matches password sent via mail

Forgot Password	<ol style="list-style-type: none">1) User Clicks on forget password in the Login Portal2) Enters valid Email address3) Existed password in the database will be sent to the Email address4) Enters the password	<ul style="list-style-type: none">• Forgotten password will be sent to email ID
	Write Wrong password in confirm password	<ul style="list-style-type: none">• Error Message showing "Password didn't Match"

Performance Testing

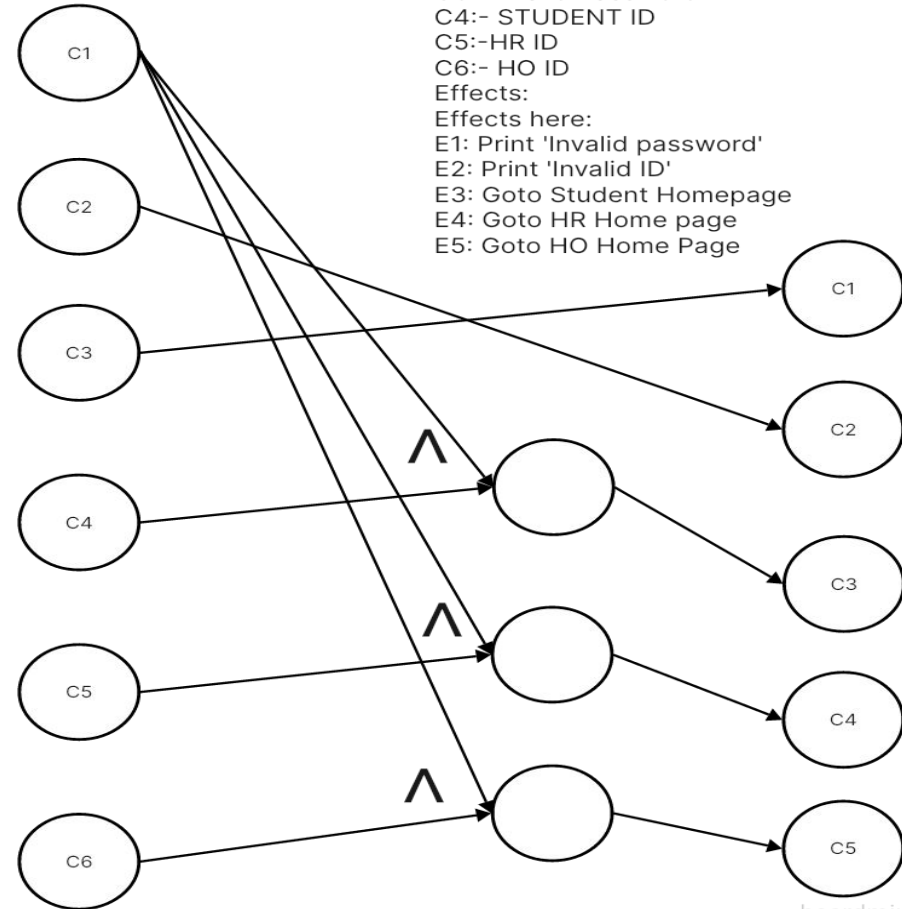
- Scenario 1-Student books a Room- $8s+2s+5s+5s=20s$
 - Student Login.
 - Student Navigates to Book a Room tab.
 - Student select the block and the website fetches the floor details.
 - Student selects the floor and clicks on submit.
- Scenario 2-HO approves the request- $8s+5s+5s=18s$
 - HO Login
 - HO Navigates to Exchange or Check in/out tab
 - HO clicks and view which to approve and approves
- Scenario 3-HR solves the complaints- $8s+4s+180s+2s+5s=199s$
 - HR Login
 - HR Navigates to complaints tab and all block complaints are fetched
 - HR Selects the complaint and solves it
 - HR solves, replies and closes the complaint

Cause Effect Graphs: Login

boardmix

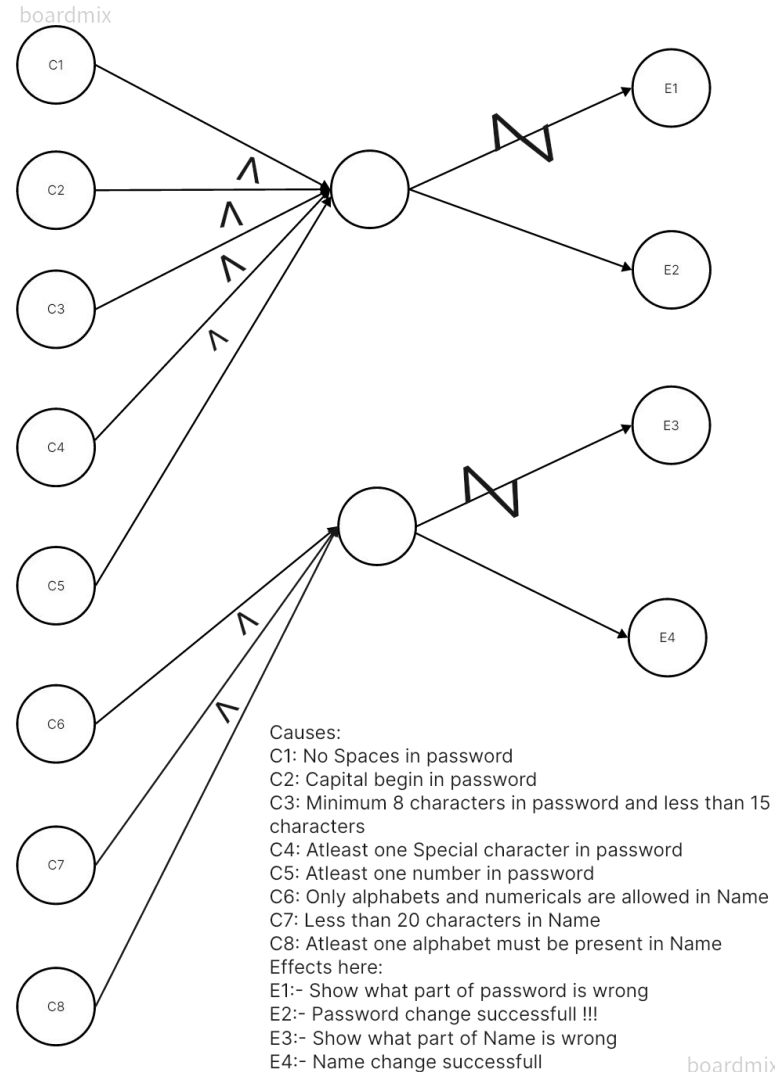
Causes:
C1:-Cred correct
C2:-Invalid ID
C3:-Invalid Password
C4:- STUDENT ID
C5:-HR ID
C6:- HO ID

Effects:
Effects here:
E1: Print 'Invalid password'
E2: Print 'Invalid ID'
E3: Goto Student Homepage
E4: Goto HR Home page
E5: Goto HO Home Page

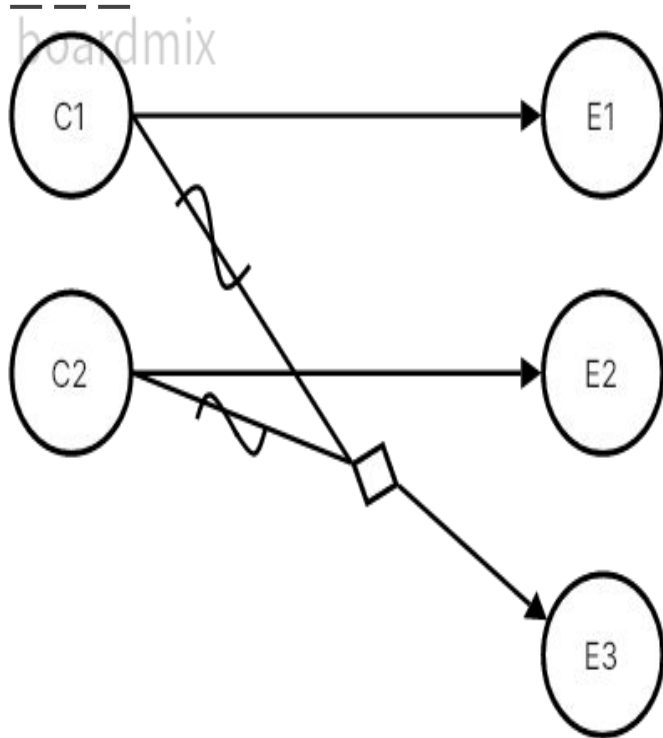


boardmix

Cause Effect Graphs: Authentication



Cause effect graphs: Fill HR Details



C1: Invalid HR Name

E1: "Enter correct HR name"

C2: Invalid Hostel Block

E2: "Enter correct HB name"

E3: display alert "HR
updated to so and so block"

Test Analysis:

We have used cause effect graphing for generating test cases for all modules. We have also written how to test integration of modules and system integration.

- No.of unit test cases for all modules:- 115
- No.of integrated test cases:- 29
- No.of system test cases:- 29
- No of Performance Scenarios: - 8