

Test cases (Note: using some from examples given and incorporating some of our own ones)

Login, Password, Logout

No.	Test Cases	Expected Behaviour	Failure indicators	Test Case (Pass/Fail)
1	Valid User Login	User should be able to access the system based on their roles	User cannot log in or receives incorrect error messages	Pass
2	Invalid NRIC Format/ Incorrect password	User receives a notification about incorrect NRIC format/incorrect password	User is allowed to log in with an invalid NRIC/ incorrect password	Pass
4	Password Change Functionality	System updates password and allows login with new credentials	System does not update the password or denies access with the new password	Pass
5	Password requirements	Password should be allowed to change only if it has minimum of 6 characters, with 1 alphabet and 1 number	New Password can be old password/does not fulfil the requirements	Pass
6	Password hash function	Password cannot be seen when typed so as to	Password can be seen when typed	Pass

		protect user's privacy		
7	Logout	User able to log out of the system to go back to the BTO management system page	User is unable to logout	Pass

### Applicant

No.	Test Cases	Expected Behaviour	Failure indicators	Test Case (Pass/Fail)
1	Project Visibility (Age and marriage status)	Singles (35+) can only apply 2-Room Married(21+) can apply 2-Room or 3-Room	Applicants see projects not relevant to their age group and marriage status	Pass
2	Project Visibility (Project is visible/hidden)	Projects are only visible to applicants when the project is "visible"	Projects are still visible to applicants when the project is "hidden"	Pass
3	Project Application (when visible)	Applicants can only apply for projects based on their group	Applicants can apply for projects not relevant to their group	Pass
4	Viewing Application Status after Visibility is hidden	Applicants continue to have access to their application details regardless of project visibility.	Application details become inaccessible once visibility is off.	Pass

5	Viewing Application Status	Shows Pending/Successful/Unsuccessful/Booked	Does not show anything or correctly	Pass
6	Single Flat Booking	System allows applicant to book one flat and restricts any further bookings	Applicant is able to book more than one flat	Pass
7	Request withdrawal before or after booking	System allows users to withdraw before/after their booking subjected to HDB Manager approval	System doesn't allow applicants to withdraw their application	Pass
8	Applicant's submission and display of enquiries	Enquiries can be successfully submitted and displayed.	Enquiries cannot be submitted or do not display correctly	Pass
9	Applicant's edit or removal of enquiries	Enquiries can be modified and removed.	Enquiries cannot be modified or removed	Pass
10	Applicants can use filter to view project	Applicants apply filters such as filtering/sorting by neighbourhood, number of available units.	Applicants cannot apply filters when viewing available projects	Pass
11	Applicants can generate receipts of their booking application	Receipt is generated and saved to applicant's files	Receipt cannot be generated	Pass

### HDB Officer

No.	Test Cases	Expected Behaviour	Failure indicators	Test Case (Pass/Fail)
1	HDB Officer Registration Eligibility	System allows officer registration to join a project only under certain conditions: - Is not an applicant of the project - Is not a HDB Officer of other projects within the same application period	System allows registration while the officer: - Is an applicant of the project - Is a HDB Officer for another project within the same application period	Pass
2	HDB Officers Registration of project	No option to register to handle the same project after application	Can register to handle the same project after application	Pass
3	HDB Officer Registration Status	Officers can view pending or approved status updates on their profiles.	Status updates are not visible or incorrect	Pass
4	Project Detail Access for HDB Officer	Officers can always access full project details, even when visibility is turned off.	Project details are inaccessible when visibility is toggled off	Pass
5	Restriction on Editing Project Details	Edit functionality is disabled or absent for Officers.	Officers are able to make changes to project details	Pass

6	Response to any Project Enquiries by applicants	Officers & Managers can access and respond to enquiries efficiently.	Officers & Managers cannot see enquiries, or their responses are not recorded.	Pass
7	Flat Selection	Officers can retrieve the correct application	Incorrect retrieval	Pass
8	Flat Updating (Flats and application side)	Officers can update flat availability accurately. This correctly updates application status and booking details in applicant's profile	Incorrect updates or failure to reflect booking details accurately.	Pass
9	Receipt Generation for Flat Booking	Accurate and complete receipts are generated for each successful booking	Receipts are incomplete, inaccurate, or fail to generate	Pass
10	Possesses all applicants capabilities	Option after login to switch to applicant or officer mode	Unable to possess applicants capabilities	Pass

#### HDB Manager

No.	Test Cases	Expected Behaviour	Failure indicators	Test Case (Pass/Fail)
1	Create, Edit, and Delete BTO Project Listings (Delete	Managers should be able to add new projects, modify existing project	Inability to create, edit, delete projects or errors during any of	Pass

	function only works outside of application period)	details, and remove projects from the system.	these operations.	
2	BTO Project Information	Information entered by the HDB Manager follows the format	One of the format is missing	Pass
3	Updates the new BTO Listing for Applicants to see	Applicants who have no active application can see and apply	Applicants are unable to see the updates	Pass
4	Single Project Management	System prevents assignment of more than one project to a manager within the same application dates.	Manager is able to handle multiple projects simultaneously during the same period.	Pass
5	Toggle Project Visibility	Changes in visibility should be reflected accurately in the project list visible to applicants	Visibility settings do not update or do not affect the project listing as expected	Pass
6	View All Project Listings (regardless of visibility)	Managers should see all projects.	Inability to view all projects	Pass
7	Filter Project Listing and View Projects	Managers should be able to apply filters to narrow down to their own projects.	Incorrect filtering results	Pass
8	Manage HDB	Managers can view and	Mismanagement of	Pass

	Officer Registrations	handle officer registrations effectively, with system updates reflecting changes accurately.	registrations or slot counts do not update properly	
9	Approve or Reject BTO Applications/ BTO Withdrawals	Approvals/Withdrawals are processed correctly, with system updates to reflect the decision	Incorrect or failed processing of applications/withdrawals	Pass
10	Generate and Filter Reports	Accurate report generation with options to filter by various categories.	Reports are inaccurate, incomplete, or filtering does not work as expected	Pass
11	Applying BTO as applicant	No option to apply for BTO projects as applicant	Able to apply for BTO projects as applicants	Pass
12	Reply to enquiries for projects they are handling	Able to reply to enquiries of their projects	Unable to reply to enquiries of their projects	Pass
13	View Enquiries for all projects	Able to view	Unable to view	Pass
14	Confirmation of deletion of projects	Before deleting, the system will prompt managers to re enter their password for confirmation	Does not prompt managers	Pass

15	Auto publish function	Managers can release projects at a predetermined later date using auto publish function	Managers are unable to use the auto publish function	Pass
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Additional features implemented:

- Password requirements (minimum of 6 characters, with 1 alphabet and 1 number)
- Password hash function (password is hidden to protect user privacy)
- System will log the activity of user each time they log in or log out
- After status is “booked”, applicants are able generate receipt with details in a txt file, and it is saved to their file storage
- Applicants are able to carry out project filtering by neighbourhood, sorting by neighbourhood, number of available units
- Officers can view unit availabilities (2-Room and 3-Room) before assigning rooms
- Improved formatting for a clearer UI
- When viewing application details, managers can see additional statistics such as distribution of flat type for applications
- When a manager wants to delete a project, he/she will be prompted to re enter their password for confirmation
- Manager is able to create a new project that opens in the future using an auto-publish function. When the opening date is reached for the project, it will be set to visible, and the auto-publish feature can be toggled on or off



- Manager is unable to create a new project when the new project application period overlaps with the current project application period