```
=== Main Menu ===
1. Login
2. Register as New User
3. Exit
Enter your choice: 1

--- Login ---
Login as:
1. Applicant
2. HDB Officer
3. HDB Manager
Enter your choice: 1
Enter your NRIC: S1234567A
Enter your password: password

Welcome Applicant: S1234567A
1. View Projects
2. Apply for Project
3. View Application Status
4. Request Withdrawal
5. Submit Enquiry
6. View/Edit/Delete Enquiries
7. Change Password
8. Logout
Enter your choice: 
```

Valid User Login as "Applicant" - S1234567A (John)

```
=== Main Menu ===
1. Login
2. Register as New User
3. Exit
Enter your choice: 1

--- Login ---
Login as:
1. Applicant
2. HDB Officer
3. HDB Manager
Enter your choice: 2
Enter your NRIC: T2109876H
Enter your password: password

Welcome HDB Officer: T2109876H
1. View Projects As Applicant
2. Apply for Project As Applicant
3. View Application Status As Applicant
4. Request Withdrawal As Applicant
5. Submit Enquiry As Applicant
6. View/Edit/Delete Enquiries As Applicant
7. Register to Join Project Team As HDB Officer
8. View Team Project Details As HDB Officer
9. Reply to Inquiries As HDB Officer
10. Update Flat Availability As HDB Officer
11. Update Applicant Status As HDB Officer
12. Generate Receipt As HDB Officer
13. Change Password As HDB Officer
14. View Applicant's Applications As HDB Officer
15. View Officer Registration Status As HDB Officer
16. Logout
Enter your choice: 
```

Valid User Login as "HDBOfficer" - T2109876H (Daniel)

```
=== Main Menu ===
1. Login
2. Register as New User
3. Exit
Enter your choice: 1

--- Login ---
Login as:
1. Applicant
2. HDB Officer
3. HDB Manager
Enter your choice: 3
Enter your NRIC: T8765432F
Enter your password: password

Welcome HDB Manager: T8765432F
1. Create BTO Project
2. Edit BTO Project
3. Delete BTO Project
4. Toggle Project Visibility
5. View All Projects
6. Filter Projects
7. Approve/Reject Officer Registration
8. Approve/Reject Application Withdrawal
9. Review and Approve/Reject Applications
10. Generate Reports
11. View Enquiries of ALL Projects
12. Reply to Enquiries
13. Change Password
14. Logout
Enter your choice: ▮
```
Valid User Login as "HDBManager" - T8765432F (Micheal)

Test Case 2:

```
=== Main Menu ===
1. Login
2. Register as New User
3. Exit
Enter your choice: 1

--- Login ---
Login as:
1. Applicant
2. HDB Officer
3. HDB Manager
Enter your choice: 1
Enter your NRIC: S1234567a
Enter your password: password
User not found.
Authentication failed. Returning to main menu.

=== Main Menu ===
1. Login
2. Register as New User
3. Exit
Enter your choice: ▮
```
Invalid NRIC Format for S1234567A

Test Case 3:

```
=== Main Menu ===
1. Login
2. Register as New User
3. Exit
Enter your choice: 1

--- Login ---
Login as:
1. Applicant
2. HDB Officer
3. HDB Manager
Enter your choice: 1
Enter your NRIC: S1234567A
Enter your password: passwrd
Incorrect password.
Authentication failed. Returning to main menu.

=== Main Menu ===
1. Login
2. Register as New User
3. Exit
Enter your choice: ▮
```

Invalid password for user S1234567A as "passwrd"

Test Case 4:

```
Enter your NRIC: S1234567A
Enter your password: password

Welcome Applicant: S1234567A
1. View Projects
2. Apply for Project
3. View Application Status
4. Request Withdrawal
5. Submit Enquiry
6. View/Edit/Delete Enquiries
7. Change Password
8. Logout
Enter your choice: 7
Enter your current password: password
Enter your new password: password2
Password changed successfully.

Welcome Applicant: S1234567A
1. View Projects
2. Apply for Project
3. View Application Status
4. Request Withdrawal
5. Submit Enquiry
6. View/Edit/Delete Enquiries
7. Change Password
8. Logout
Enter your choice: 8
Logging out. Returning to Main Menu.

=== Main Menu ===
1. Login
2. Register as New User
3. Exit
Enter your choice: 1

--- Login ---
Login as:
1. Applicant
2. HDB Officer
3. HDB Manager
Enter your choice: 1
Enter your NRIC: S1234567A
Enter your password: password2

Welcome Applicant: S1234567A
1. View Projects
2. Apply for Project
3. View Application Status
4. Request Withdrawal
5. Submit Enquiry
6. View/Edit/Delete Enquiries
7. Change Password
8. Logout
Enter your choice:
```

Password change for user S1234567A from password to password2

```
=== Main Menu ===
1. Login
2. Register as New User
3. Exit
Enter your choice: 1

--- Login ---
Login as:
1. Applicant
2. HDB Officer
3. HDB Manager
Enter your choice: 1
Enter your NRIC: S3456789E
Enter your password: password

Welcome Applicant: S3456789E
1. View Projects
2. Apply for Project
3. View Application Status
4. Request Withdrawal
5. Submit Enquiry
6. View/Edit/Delete Enquiries
7. Change Password
8. Logout
Enter your choice: 1

--- Available BTO Projects ---

Welcome Applicant: S3456789E
1. View Projects
2. Apply for Project
3. View Application Status
4. Request Withdrawal
5. Submit Enquiry
6. View/Edit/Delete Enquiries
7. Change Password
8. Logout
Enter your choice: 2

--- Available BTO Projects ---
No eligible projects available at the moment.

Welcome Applicant: S3456789E
1. View Projects
2. Apply for Project
3. View Application Status
4. Request Withdrawal
5. Submit Enquiry
6. View/Edit/Delete Enquiries
7. Change Password
8. Logout
Enter your choice: █
```

Applicant User - S3456789E (Rachel) unable to view the BTO Project "Acacia Breeze" due to being 25 and Single.

```
--- Login ---
Login as:
1. Applicant
2. HDB Officer
3. HDB Manager
Enter your choice: 3
Enter your NRIC: S5678901G
Enter your password: password

Welcome HDB Manager: S5678901G
1. Create BTO Project
2. Edit BTO Project
3. Delete BTO Project
4. Toggle Project Visibility
5. View All Projects
6. Filter Projects
7. Approve/Reject Officer Registration
8. Approve/Reject Application Withdrawal
9. Review and Approve/Reject Applications
10. Generate Reports
11. View Enquiries of ALL Projects
12. Reply to Enquiries
13. Change Password
14. Logout
Enter your choice: 4

--- Toggle Project Visibility ---
1. Acacia Breeze (Currently Visible)
Select a project to toggle visibility (number): 1
Project visibility toggled successfully. New status: Hidden
Projects written to: SC2002 Shrujan Final/csv/ProjectList.csv
ProjectList.csv updated on disk.

Welcome HDB Manager: S5678901G
1. Create BTO Project
2. Edit BTO Project
3. Delete BTO Project
4. Toggle Project Visibility
5. View All Projects
6. Filter Projects
7. Approve/Reject Officer Registration
8. Approve/Reject Application Withdrawal
9. Review and Approve/Reject Applications
10. Generate Reports
11. View Enquiries of ALL Projects
12. Reply to Enquiries
13. Change Password
14. Logout
Enter your choice: 14
Logging out. Returning to Main Menu.
```

```
--- Login ---
Login as:
1. Applicant
2. HDB Officer
3. HDB Manager
Enter your choice: 1
Enter your NRIC: S1234567A
Enter your password: password

Welcome Applicant: S1234567A
1. View Projects
2. Apply for Project
3. View Application Status
4. Request Withdrawal
5. Submit Enquiry
6. View/Edit/Delete Enquiries
7. Change Password
8. Logout
Enter your choice: 1

--- Available BTO Projects ---

Welcome Applicant: S1234567A
1. View Projects
2. Apply for Project
3. View Application Status
4. Request Withdrawal
5. Submit Enquiry
6. View/Edit/Delete Enquiries
7. Change Password
8. Logout
Enter your choice: 2

--- Available BTO Projects ---
No eligible projects available at the moment.
```

Using HDBManager - S5678901G (Jessica) to toggle off visibility on "Acacia Breeze" then, S1234567A (John) cannot apply or view the project. (test case 5 feature)

```
Enter your choice:

--- Toggle Project Visibility ---
1. Red (Currently Visible)
Select a project to toggle visibility (number): 1
Project visibility toggled successfully. New status: Hidden
Projects written to: SC2002 Shrujan Final/csv/ProjectList.csv
ProjectList.csv updated on disk.

Welcome HDB Manager: T8765432F
1. Create BTO Project
2. Edit BTO Project
3. Delete BTO Project
4. Toggle Project Visibility
5. View All Projects
6. Filter Projects
7. Approve/Reject Officer Registration
8. Approve/Reject Application Withdrawal
9. Review and Approve/Reject Applications
10. Generate Reports
11. View Enquiries of ALL Projects
12. Reply to Enquiries
13. Change Password
14. Logout
Enter your choice: 14
Logging out. Returning to Main Menu.

=== Main Menu ===
1. Login
2. Register as New User
3. Exit
Enter your choice: 1

--- Login ---
Login as:
1. Applicant
2. HDB Officer
3. HDB Manager
Enter your choice: 1
Enter your NRIC: T2345678D
Enter your password: password

Welcome Applicant: T2345678D
1. View Projects
2. Apply for Project
3. View Application Status
4. Request Withdrawal
5. Submit Enquiry
6. View/Edit/Delete Enquiries
7. Change Password
8. Logout
Enter your choice: 3

--- Your Application Status ---
Project: Red | Status: PENDING

Welcome Applicant: T2345678D
1. View Projects
2. Apply for Project
3. View Application Status
4. Request Withdrawal
5. Submit Enquiry
6. View/Edit/Delete Enquiries
7. Change Password
8. Logout
Enter your choice:
```

Applicant - T2345678D (James) able to view his status on Application even though changed to Hidden.

```
Welcome HDB Officer: T1234567J
1. View Projects As Applicant
2. Apply for Project As Applicant
3. View Application Status As Applicant
4. Request Withdrawal As Applicant
5. Submit Enquiry As Applicant
6. View/Edit/Delete Enquiries As Applicant
7. Register to Join Project Team As HDB Officer
8. View Team Project Details As HDB Officer
9. Reply to Inquiries As HDB Officer
10. Update Flat Availability As HDB Officer
11. Update Applicant Status As HDB Officer
12. Generate Receipt As HDB Officer
13. Change Password As HDB Officer
14. View Applicant's Applications As HDB Officer
15. View Officer Registration Status As HDB Officer
16. Logout
Enter your choice: 11

--- Update Applicant Status and Book Flat for Successful Applicants ---
Enter the project name to view applications: Red
1. Applicant: T7654321B | Current Status: SUCCESSFUL | Flat Type: null
Select an application to update (number): 1
Enter new status (BOOKED): BOOKED
Enter flat type (2-Room/3-Room): 2-Room
Applicant status updated successfully.

Welcome HDB Officer: T1234567J
1. View Projects As Applicant
2. Apply for Project As Applicant
3. View Application Status As Applicant
4. Request Withdrawal As Applicant
5. Submit Enquiry As Applicant
6. View/Edit/Delete Enquiries As Applicant
7. Register to Join Project Team As HDB Officer
8. View Team Project Details As HDB Officer
9. Reply to Inquiries As HDB Officer
10. Update Flat Availability As HDB Officer
11. Update Applicant Status As HDB Officer
12. Generate Receipt As HDB Officer
13. Change Password As HDB Officer
14. View Applicant's Applications As HDB Officer
15. View Officer Registration Status As HDB Officer
16. Logout
Enter your choice: 11

--- Update Applicant Status and Book Flat for Successful Applicants ---
Enter the project name to view applications: Red
No Valid Applications You Can Update.

Welcome HDB Officer: T1234567J
1. View Projects As Applicant
2. Apply for Project As Applicant
3. View Application Status As Applicant
4. Request Withdrawal As Applicant
5. Submit Enquiry As Applicant
6. View/Edit/Delete Enquiries As Applicant
7. Register to Join Project Team As HDB Officer
8. View Team Project Details As HDB Officer
9. Reply to Inquiries As HDB Officer
10. Update Flat Availability As HDB Officer
11. Update Applicant Status As HDB Officer
12. Generate Receipt As HDB Officer
13. Change Password As HDB Officer
14. View Applicant's Applications As HDB Officer
15. View Officer Registration Status As HDB Officer
16. Logout
Enter your choice:
```

Officer - T1234567J (David) able to only book one flat for successful applicant, T7654321B.

```
--- Your Application Status ---
Project: Red | Status: PENDING

Welcome Applicant: T7654321B
1. View Projects
2. Apply for Project
3. View Application Status
4. Request Withdrawal
5. Submit Enquiry
6. View/Edit/Delete Enquiries
7. Change Password
8. Logout
Enter your choice: 5

--- Submit Enquiry ---
1. Red in Black
Enter the number corresponding to the project for which you want to submit an enquiry: 1
Enter your enquiry text: How to apply for more project
Enquiry submitted successfully.

Welcome Applicant: T7654321B
1. View Projects
2. Apply for Project
3. View Application Status
4. Request Withdrawal
5. Submit Enquiry
6. View/Edit/Delete Enquiries
7. Change Password
8. Logout
Enter your choice: 6

--- Manage Your Enquiries ---
1. ID: 1, Project: Red, Enquiry: How to apply for more project
Select an enquiry by number to manage (or enter 0 to cancel): 1
1. Edit Enquiry
2. Delete Enquiry
Enter your choice: 1
Enter the new enquiry text: Mcdonald
Enquiry updated successfully.

Welcome Applicant: T7654321B
1. View Projects
2. Apply for Project
3. View Application Status
4. Request Withdrawal
5. Submit Enquiry
6. View/Edit/Delete Enquiries
7. Change Password
8. Logout
Enter your choice: 6

--- Manage Your Enquiries ---
1. ID: 1, Project: Red, Enquiry: Mcdonald
Select an enquiry by number to manage (or enter 0 to cancel): 1
1. Edit Enquiry
2. Delete Enquiry
Enter your choice: 2
Enquiry deleted successfully.

Welcome Applicant: T7654321B
1. View Projects
2. Apply for Project
3. View Application Status
4. Request Withdrawal
5. Submit Enquiry
6. View/Edit/Delete Enquiries
7. Change Password
8. Logout
Enter your choice: 
```

Applicant T7654321B (Sarah) applied for project Red and is able to manage her enquiries (edit/delete)

```
--- Officer Registration Status ---
Project: Red | Status: PENDING APPROVAL

Welcome HDB Officer: T1234567J
1. View Projects As Applicant
2. Apply for Project As Applicant
3. View Application Status As Applicant
4. Request Withdrawal As Applicant
5. Submit Enquiry As Applicant
6. View/Edit/Delete Enquiries As Applicant
7. Register to Join Project Team As HDB Officer
8. View Team Project Details As HDB Officer
9. Reply to Inquiries As HDB Officer
10. Update Flat Availability As HDB Officer
11. Update Applicant Status As HDB Officer
12. Generate Receipt As HDB Officer
13. Change Password As HDB Officer
14. View Applicant's Applications As HDB Officer
15. View Officer Registration Status As HDB Officer
16. Logout
Enter your choice: 16
Logging out. Returning to Main Menu.

=== Main Menu ===
1. Login
2. Register as New User
3. Exit
Enter your choice: 1

--- Login ---
Login as:
1. Applicant
2. HDB Officer
3. HDB Manager
Enter your choice: 3
Enter your NRIC: T8765432F
Enter your password: password

Welcome HDB Manager: T8765432F
1. Create BTO Project
2. Edit BTO Project
3. Delete BTO Project
4. Toggle Project Visibility
5. View All Projects
6. Filter Projects
7. Approve/Reject Officer Registration
8. Approve/Reject Application Withdrawal
9. Review and Approve/Reject Applications
10. Generate Reports
11. View Enquiries of ALL Projects
12. Reply to Enquiries
13. Change Password
14. Logout
Enter your choice: 7

--- Approve/Reject Officer Registration ---
Enter the project name to review registrations: Red
Enter the officer's NRIC: T1234567J
1. Approve Registration
2. Reject Registration
Enter your choice: 1
Officer registration approved.
Projects written to: SC2002 Shrujan Final/csv/ProjectList.csv
ProjectList.csv updated on disk.
```

HDBManager T1234567J (Micheal) approved HDBOfficer T1234567J (David)'s Application to Join Project "Red"

Test case 11:

```
Welcome HDB Officer: T1234567J
1. View Projects As Applicant
2. Apply for Project As Applicant
3. View Application Status As Applicant
4. Request Withdrawal As Applicant
5. Submit Enquiry As Applicant
6. View/Edit/Delete Enquiries As Applicant
7. Register to Join Project Team As HDB Officer
8. View Team Project Details As HDB Officer
9. Reply to Inquiries As HDB Officer
10. Update Flat Availability As HDB Officer
11. Update Applicant Status As HDB Officer
12. Generate Receipt As HDB Officer
13. Change Password As HDB Officer
14. View Applicant's Applications As HDB Officer
15. View Officer Registration Status As HDB Officer
16. Logout
Enter your choice: 7

--- Register to Join Project Team ---
Enter the project name to join: Red
Registration request submitted successfully.

Welcome HDB Officer: T1234567J
1. View Projects As Applicant
2. Apply for Project As Applicant
3. View Application Status As Applicant
4. Request Withdrawal As Applicant
5. Submit Enquiry As Applicant
6. View/Edit/Delete Enquiries As Applicant
7. Register to Join Project Team As HDB Officer
8. View Team Project Details As HDB Officer
9. Reply to Inquiries As HDB Officer
10. Update Flat Availability As HDB Officer
11. Update Applicant Status As HDB Officer
12. Generate Receipt As HDB Officer
13. Change Password As HDB Officer
14. View Applicant's Applications As HDB Officer
15. View Officer Registration Status As HDB Officer
16. Logout
Enter your choice: 15

--- Officer Registration Status ---
Project: Red | Status: PENDING APPROVAL

Welcome HDB Officer: T1234567J
1. View Projects As Applicant
2. Apply for Project As Applicant
3. View Application Status As Applicant
4. Request Withdrawal As Applicant
5. Submit Enquiry As Applicant
6. View/Edit/Delete Enquiries As Applicant
7. Register to Join Project Team As HDB Officer
8. View Team Project Details As HDB Officer
9. Reply to Inquiries As HDB Officer
10. Update Flat Availability As HDB Officer
11. Update Applicant Status As HDB Officer
12. Generate Receipt As HDB Officer
13. Change Password As HDB Officer
14. View Applicant's Applications As HDB Officer
15. View Officer Registration Status As HDB Officer
16. Logout
Enter your choice:
```

HDBOfficer - T1234567J (David) able to view his registration status

```
Welcome HDB Officer: T1234567J
1. View Projects As Applicant
2. Apply for Project As Applicant
3. View Application Status As Applicant
4. Request Withdrawal As Applicant
5. Submit Enquiry As Applicant
6. View/Edit/Delete Enquiries As Applicant
7. Register to Join Project Team As HDB Officer
8. View Team Project Details As HDB Officer
9. Reply to Inquiries As HDB Officer
10. Update Flat Availability As HDB Officer
11. Update Applicant Status As HDB Officer
12. Generate Receipt As HDB Officer
13. Change Password As HDB Officer
14. View Applicant's Applications As HDB Officer
15. View Officer Registration Status As HDB Officer
16. Logout
Enter your choice: 8

--- View Project Details ---
Project Name: Red
Neighbourhood: Black
Visibility: Hidden
2-Room Units: 10
3-Room Units: 5
Application Period: 4/20/25 to 5/20/25

Welcome HDB Officer: T1234567J
1. View Projects As Applicant
2. Apply for Project As Applicant
3. View Application Status As Applicant
4. Request Withdrawal As Applicant
5. Submit Enquiry As Applicant
6. View/Edit/Delete Enquiries As Applicant
7. Register to Join Project Team As HDB Officer
8. View Team Project Details As HDB Officer
9. Reply to Inquiries As HDB Officer
10. Update Flat Availability As HDB Officer
11. Update Applicant Status As HDB Officer
12. Generate Receipt As HDB Officer
13. Change Password As HDB Officer
14. View Applicant's Applications As HDB Officer
15. View Officer Registration Status As HDB Officer
16. Logout
Enter your choice:
```

Officer - T1234567J (David) able to view project details even with visibility toggled off.

Test case 13:

```
Welcome HDB Officer: T1234567J
1. View Projects As Applicant
2. Apply for Project As Applicant
3. View Application Status As Applicant
4. Request Withdrawal As Applicant
5. Submit Enquiry As Applicant
6. View/Edit/Delete Enquiries As Applicant
7. Register to Join Project Team As HDB Officer
8. View Team Project Details As HDB Officer
9. Reply to Inquiries As HDB Officer
10. Update Flat Availability As HDB Officer
11. Update Applicant Status As HDB Officer
12. Generate Receipt As HDB Officer
13. Change Password As HDB Officer
14. View Applicant's Applications As HDB Officer
15. View Officer Registration Status As HDB Officer
16. Logout
Enter your choice: 8

--- View Project Details ---
Project Name: Red
Neighbourhood: Black
Visibility: Hidden
2-Room Units: 10
3-Room Units: 5
Application Period: 4/20/25 to 5/20/25

Welcome HDB Officer: T1234567J
1. View Projects As Applicant
2. Apply for Project As Applicant
3. View Application Status As Applicant
4. Request Withdrawal As Applicant
```

No functionality given for them to edit the project.

Test Case 14:

```
--- Login ---
Login as:
1. Applicant
2. HDB Officer
3. HDB Manager
Enter your choice: 2
Enter your NRIC: T1234567J
Enter your password: password

Welcome HDB Officer: T1234567J
1. View Projects As Applicant
2. Apply for Project As Applicant
3. View Application Status As Applicant
4. Request Withdrawal As Applicant
5. Submit Enquiry As Applicant
6. View/Edit/Delete Enquiries As Applicant
7. Register to Join Project Team As HDB Officer
8. View Team Project Details As HDB Officer
9. Reply to Inquiries As HDB Officer
10. Update Flat Availability As HDB Officer
11. Update Applicant Status As HDB Officer
12. Generate Receipt As HDB Officer
13. Change Password As HDB Officer
14. View Applicant's Applications As HDB Officer
15. View Officer Registration Status As HDB Officer
16. Logout
Enter your choice: 9

--- Reply to Inquiries ---
1. ID: 1, Applicant: T7654321B, Project: Red, Enquiry: Is there a mcdonald's nearby, Reply: No reply
Enter the ID of the enquiry to reply to: 1
Enter your reply: Yes
Reply sent successfully.

Welcome HDB Officer: T1234567J
1. View Projects As Applicant
2. Apply for Project As Applicant
3. View Application Status As Applicant
4. Request Withdrawal As Applicant
5. Submit Enquiry As Applicant
6. View/Edit/Delete Enquiries As Applicant
7. Register to Join Project Team As HDB Officer
8. View Team Project Details As HDB Officer
9. Reply to Inquiries As HDB Officer
10. Update Flat Availability As HDB Officer
11. Update Applicant Status As HDB Officer
12. Generate Receipt As HDB Officer
13. Change Password As HDB Officer
14. View Applicant's Applications As HDB Officer
15. View Officer Registration Status As HDB Officer
16. Logout
Enter your choice:
```

Officer - T1234567J (David) able to reply to enquiries on the project.

```
=== Main Menu ===
1. Login
2. Register as New User
3. Exit
Enter your choice: 1

--- Login ---
Login as:
1. Applicant
2. HDB Officer
3. HDB Manager
Enter your choice: 2
Enter your NRIC: T1234567J
Enter your password: password

Welcome HDB Officer: T1234567J
1. View Projects As Applicant
2. Apply for Project As Applicant
3. View Application Status As Applicant
4. Request Withdrawal As Applicant
5. Submit Enquiry As Applicant
6. View/Edit/Delete Enquiries As Applicant
7. Register to Join Project Team As HDB Officer
8. View Team Project Details As HDB Officer
9. Reply to Inquiries As HDB Officer
10. Update Flat Availability As HDB Officer
11. Update Applicant Status As HDB Officer
12. Generate Receipt As HDB Officer
13. Change Password As HDB Officer
14. View Applicant's Applications As HDB Officer
15. View Officer Registration Status As HDB Officer
16. Logout
Enter your choice: 11

--- Update Applicant Status and Book Flat for Successful Applicants ---
Enter the project name to view applications: Red
1. Applicant: S9876543C | Current Status: SUCCESSFUL | Flat Type: null
Select an application to update (number): 1
Enter new status (BOOKED): BOOKED
Enter flat type (2-Room/3-Room): 3-Room
Applicant status updated successfully.

Welcome HDB Officer: T1234567J
1. View Projects As Applicant
2. Apply for Project As Applicant
3. View Application Status As Applicant
4. Request Withdrawal As Applicant
5. Submit Enquiry As Applicant
6. View/Edit/Delete Enquiries As Applicant
7. Register to Join Project Team As HDB Officer
8. View Team Project Details As HDB Officer
9. Reply to Inquiries As HDB Officer
10. Update Flat Availability As HDB Officer
11. Update Applicant Status As HDB Officer
12. Generate Receipt As HDB Officer
13. Change Password As HDB Officer
14. View Applicant's Applications As HDB Officer
15. View Officer Registration Status As HDB Officer
16. Logout
Enter your choice: █
```

HDBOfficer - T1234567J (David) able to update applicant status and book a flat for them with the flatType.

```
Welcome HDB Officer: T2109876H
1. View Projects As Applicant
2. Apply for Project As Applicant
3. View Application Status As Applicant
4. Request Withdrawal As Applicant
5. Submit Enquiry As Applicant
6. View/Edit/Delete Enquiries As Applicant
7. Register to Join Project Team As HDB Officer
8. View Team Project Details As HDB Officer
9. Reply to Inquiries As HDB Officer
10. Update Flat Availability As HDB Officer
11. Update Applicant Status As HDB Officer
12. Generate Receipt As HDB Officer
13. Change Password As HDB Officer
14. View Applicant's Applications As HDB Officer
15. View Officer Registration Status As HDB Officer
16. Logout
Enter your choice: 12

--- Generate Receipt ---
1. Applicant: T7654321B, Project: Acacia Breeze
Select the application number for which to generate a receipt: 1
Receipt generated successfully:
Applicant Name: Sarah
Applicant NRIC: T7654321B
Applicant Age: 40
Applicant Marital Status: Married
Applicant Flat Type Booked: 2-Room
Applicant Project: Acacia Breeze
```

Receipt Generated from Officer view

Test Case 17:

```
--- Create BTO Project ---
Enter project name: ableToCreate
Enter neighbourhood: andEdit
Is the project visible? (yes/no): yes
Enter application opening date (M/DD/YY): 4/20/25
Enter application closing date (M/DD/YY): 4/20/26
Enter number of 2-Room units: 10
Enter selling price for 2-Room flats: 10
Enter number of 3-Room units: 10
Enter selling price for 3-Room flats: 10
Enter available HDB Officer slots: 3
Project created successfully!
Projects written to: SC2002 Shrujan Final/csv/ProjectList.csv
ProjectList.csv updated on disk.

Welcome HDB Manager: S5678901G
1. Create BTO Project
2. Edit BTO Project
3. Delete BTO Project
4. Toggle Project Visibility
5. View All Projects
6. Filter Projects
7. Approve/Reject Officer Registration
8. Approve/Reject Application Withdrawal
9. Review and Approve/Reject Applications
10. Generate Reports
11. View Enquiries of ALL Projects
12. Reply to Enquiries
13. Change Password
14. Logout
Enter your choice: 5

--- All BTO Projects ---
Project: Acacia Breeze, Neighbourhood: Bishan, Visible: true, Manager: Jessica
Project: Red, Neighbourhood: Black, Visible: true, Manager: Michael
Project: ableToCreate, Neighbourhood: andEdit, Visible: true, Manager: Jessica

Welcome HDB Manager: S5678901G
1. Create BTO Project
2. Edit BTO Project
3. Delete BTO Project
4. Toggle Project Visibility
5. View All Projects
6. Filter Projects
7. Approve/Reject Officer Registration
8. Approve/Reject Application Withdrawal
9. Review and Approve/Reject Applications
10. Generate Reports
11. View Enquiries of ALL Projects
12. Reply to Enquiries
13. Change Password
14. Logout
Enter your choice:
```

HDBManager able to create a new BTOProject with details

```
--- Edit BTO Project ---
1. Acacia Breeze
2. ableToCreate
Select a project to edit (number): 2
Enter new project name (leave blank to keep): newName
Enter new neighbourhood (leave blank to keep): newNeighbourhood
Enter new opening date (M/DD/YY, leave blank to keep):
Enter new closing date (M/DD/YY, leave blank to keep):
Enter new price for 2-Room flat (leave blank to keep):
Enter new price for 3-Room flat (leave blank to keep):
Enter new 2-Room Flat Units (leave blank to keep):
Enter new 3-Room Flat Units (leave blank to keep):
Project updated successfully.
Projects written to: SC2002 Shrujan Final/csv/ProjectList.csv
ProjectList.csv updated on disk.

Welcome HDB Manager: S5678901G
1. Create BTO Project
2. Edit BTO Project
3. Delete BTO Project
4. Toggle Project Visibility
5. View All Projects
6. Filter Projects
7. Approve/Reject Officer Registration
8. Approve/Reject Application Withdrawal
9. Review and Approve/Reject Applications
10. Generate Reports
11. View Enquiries of ALL Projects
12. Reply to Enquiries
13. Change Password
14. Logout
Enter your choice: 5

--- All BTO Projects ---
Project: Acacia Breeze, Neighbourhood: Bishan, Visible: true, Manager: Jessica
Project: Red, Neighbourhood: Black, Visible: true, Manager: Michael
Project: newName, Neighbourhood: newNeighbourhood, Visible: true, Manager: Jessica

Welcome HDB Manager: S5678901G
1. Create BTO Project
2. Edit BTO Project
3. Delete BTO Project
4. Toggle Project Visibility
5. View All Projects
6. Filter Projects
7. Approve/Reject Officer Registration
8. Approve/Reject Application Withdrawal
9. Review and Approve/Reject Applications
10. Generate Reports
11. View Enquiries of ALL Projects
12. Reply to Enquiries
13. Change Password
14. Logout
Enter your choice:
```

HDBManager able to edit the details of the project

Test case 18:

```
--- Login ---
Login as:
1. Applicant
2. HDB Officer
3. HDB Manager
Enter your choice: 3
Enter your NRIC: S5678901G
Enter your password: password

Welcome HDB Manager: S5678901G
1. Create BTO Project
2. Edit BTO Project
3. Delete BTO Project
4. Toggle Project Visibility
5. View All Projects
6. Filter Projects
7. Approve/Reject Officer Registration
8. Approve/Reject Application Withdrawal
9. Review and Approve/Reject Applications
10. Generate Reports
11. View Enquiries of ALL Projects
12. Reply to Enquiries
13. Change Password
14. Logout
Enter your choice: 1

--- Create BTO Project ---
Enter project name: SingleProject
Enter neighbourhood: blank
Is the project visible? (yes/no): yes
Enter application opening date (M/DD/YY): 04/05/25
Enter application closing date (M/DD/YY): 04/05/26
Enter number of 2-Room units: 10
Enter selling price for 2-Room flats: 10
Enter number of 3-Room units: 10
Enter selling price for 3-Room flats: 10
Enter available HDB Officer slots: 3
You already have a project during this application period. Cannot create another.
Failed to create project.

Welcome HDB Manager: S5678901G
1. Create BTO Project
2. Edit BTO Project
3. Delete BTO Project
4. Toggle Project Visibility
5. View All Projects
6. Filter Projects
7. Approve/Reject Officer Registration
8. Approve/Reject Application Withdrawal
9. Review and Approve/Reject Applications
10. Generate Reports
11. View Enquiries of ALL Projects
12. Reply to Enquiries
13. Change Password
14. Logout
Enter your choice:
```

Manager cannot be in charge/create multiple projects during the same time frame.

```
... ... create project.

Welcome HDB Manager: S5678901G
1. Create BTO Project
2. Edit BTO Project
3. Delete BTO Project
4. Toggle Project Visibility
5. View All Projects
6. Filter Projects
7. Approve/Reject Officer Registration
8. Approve/Reject Application Withdrawal
9. Review and Approve/Reject Applications
10. Generate Reports
11. View Enquiries of ALL Projects
12. Reply to Enquiries
13. Change Password
14. Logout
Enter your choice: 4

--- Toggle Project Visibility ---
1. Acacia Breeze (Currently Visible)
2. newName (Currently Visible)
Select a project to toggle visibility (number): 2
Project visibility toggled successfully. New status: Hidden
Projects written to: SC2002 Shrujan Final/csv/ProjectList.csv
ProjectList.csv updated on disk.

Welcome HDB Manager: S5678901G
1. Create BTO Project
2. Edit BTO Project
3. Delete BTO Project
4. Toggle Project Visibility
5. View All Projects
6. Filter Projects
7. Approve/Reject Officer Registration
8. Approve/Reject Application Withdrawal
9. Review and Approve/Reject Applications
10. Generate Reports
11. View Enquiries of ALL Projects
12. Reply to Enquiries
13. Change Password
14. Logout
Enter your choice: █
```

Manager able to toggle visibility and reflect it into the system.

Test case 20:

```
 11. View Enquiries of ALL Projects
 12. Reply to Enquiries
 13. Change Password
 14. Logout
Enter your choice: 6

--- Filter Projects ---
1. Filter by Neighbourhood
2. Filter by Flat Type
3. Show All Projects
Enter your choice (1-3): 1
Available Neighbourhoods:
1. Bishan
2. Black
3. newNeighbourhood
Enter neighbourhood: Black
Filtered Projects by Neighbourhood:
Red in Black

Welcome HDB Manager: T8765432F
1. Create BTO Project
2. Edit BTO Project
3. Delete BTO Project
4. Toggle Project Visibility
5. View All Projects
6. Filter Projects
7. Approve/Reject Officer Registration
8. Approve/Reject Application Withdrawal
9. Review and Approve/Reject Applications
10. Generate Reports
11. View Enquiries of ALL Projects
12. Reply to Enquiries
13. Change Password
14. Logout
Enter your choice:
```

HDBManager able to filter the projects.

```
Welcome HDB Manager: S5678901G
1. Create BTO Project
2. Edit BTO Project
3. Delete BTO Project
4. Toggle Project Visibility
5. View All Projects
6. Filter Projects
7. Approve/Reject Officer Registration
8. Approve/Reject Application Withdrawal
9. Review and Approve/Reject Applications
10. Generate Reports
11. View Enquiries of ALL Projects
12. Reply to Enquiries
13. Change Password
14. Logout
Enter your choice: 6

--- Filter Projects ---
1. Filter by Neighbourhood
2. Filter by Flat Type
3. Show All of Your Projects
Enter your choice (1-3): 3

--- All of Your Projects ---
Project: Acacia Breeze, Neighbourhood: Bishan, Visible: true, Manager: Jessica
```

HDBManager able to view of all their own projects.

Test Case 21:

```
--- Approve/Reject Officer Registration ---
Enter the project name to review registrations: newName
Enter the officer's NRIC: S6543210I
1. Approve Registration
2. Reject Registration
Enter your choice: 1
Officer registration approved.
Due to this project being assigned after S6543210Icurrent project, it has been added into the FutureProjects:
Future Projects:
Project : newName
Projects written to: SC2002 Shrujan Final/csv/ProjectList.csv
ProjectList.csv updated on disk.

Welcome HDB Manager: S5678901G
1. Create BTO Project
2. Edit BTO Project
3. Delete BTO Project
4. Toggle Project Visibility
5. View All Projects
6. Filter Projects
7. Approve/Reject Officer Registration
8. Approve/Reject Application Withdrawal
9. Review and Approve/Reject Applications
10. Generate Reports
11. View Enquiries of ALL Projects
12. Reply to Enquiries
13. Change Password
14. Logout
Enter your choice: []
```

HDBManager is able to approve the registration for the HDBOfficer as long as they are not assigned to another project with overlapping time frame. If the officer is applying for a project after his current time frame, it is added to the officer's FutureProjects.

```
Welcome HDB Manager: T8765432F
1. Create BTO Project
2. Edit BTO Project
3. Delete BTO Project
4. Toggle Project Visibility
5. View All Projects
6. Filter Projects
7. Approve/Reject Officer Registration
8. Approve/Reject Application Withdrawal
9. Review and Approve/Reject Applications
10. Generate Reports
11. View Enquiries of ALL Projects
12. Reply to Enquiries
13. Change Password
14. Logout
Enter your choice: 8

--- Approve/Reject Application Withdrawal ---
Select a project to review withdrawal applications:
1. Red
Enter the project number: 1
1. Applicant: T2345678D, Status: WITHDRAWAL_REQUESTED
Select a withdrawal request to review (number): 1
1. Approve Withdrawal (confirm request)
2. Reject Withdrawal (revert request)
Enter your choice: 1
Withdrawal approved.

Welcome HDB Manager: T8765432F
1. Create BTO Project
2. Edit BTO Project
3. Delete BTO Project
4. Toggle Project Visibility
5. View All Projects
6. Filter Projects
7. Approve/Reject Officer Registration
8. Approve/Reject Application Withdrawal
9. Review and Approve/Reject Applications
10. Generate Reports
11. View Enquiries of ALL Projects
12. Reply to Enquiries
13. Change Password
14. Logout
Enter your choice:
```

HDBManager able to approve withdrawal request.

Test case 23:

```
withdrawal approved:

Welcome HDB Manager: T8765432F
1. Create BTO Project
2. Edit BTO Project
3. Delete BTO Project
4. Toggle Project Visibility
5. View All Projects
6. Filter Projects
7. Approve/Reject Officer Registration
8. Approve/Reject Application Withdrawal
9. Review and Approve/Reject Applications
10. Generate Reports
11. View Enquiries of ALL Projects
12. Reply to Enquiries
13. Change Password
14. Logout
Enter your choice: 10

--- Generate Reports ---
Applicant List Report
----------------------------
Applicant NRIC: T2345678D
Flat Type Booked: null
Application Status: WITHDRAWN
----------------------------
Applicant NRIC: T7654321B
Flat Type Booked: 2-Room
Application Status: BOOKED
----------------------------
Applicant NRIC: S9876543C
Flat Type Booked: 3-Room
Application Status: BOOKED
----------------------------


Welcome HDB Manager: T8765432F
1. Create BTO Project
2. Edit BTO Project
3. Delete BTO Project
4. Toggle Project Visibility
5. View All Projects
6. Filter Projects
7. Approve/Reject Officer Registration
8. Approve/Reject Application Withdrawal
9. Review and Approve/Reject Applications
10. Generate Reports
11. View Enquiries of ALL Projects
12. Reply to Enquiries
13. Change Password
14. Logout
Enter your choice: 
```

HDBManager able to generate accurate reports