



Dhirubhai Ambani University Technology

Formerly DA-IICT

Group – 28

System Testing — Settings and Notifications Page

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BlackBox Testing — Settings Page

1. Appearance & Privacy

1.1 Field Constraints

Dark Mode

- Toggle ON/OFF should be allowed.
- Will switch the theme instantly.

Data Sharing

- Toggle ON/OFF allowed.
- If data sharing is off then you can't use the ai assistant feature because it will share your data.

Auto save is implemented.

1.2 ECP

| EC | Dark Mode | Data Sharing | Expected Result |
|----|-----------|--------------|-----------------|
| E1 | ON | ON | Settings saved |
| E2 | OFF | ON | Settings saved |
| E3 | ON | OFF | Settings saved |

1.3 BVA

| Initial State | Action | Expected Result |
|---------------|-----------------|-----------------|
| Light Mode | Toggle to Dark | Theme switches |
| Dark Mode | Toggle to Light | Theme switches |

2. Export Data (CSV files)

2.1 Field Constraints

- User can select date , either a single date or a range of date , where the order wouldn't matter
- Selection of future date (w.r.t to current date) is not allowed
- Export button enabled only when:

- at least 1 expense exists in selected range.
- Else Export button would be unclickable
- On export go to downloads CSV to local browser's downloads

2.2 Equivalent class Portioning

| EC | Dates Selected | Transactions Found | Export Button | Expected Result |
|----|---------------------|--------------------|---------------|-------------------|
| E1 | None | — | Disabled | Cannot export |
| E2 | Valid date or range | 0 | Disabled | Cannot export |
| E3 | Valid date or range | ≥ 1 | Enabled | CSV is downloaded |

2.3 BVA

| Date Selection | Transactions | Expected Output |
|--|--------------|------------------------|
| No date | — | Export disabled |
| Single day (0 transactions) | 0 | Export disabled |
| Single day (≥ 1 transactions) | ≥ 1 | CSV file is downloaded |
| Range of date (≥ 1 transactions) | ≥ 1 | CSV file download |

3. Delete Account

- Clicking **Delete Account** opens confirmation box.
- Cancel, backdrop, or X → closes box.
- “Yes, delete my account” closes box.

3.2 ECP

| EC | Delete Clicked? | Confirm Choice | Expected Result |
|----|-----------------|---------------------|-----------------------------|
| D1 | Yes | Close(cross button) | box closes, nothing happens |
| D2 | Yes | X | box closes |
| D3 | Yes | Yes | Account gets deleted |

3.3 BVA

| User Action | Expected Output |
|------------------------------------|-----------------|
| Click Delete → Cancel | box closes |
| Click Delete → Close(cross button) | box closes |
| Click Delete → Confirm | Account deleted |

Acceptance Testing — Settings Page

Test 1 — Dark Mode Toggle + Save

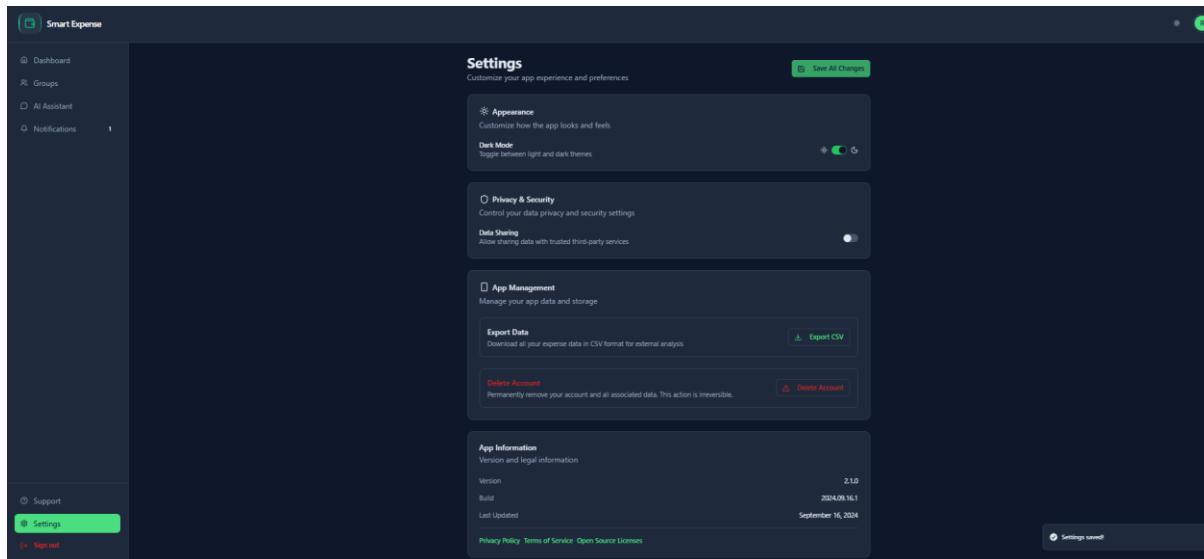
Initial State: Light mode

Action:

1. Go to Settings → Appearance.
2. Toggle Dark Mode switch to ON.

Expected Output:

- Theme switches to dark.



Test 2 — Data Sharing Toggle Will be auto-Save

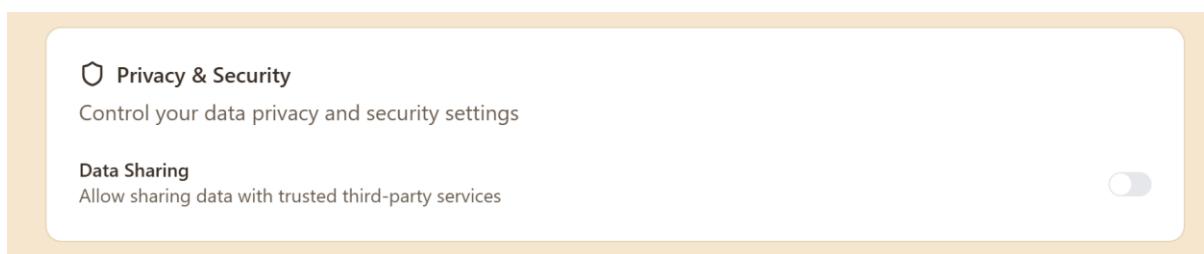
Initial State: Data Sharing OFF

Action:

1. Go to Settings → Privacy & Security.
2. Toggle Data Sharing to ON from OFF.
3. Navigate to another page (e.g., Dashboard) and come back to Settings.

Output:

Data sharing will remain Off due to auto-save



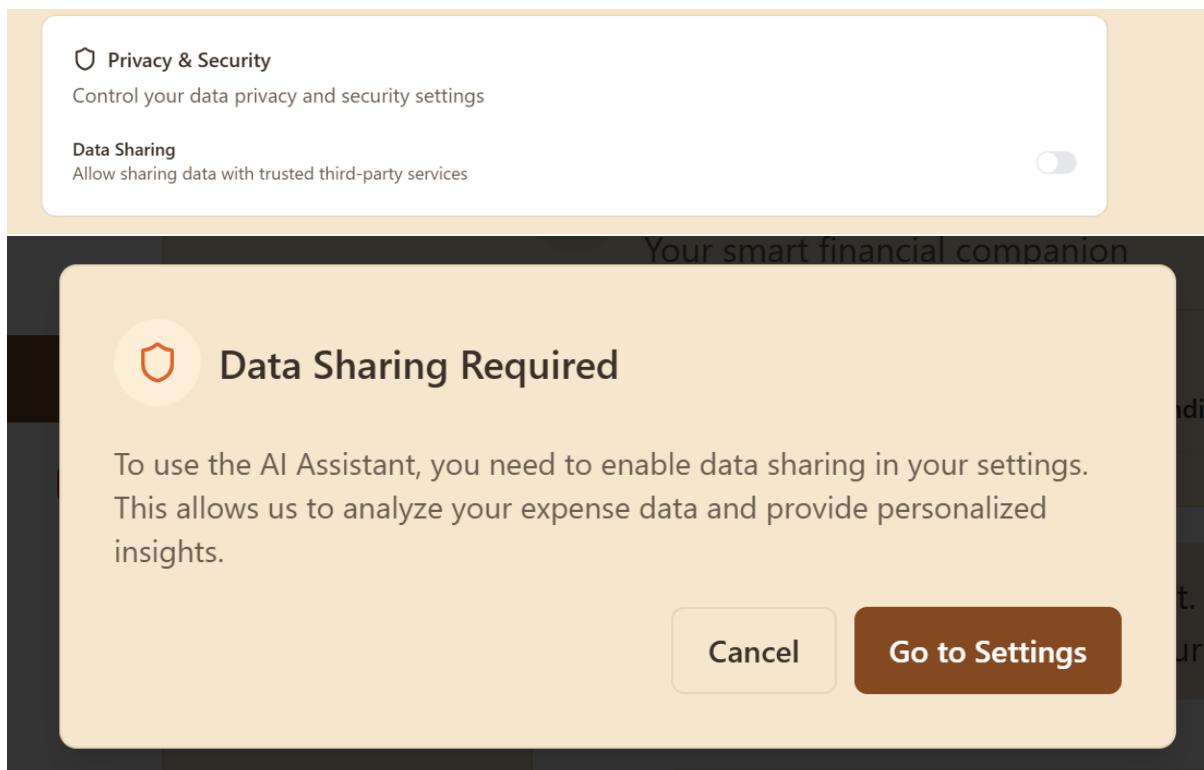
Test 2.1 — Data sharing functionality test

Initial State: Data Sharing OFF

Action:

4. Go to Settings → Privacy & Security.
5. Toggle Data Sharing to off state
6. Navigate to “AI-assistant” to check wheater Chatbot is able to “use data” as a third – part based service

Output:



Since the Data sharing was off , using the AI-chatbot is disabled .

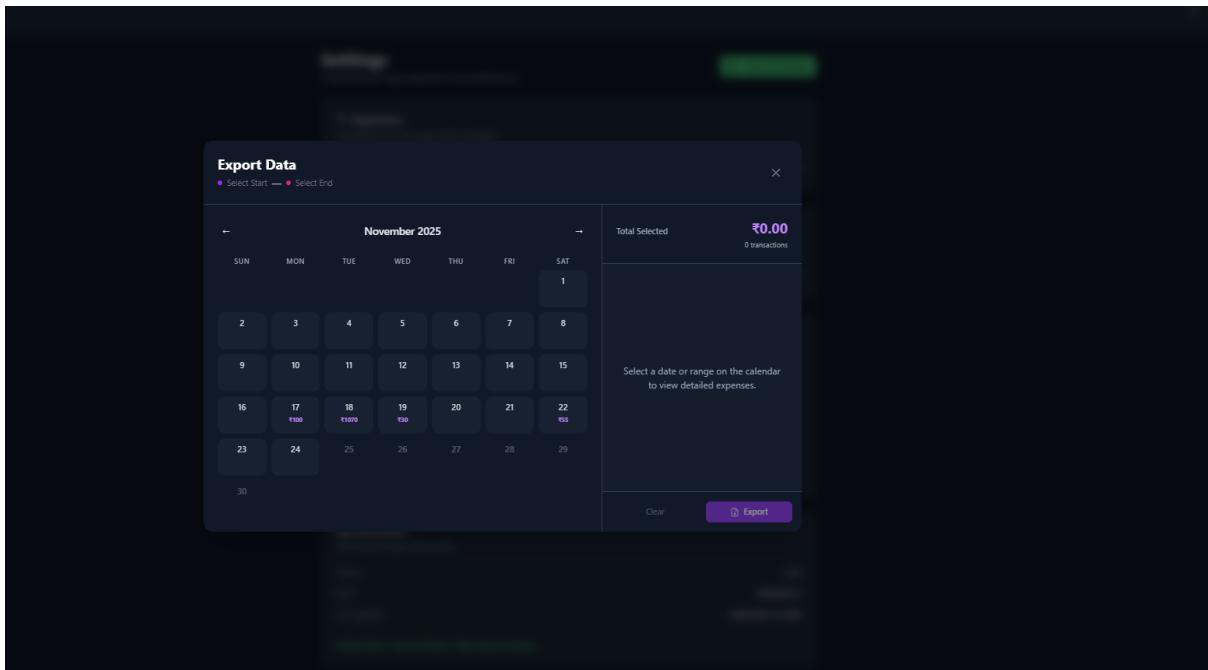
Test 3 — Export Data: No Date Selected

Action:

1. Go to Settings → App Management.
2. Click “Export CSV” to open the Export data page (contains calender)
3. Do not select any date on the calendar.

Expected Output:

- Export button will remain disabled.
- No file can be downloaded.



Test 4 — Export Data: Date With No Transactions

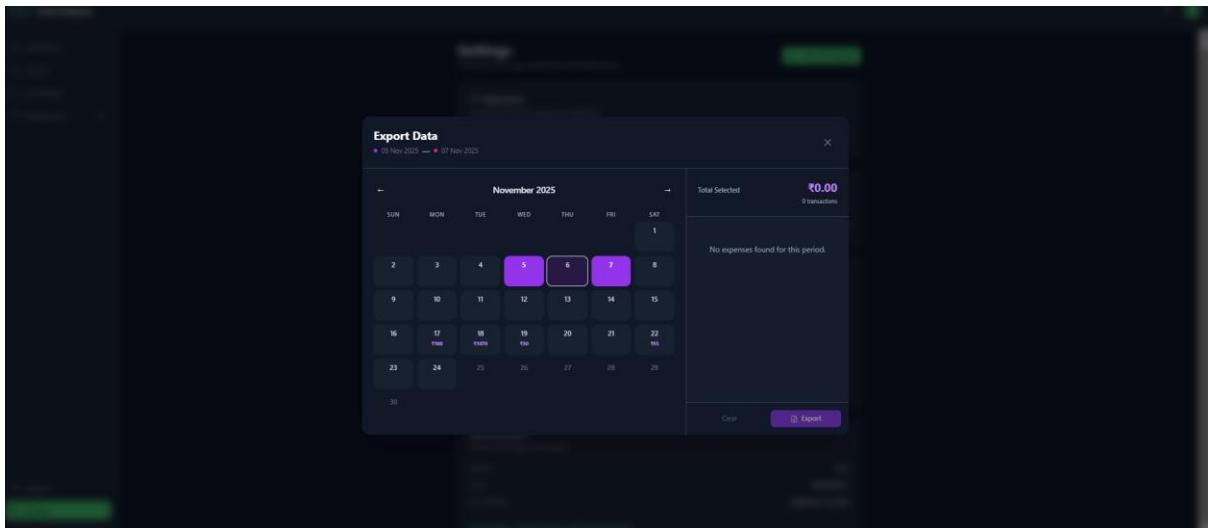
Precondition: Choose a day where your database has 0 expenses.

Action:

1. Open Export Data page .
2. Select that single date.

Expected Output:

- Right panel shows Total Selected: zero transactions
- Export button will remain disabled.
- No CSV file can be downloaded.



Test 5 — Export Data: Valid Date Range With Transactions

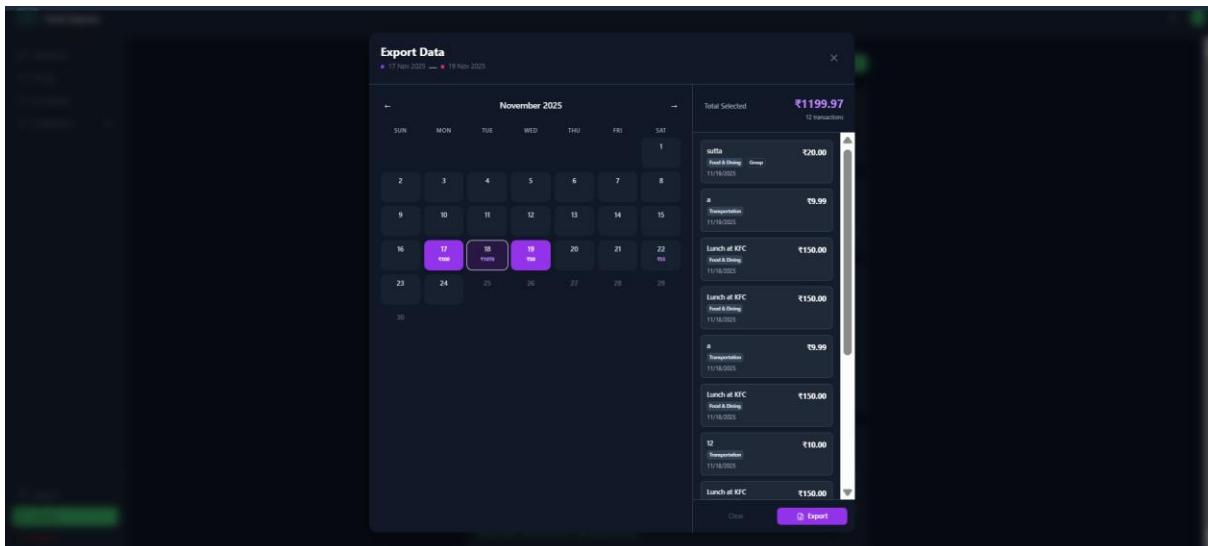
Precondition: There should be a range of dates that cover atleast more than one transactions

Action:

1. Click ontp the export button (Export data model opens up)
2. Select any date/dates that contains atleastone or more than one transactions of payments
3. Click Export.

Expected Output:

- Right panel shows Total Selected > ₹0 and N transactions.
- Export button is enabled.
- A CSV file will be downloaded.
- Opening the CSV it will show columns like: Date, Title, Category, Amount, Type and rows corresponding to the selected period.



| A1 | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R |
|----|------------|--------------|----------------|---------|----------|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Date | Title | Category | Amount | Type | | | | | | | | | | | | |
| 2 | 11/19/2025 | sutta | Food & Dining | ₹20.00 | group | | | | | | | | | | | | |
| 3 | 11/19/2025 | a | Transportation | ₹9.99 | | | | | | | | | | | | | |
| 4 | 11/18/2025 | Lunch at KFC | Food & Dining | ₹150.00 | | | | | | | | | | | | | |
| 5 | 11/18/2025 | a | Transportation | ₹9.99 | | | | | | | | | | | | | |
| 6 | 11/18/2025 | Lunch at KFC | Food & Dining | ₹150.00 | | | | | | | | | | | | | |
| 7 | 11/18/2025 | 12 | Transportation | ₹10.00 | | | | | | | | | | | | | |
| 8 | 11/18/2025 | Lunch at KFC | Food & Dining | ₹150.00 | | | | | | | | | | | | | |
| 9 | 11/18/2025 | a | Transportation | ₹9.99 | | | | | | | | | | | | | |
| 10 | 11/18/2025 | Lunch at KFC | Food & Dining | ₹150.00 | | | | | | | | | | | | | |
| 11 | 11/18/2025 | Lunch at KFC | Food & Dining | ₹150.00 | | | | | | | | | | | | | |
| 12 | 11/18/2025 | Lunch at KFC | Food & Dining | ₹150.00 | | | | | | | | | | | | | |
| 13 | 11/17/2025 | eating | Food & Dining | ₹99.99 | personal | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | |

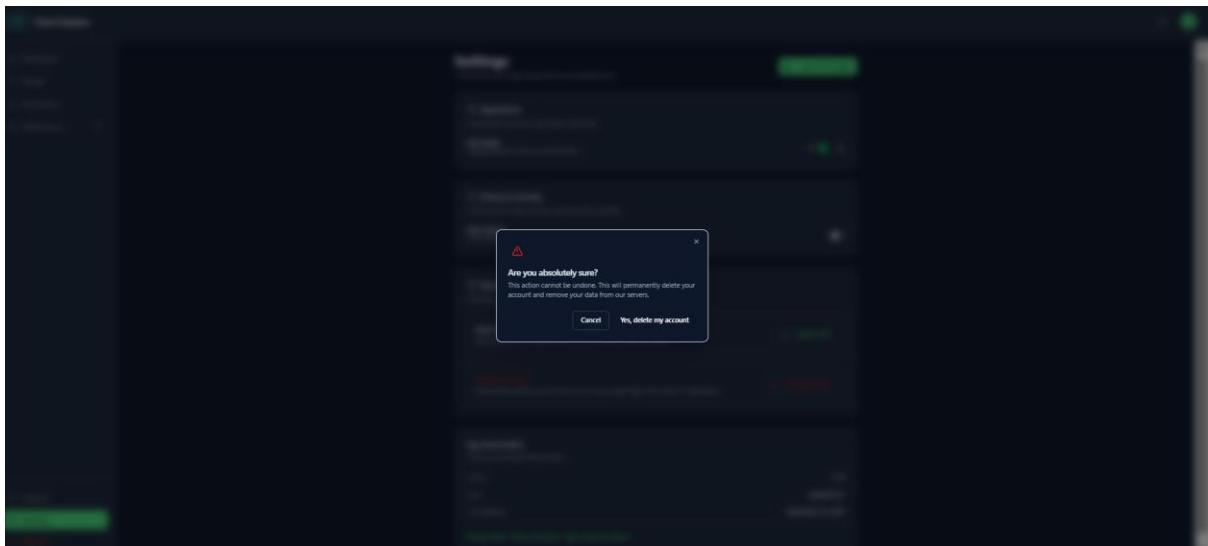
Test 6 — Delete Account Dialog: Cancel Path

Action:

1. Go to Settings → App Management.
2. Click on the “Delete Account” button.
3. In the confirmation popup box, click “Cancel”.

Expected Output:

- Confirmation dialog closes.
- User stays on Settings page.
- No navigation occurs.



BlackBox Testing — Notifications Page

1. Notification's page Constraints

1. Notification list

- Shows all notifications for the logged-in user.
- Each item shows: icon, title, message, time (e.g. “6 days ago”),
- Unread notifications have a highlighted background and a small dot.

2. Tabs

- **All** tab: shows every notification.
- **Unread** tab: shows only unread notifications.
- **Action Required** tab: shows only notifications that have action buttons (e.g. Accept / Decline)
- Counts beside each tab must match what is shown inside that tab.

3. Unread count & Mark All Read

- Total unread count is shown near the bell icon and shows a “x” number of unread messages

- **Mark All Read** button appears only when there is at least one unread notification.
- After clicking **Mark All Read**, all notifications become read and unread count becomes 0.

4. Per-notification buttons

- Mark as read (✓) appears only on unread notifications.
- Delete (X) appears on all notifications.
- Clicking Mark as read changes that notification to read and updates counts.
- Clicking Delete removes that notification from all tabs and updates counts.

2. Equivalence Class Partitioning (ECP)

| EC Class | Read? | Needs Action? (buttons) | Active Tab | Expected Behaviour |
|----------|--------|---|-----------------|--|
| E1 | unread | no | All | Notification visible, highlighted, shows Mark as read and Delete . |
| E2 | unread | no | Unread | Notification visible with unread styling. |
| E3 | read | no | Unread | Notification not visible. |
| E4 | unread | yes (e.g. group invitation, expense owed) | Action Required | Notification visible with the correct action buttons (Accept/Decline or Pay). |
| E5 | read | yes | Action Required | Notification still visible with action buttons, but without unread highlight. |
| E6 | any | no | Action Required | Notification not shown because it has no actions. |
| E7 | any | any | All | All notifications always visible in All tab. |

| EC Class | Read? | Needs Action? (buttons) | Active Tab | Expected Behaviour |
|-----------------|--------------|--------------------------------|-------------------|---|
| E8 | unread | any | All / Unread | Clicking the card (or action button for Pay) marks it as read and updates unread count. |

3. Boundary Value Analysis (BVA)

| Scenario / State | User Action | Expected Output | Reason (Boundary) |
|---|--|--|---|
| 0 notifications | Open Notifications page | “No notifications” card in All tab, unread count = 0, Mark All Read hidden. | Boundary: zero items. |
| 1 unread notification | Open page | Unread count = 1; notification shown in All & Unread; Mark All Read visible. | Smallest non-zero unread. |
| Several unread notifications | Click Mark All Read | All become read; unread count = 0; Unread tab shows “All caught up!”. | Boundary when unread goes from >0 to 0. |
| 1 unread notification | Click Mark as read on that item | That item loses highlight; unread count decreases by 1; disappears from Unread tab. | Single-item change. |
| 1 notification (read or unread) | Click Delete | Notification is removed; all tabs empty; counts become 0. | Deleting the last item. |
| 1 group invitation (unread, action buttons visible) | Click Accept | Notification disappears from all tabs; unread and Action Required counts decrease. | Boundary for resolving an action. |
| 1 expense_owed notification with group link | Click card or Pay ₹... | User is taken to that group’s Balances page; notification becomes read (if it was unread). | Navigation behaviour. |

Acceptance Testing — Notifications Page

Test 1 — Mark All Read

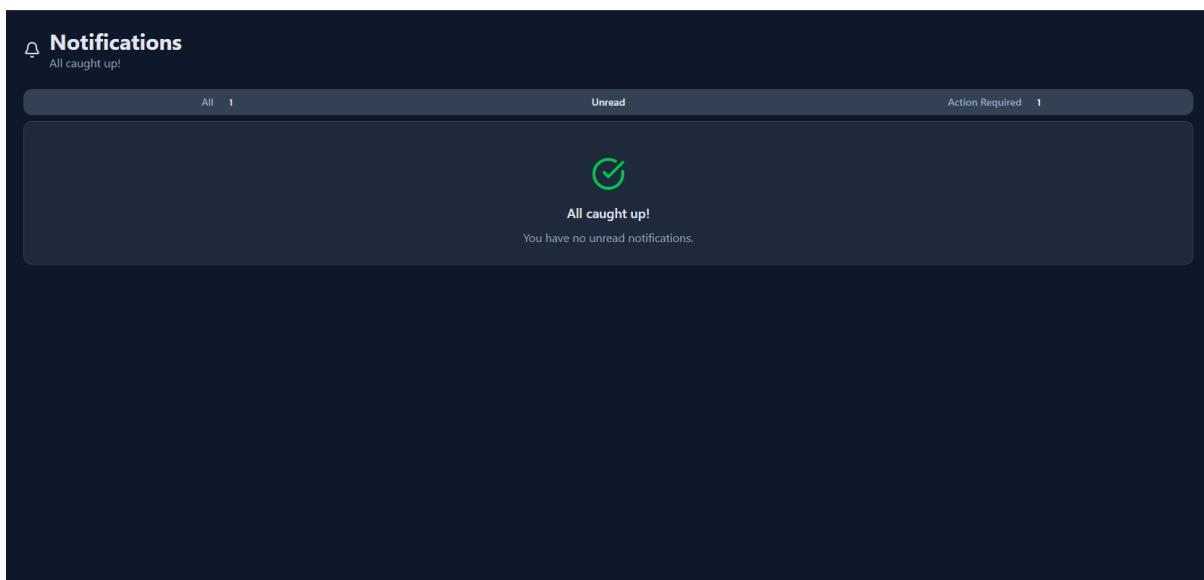
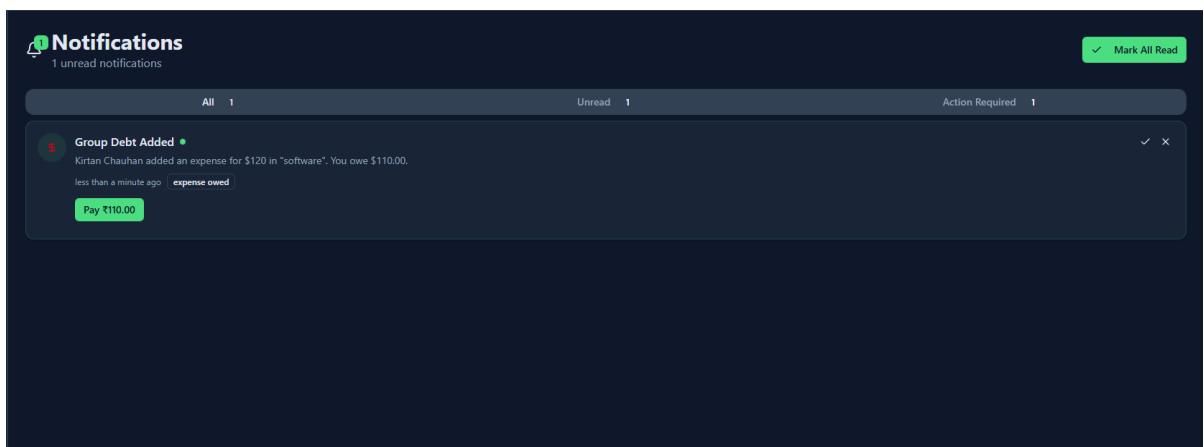
Precondition: At least 1 unread notifications exist.

Steps:

1. Open the Notifications page.
2. Check that the unread count is greater than 0.
3. Click “Mark All Read”.

Expected Result:

- All notifications lose the unread highlight.
- Unread count becomes 0.
- **Unread** tab shows the “All caught up!” message.



Test 2 — Mark Single Notification as Read

Precondition: At least 1 unread notification is visible in **All** tab.

Steps:

1. Open **All** tab.
2. On an unread notification, click the small tick button, which marks the message as read .

Expected Result:

- That notification now looks “read” (no highlight, no unread dot).
- Unread count decreases by 1.
- That notification no longer appears in **Unread** tab.

Test 3 — Delete a Notification

Precondition: At least 1 notification exists.

Steps:

1. Open All tab.
2. Click the X (Delete) button on any notification.
3. Switch to Unread and Action Required tabs.

Expected Result:

- The deleted notification is gone from all tabs.
- Counts (total and unread) are updated correctly.

The image consists of three vertically stacked screenshots of a mobile application's notification screen. Each screenshot shows a list of notifications with a header indicating the total number of unread notifications (5, 4, and 4 respectively). The notifications are categorized by type: 'Group Debt Added'. Each notification includes a timestamp, a 'Pay' button, and a 'Mark All Read' button. The notifications are identical across all three screens, except for the count which decreases from 5 to 4.

- Screenshot 1: Notifications screen with 5 unread notifications. It shows two notifications for 'Group Debt Added' from Darshit Ramani. The first notification is for \$30 and the second for \$1200. Both have a 'Pay ₹15.00' button.
- Screenshot 2: Notifications screen with 4 unread notifications. It shows the same two notifications as Screenshot 1, with a 'Pay ₹850.00' button.
- Screenshot 3: Notifications screen with 4 unread notifications. It shows the same two notifications as Screenshot 1, with a 'Pay ₹850.00' button.

Test 4 — Accept Group Invitation

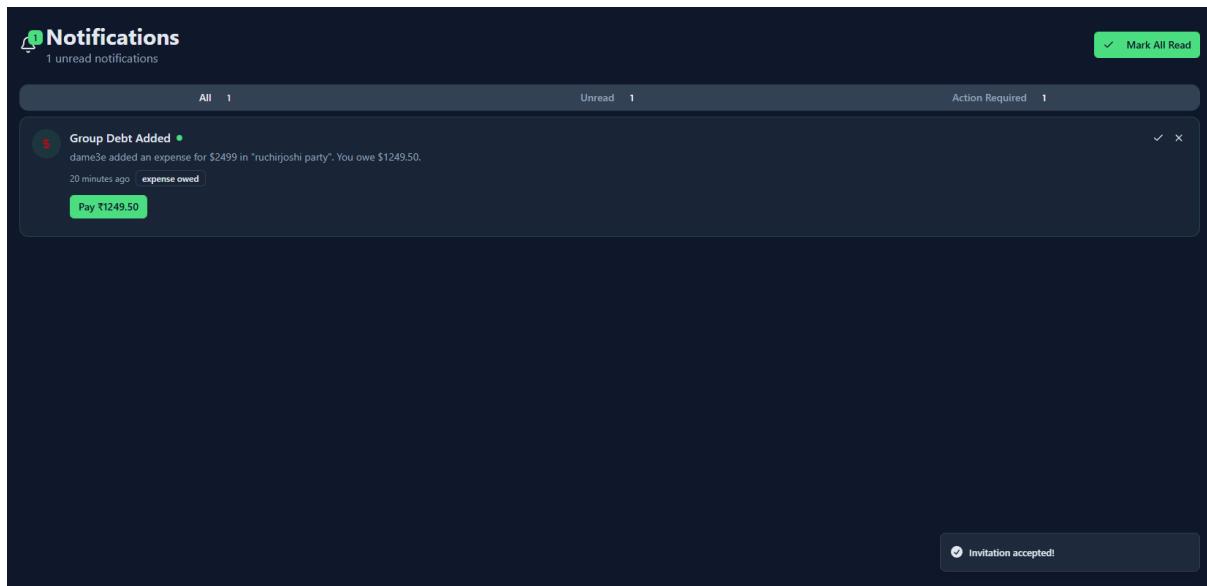
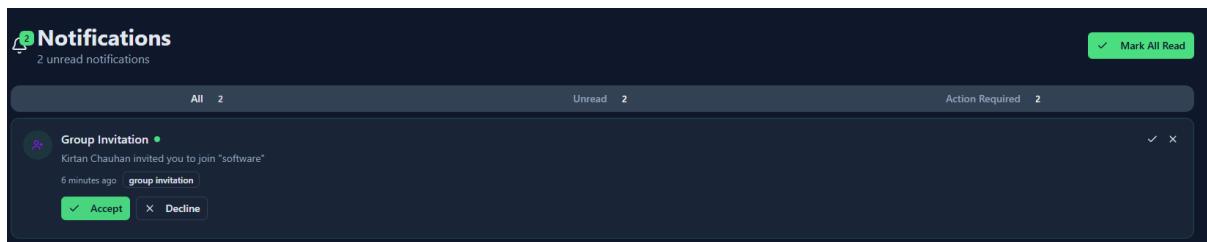
Precondition: A Group Invitation notification with **Accept** and **Decline** buttons is visible.

Steps:

1. Go to **Action Required** tab (or All/Unread if it shows there).
2. Click **Accept** on the group invitation.

Expected Result:

- A success message/popup is shown.
- The invitation notification disappears.
- Unread count and Action Required count decrease accordingly by the number times action is performed



Test 5 — Open Group from Expense Notification

Precondition: An expense_owed / settlement / expense notification is visible with a Pay

Steps:

1. Open Notifications page.

2. Click on that notification card or the pay button.

Expected Result:

- The app opens the related **Group** page on the **Balances** tab.
- If the notification was unread, it becomes read and unread count decreases.

