**Business Requirements Document (BRD)**

**1. Introduction**

Share Station is a cross-platform (Android & iOS) mobile application (built in Flutter) that operates as a digital “games club.” Members contribute game accounts (on PS4 or PS5) or funds toward acquiring new titles, and can borrow, rent, or sell accounts. The app centralizes all contribution, borrowing, balance, points, and reservation logic; displays a personalized dashboard to each member; and provides administrators with a comprehensive control panel.

**2. Purpose & Objectives**

* **Purpose:**
  + Precisely define every data entity, business rule, and UI requirement to implement Share Station in a clean, modular Flutter codebase.
* **Objectives:**
  + Enable contributions of game accounts (PS4/PS5) — full, primary, secondary, or PS Plus — and fund shares.
  + Automate calculation of balances, expirations, withdrawals, and referral fees.
  + Implement borrowing queues, weekly reservation windows, and cooldowns.
  + Calculate and display points, station limits, net lending/borrowing/exchange.
  + Present dynamic member dashboards; provide admins with editing and reporting tools.
  + Deliver a modern, responsive UI with Arabic/English support and professional styling.
  + Structure code into separate Dart files per screen and feature for ease of future maintenance and scalability.

**3. Scope**

* **In Scope:**
  + Flutter mobile app (Android & iOS)
  + Authentication & role-based authorization (Admin, VIP, Member, Client, User)
  + Contribution workflows (game accounts by platform + fund shares)
  + Balance & points engines
  + Borrowing/reservation processes (including PS4/PS5 platform handling)
  + Dashboards & admin control panel
* **Out of Scope:**
  + Physical shipping of consoles/accounts
  + Payment gateway integration (abstracted as service calls)
  + Third-party proprietary game APIs

**4. Stakeholders**

* **End Users:** Admin, VIP Member, Member, Client, User
* **Product Owner / Business Analyst**
* **Development Team** (Flutter frontend, backend services)
* **QA Engineers**
* **Operations & DevOps** (deployment pipelines)

**5. User Roles & Permissions**

| **Role** | **Description** | **Permissions** |
| --- | --- | --- |
| **Admin** | Full system control: manage members, vault, contributions, and all metrics. | CRUD all data; configure vault items; adjust balance/points; view system analytics. |
| **VIP** | Permanent membership (no expiry); up to 5 simultaneous borrows; eligible for balance withdrawal. | Borrow up to 5; withdraw balance (20% fee); view dashboard; refer new members; contribute freely. |
| **Member** | One-time 1,500 LE payment; permanent until 6 months of inactivity; borrow limits per contributions. | Borrow per tier; contribute games/funds; view dashboard; refer new members. |
| **Client** | One-time 750 LE payment; borrow 5–10 games per membership cycle; renewable. | Borrow up to 5–10 games; view dashboard; renew membership after depletion. |
| **User** | Pay-per-use: rent games individually. | Browse & rent games at published rental fees; view transaction history only. |

**6. Key Entities & Variables**

**6.1 Contribution**

* **Types:**
  + **Game Account** on **PS4** or **PS5**, with roles:
    - **Full** (ownership of account)
    - **Primary** (first-use account share)
    - **Secondary** (75% borrow value account share)
    - **PS Plus** (counts as double borrow value and double share)
  + **Fund Share** (monetary contribution toward new purchases)
* **Effects:**
  + **Station Limit** increases by contributed value.
  + Counts toward promotion thresholds (VIP: ≥ 15 contributions & ≥ 5 fund shares).
  + Resets inactivity suspension timer.

**6.2 Balance**

* **Sources & Rates:**
  + **Sell Value:** 90% of sale proceeds from a contributed account.
  + **Borrow Value:** 70% of game value when others borrow your shared account.
  + **Refunds:** When new members fund a previously contributed game, existing contributors share evenly.
  + **Referral Fees:** 20% of membership or rental fees paid by referred members.
* **Expiry & Withdrawal:**
  + Non–cash-in balances expire 3 months after earning.
  + Cash-in balances (deposits) never expire.
  + Suspension (6 months inactivity) immediately zeroes non–cash-in balance.
  + **VIP Withdrawal:** Withdrawable at any time with a 20% fee.

**6.3 Points**

* **Earning:**
  + Top 5 monthly players: 50 points each.
  + 1 point per 1 LE spent on borrowing, funding, or purchases.
  + Social media participation grants additional points.
* **Redemption:**
  + 25 points = 1 LE credit.
  + Max 2,500 points (100 LE) redeemed per transaction.

**6.4 Station Limit**

* Maximum LE value of games a member may borrow from the vault; equals sum of all contributions’ values.
* Each borrow reduces Station Limit by the borrow value (100% for primary, 75% for secondary, 200% for PS Plus).

**6.5 Net Metrics (tracked per member)**

* **Net Lending** = Paid Lending – Free Lending
* **Net Borrowing** = Paid Borrowing – Free Borrowing
* **Net Exchange** = Total Lending – Total Borrowing

**7. Membership Lifecycle & Promotion**

1. **Sign-Up:** Choose role—Member (1,500 LE), Client (750 LE), or User (pay-per-use).
2. **Contributions:** Add game accounts (PS4/PS5) or funds; system updates Station Limit, balances, and contribution counts.
3. **Inactivity Suspension:** No contributions for 6 months → suspension → non–cash-in balance expires.
4. **Reactivation:** Any new contribution resets inactivity timer and re-enables borrowing privileges.
5. **VIP Promotion:** Achieve ≥ 15 total contributions (any type) **and** ≥ 5 fund shares → auto-promote to VIP (permanent status).
6. **Client Renewal:** After 10 borrows, Client may renew membership with another 750 LE payment.

**8. Game Library Categories**

1. **Members’ Games:**
   * Contributed PS4/PS5 accounts; Members borrow **free**, Clients up to 5 free borrows, Users pay borrow value.
2. **User/Client Games:**
   * All users pay published rental fees to borrow.
3. **Game Vault (Crowdfunded New Titles):**
   * Admin-initiated voting on requested games; members vote & contribute funds.
   * Contributors gain borrowing priority proportional to their contributions.
   * Borrow consumes Station Limit per account type rules.

**9. Functional Workflows**

**9.1 Contribution Process**

1. User selects contribution: game account (specify platform: PS4/PS5 + account type) or fund share.
2. System records contribution → updates:
   * **Station Limit** += account/fund value
   * Contribution & fund-share counters
   * If game account share: **Balance** += 70% of value
3. Check VIP promotion eligibility; update user role if criteria met.

**9.2 Borrowing / Reservation**

1. User browses available games (filter by category & platform).
2. On selection, system calculates **Borrow Value**:
   * Primary = 100%
   * Secondary = 75%
   * PS Plus = 200%
3. Validate against Station Limit and role’s simultaneous-borrow limit.
4. **Weekly Reservation Window (Thursday):**
   * If available: immediate borrow → Station Limit -= borrow value; update Net Borrowing, Points, Balance.
   * If unavailable: join queue; notify position & ETA.
5. After borrow, impose **Cooldown** until next Thursday window.

**9.3 Selling Contributed Game**

1. Contributor initiates sale of a contributed PS4/PS5 account.
2. System pays out 90% of sale price into **Balance**.
3. Remove account from library; Station Limit -= game value.

**9.4 Points Redemption**

1. User redeems in multiples of 25 points → 1 LE credit (max 100 LE per transaction).
2. Deduct points; add credit to **Balance**.

**10. Dashboards & Admin Panel**

**10.1 Member Dashboard**

* **Metrics:**
  + Current Balance (breakdown by source & expiry dates)
  + Station Limit (total vs. remaining)
  + Points balance & redeem option
  + Net Lending / Net Borrowing / Net Exchange
  + Contributions summary & path to next VIP threshold
  + Active reservations, queue positions & cooldown status

**10.2 Admin Control Panel**

* **User Management:** CRUD users; adjust roles, balances, points; suspend/reactivate memberships.
* **Vault Management:** Add/remove games (PS4/PS5); initiate funding votes; view fund contributions & contributor priorities.
* **Reporting:** Real-time analytics on contributions, borrowings, expirations, referral revenue, top players, and monthly points leaderboard.

**11. Non-Functional Requirements**

* **Code Architecture:**
  + **Modular Dart structure**: separate files per screen & service.
  + **Service layer** for business logic; **repository layer** for data access.
* **UI/UX:**
  + Modern, professional design; supports Arabic & English text.
  + Responsive layouts; consistent theme across Android & iOS.
* **Performance & Security:**
  + Fast load times; optimized queries for dashboards.
  + Secure authentication (e.g., Firebase Auth).
  + Input validation & robust error handling.
* **Deployment & CI/CD:**
  + Automated pipelines for Play Store & App Store builds.
  + Environment configurations for dev, staging, and production.

**12. Data Relationships & Impact Matrix**

| **Trigger** | **Updates / Affected Variables** |
| --- | --- |
| New Contribution (game/fund) | +Station Limit; +Contribution Count; +Fund Share Count; resets Suspension Timer; may +Balance (if game share) |
| Borrow (Primary/Secondary/PS Plus) | –Station Limit; +Net Borrowing; +Points; start Cooldown; –Available Borrow Slots |
| Game Re  turned / Completed Borrow | update Net Lending (if paid lending); reset Cooldown on next reservation window |
| Sale of Game Account | +Balance (90% of sale); –Station Limit; –Library Inventory |
| Points Redemption | –Points; +Balance |
| Monthly Top-5 Ranking | +50 Points (top 5 users) |
| Suspension (6 months inactivity) | Balance (non–cash-in) → 0; borrowing disabled until new contribution |
| VIP Promotion | Role → VIP; Borrow limit → 5; enable balance withdrawal (20% fee); membership never expires |
| New Client Membership (750 LE) | Role → Client; +Station Limit (4×750 LE); set borrow cycle limit 10; track renewals |

**13. Glossary**

| **Term** | **Definition** |
| --- | --- |
| Contribution | A PS4/PS5 game account (Full/Primary/Secondary/PS Plus) or monetary Fund Share. |
| Station Limit | Maximum LE-value of games a member can borrow; equals sum of all contributions. |
| Cooldown | Period post-borrow until next reservation window. |
| Reservation Window | Weekly Thursday slot when members may reserve one game. |
| Net Lending | Paid lends minus free lends. |
| Net Borrowing | Paid borrows minus free borrows. |
| Net Exchange | Total lent minus total borrowed. |

**14.1 Entity (Participant):**

1. Name

A single Participant can have multiple IDs, but only one name.

1. ID

Each Name has his unique ID for each Tier value he possesses.

1. Platform

PS5 or PS4 or NA (Changeable)

1. Phone Number

(Changeable)

1. Join Date

Join date for each Tier value of Participant.

1. Suspension Date

If Tier is non-Member or VIP Member, then there is no suspension date, else if he was removed or left the group, then a date value shall occur.

Otherwise, A Member’s suspension date is 6 months after his (Join Date, latest Game Share, or latest Fund Share)

Reduces Balance, Points, Station Limit, Borrow Limit, Free Borrowings and all metrics to 0 and remove Games Shares from Library.

If reactivated, all data shall return to its latest state except Balance & Points.

1. Origin

Admin, Co-Founder, Wave 1 to Wave 5… up till now

1. Tier

VIP Member (Once has 15+ Total Shares & 5+ Fund Shares), Member, Client, or User.

1. Recruiter ID & Name

Could be Null.

1. PS ID

Value for a Participant PS ID

1. Balance

Consists of 5 components (Non-Admins):

1. Borrow Value: 70% of the actual borrow value of Participant Game Shares. (Expires after 90 days from borrow date) (+)
2. Sell Value: 90% of the actual sell value of Participant Game Shares. (Expires after 90 days from sell date) (+)
3. Refunds: new Fund Shares for a previous Fund Share splits evenly among Main Funders. (issued only 90 days from purchase date) (+)
4. Referrals: 20% of Subscription Fees or Borrow Fees of recruits. (90 days from Join Date of recruit. (issued only 90 days from purchase date) (+)
5. Cash In: Extra cash transactions. (Non-Expirable) (+)
   * Station Points: Points converted to Balance. (usable only on same date, to borrow, buy or a Fund Share) (+)
   * Withdrawals: any participant can withdraw his Cash Ins, but only VIP Member can withdraw his Balance. (-)
   * Cash Out Fees: 20% from Withdrawals of Non-Cash In Balance. (-)
   * Used Balance: (Fees, borrow, buy, Fund Share transactions) (-)
   * Expired Balance: (-)
   * Suspension: reduce to 0
6. Points

Consists of 3 components (Non-Admins):

* + Expenses: Each 1LE spent (does not include Used Balance) (+)
  + Goodwill: Top 5 Scorers of Members for each month (+)
  + Social Gift: Adjustable amount for social contributions. (+)
    - Converted Points: 2500 Points max for each transaction. (-)
    - Suspension: reduce to 0

1. Station Limit

Consists of 3 components:

* + 4 times the Subscription Fees for Member & Client tiers. (+)
  + Total Game Value of Total Fund Shares (+)
  + Social Gift: Adjustable amount for social contributions. (+)
    - Free Games Vault Borrows: Game Value of borrowed Games Vault titles or 75% of its Game Value if borrowed secondary. (-)
    - Suspension: reduce to 0

1. Status

Active, Inactive, or Suspended.

1. Borrow Limit
   * Increases by Total Shares.
     + <4 Total Shares= 1 Borrow Limit
     + <9 Total Shares= 2 Borrow Limit
     + <15 Total Shares= 3 Borrow Limit
     + 15+ Total Shares= 4 Borrow Limit
     + 15+ Total Shares & 5+ Fund Shares & Tier is Member = 5 Borrow Limit
   * Decreases by active Borrows:
     + Primary Borrow: counts as one Borrow
     + Secondary Borrow: counts half Borrow
     + PS Plus Borrow: counts as double the Borrow
   * Increases by released Borrows.
   * Suspension: reduce to 0
2. Free Borrowings

For Clients only, increases with Subscription Fees (5 FBs for each recharge)

Decreases for each Borrow from Member Games

* Primary Borrow: counts as one Borrow
* Secondary Borrow: counts half Borrow
* Suspension: reduce to 0

1. Cool Down Status

Eligibility to participate in Borrow Window:

* Eligible if no Primary Borrow in the last 7 Days.
* Suspension: Non-Eligible

1. Cold Period

Period of inactivity: Resets with the latest (Game Share, Fund Share, Paid Borrow, game Purchase)

Suspension: reduce to 0

1. Game Shares
   * **Divided into:**
     + Full or Primary Shares: count as one Share
     + Secondary only Shares: count as half Share.
     + PS Plus titles: count as double the Share.
   * Total Shares increase.
   * Affects his C Score
   * Resets inactivity Suspension timer for Members.
   * Resets Cold Period timer.
   * Suspension: reduce to 0 and remove Game Shares from Library
2. Fund Shares

* Counts as Share for each title.
* Total Shares increase.
* Affects Participant C Score; position of Total Shares among his non-Suspended and Active Borrowers of the same Tier.
* Total Funds increases by total Share Value.
* Affects Participant F Score.
* Resets inactivity Suspension timer for Members.
* Resets Cold Period timer.

1. Total Shares

* Game Shares + Fund Shares
* Affects Participant C Score.

1. Total Funds
   * Total Share Values + Total Borrow Values + Total Sell Values
   * Affects Participant F Score.
2. Average Hold Period

Total days spent on borrows / Number of New Borrows.

1. Net Lendings

Total New Free Lendings – Total New Paid Lendings

1. Net Borrowings

Total New Paid Borrows – Total New Free Borrows

1. Borrows/Lending

* Primary Borrow: counts as one Borrow for borrower, one Lending for lender.
* Secondary Borrow: counts half Borrow for borrower, half Lending for lender.
* PS Plus Borrow: counts as double the Borrow for borrower, double the Lending for lender.
* Each Participant has 60 days sequential or intermittent for each Account ID / 120 days for his Fund Shares Borrows, If Participant borrowed a game after the mentioned period, it counts as a New Borrow for borrower and New Lending for lender.
* If Borrow did not result in actual Borrow Value, then it is a Free Borrow, If Lending did not result in actual Borrow Value, then it is a Free Lending.
* Each Borrow, marks borrowed Slot for its Account ID to Taken, marked back to Available if released or 30 days have passed since borrow date even if not released.

1. Net Exchange

Net Lendings + Net Borrowings

1. C Score

Position of Total Shares among his non-Suspended and Active Borrowers of the same Tier.

1. F Score

Position of Total Funds among his non-Suspended and Active Borrowers of the same Tier.

1. H Score

Position of Average Hold Period among his non-Suspended and Active Borrowers of the same Tier.

1. E Score

Position of Net Exchange among his non-Suspended and Active Borrowers of the same Tier.

1. Active Borrowers

Participants with more than 0 Borrows made.

1. Score

C Score \*0.2 + F Score \*0.35 + H Score \*0.1 + E Score \*0.35

**14.2 Entity (Account):**

1. Account ID

Each Game Share has:

* + Its unique ID
  + Titles included.
  + Lender Tier: Games Vault, Member or Non-Member.
  + Date Added and Removed.
  + Edition, Region, Expiry Date, Email & Password
  + Status: Available or not Available.
  + Sharing Options: Primary PS5 or PS4, Secondary PS5 or PS4.
  + Slots Values: Available, Taken, Reserved and Not Available.
  + Game Value & Total Cost.
  + Total Revenues: Revenues from Borrow Value, Sell Value & Fund Shares.
  + Profit: Total Revenues – Total Cost.

1. Borrow Window

* If Borrower is Member or Client with available FBs, lend requested Title from Member with the lowest Score possible, if NA, lend from Games Vault, if NA, lend from Non-Member with the most Score.
* If Borrower is User or Client with unavailable FBs, lend requested Title from Games Vault, if NA, lend from Admin with the most Score possible, if NA lend from Member with the most Score possible, if NA, lend from Non-Member with the most Score possible.
* Display current and post-borrowing limits and rules.

each game has A Price and a Value for borrowing

and each game account should also have region information like a drop down of all the accounts regions also accounts should have a drop down of the Edition of the game Deluxe standard and all other edition could an account be and of course each account have its credential and User information who contributed this account member ID and Name of the User and the date that this account been contributed cause it will help with each member suspension or if its a purchase game multiple users bought together they all should be present on the game entry also admin have the ability to add a new member contribution to an old bought game account and this contribution should be distributed on all the original contributor evenly and if another member wanted to contribute to the same account the contribution only being divided evenly on the original contributor also the late member who contributed don't get any portion.

Admin Should be able to add edit or delete a game entry from the UI and the Admin dashboard

Member only should see the game card and its accounts availability and number

Member doesn't directly borrow or return they only put requests and the admin approve those requests.

all of the games are ACCOUNTS game accounts which can be a Primary account Secondary Account or Full Account

and there is also Plus Accounts and this is ps plus account that members can contribute as well

so the i thing library can have a game account or plus account cause plus accounts can be primary secondary or full as well

account can have multiple game so the game account can be on multiple game entries but the same account for the same game its already added

we can have multiple accounts for the same game and multiple types of accounts so when adding a game if its already exists the account will be added to the same game entry as another account with its account id and credentials

game can have an 3 accounts for example and 1 of them is only available and the rest is borrowed

rest of info is on the brd i recommend reviewing it completely again so u don't miss anything and logic for the library

**14.3 Entity (Library):**

1. Library

List of Game Shares

Updates with Game Shares added and removed, each Title has:

1. 3 Slots:
   * Primary PS5 / Primary PS4 / Secondary
2. 3 Slot Values:
   * Mark Slot Available according to Sharing Options.
   * Mark Slot Taken if active Borrow with Hold Period of less than 30 days, Mark it back to Available if released.
   * Mark Slot Not Available if sold.
   * Mark Slot Reserved if there it has reservation.
3. 3 Properties in order:
   * Available by Member, no markings.
   * Only available in Games Vault, marks Slot with green background.
   * Only available by Non-Member, marks Slot with Yellow background.

**14.4 Entity (Games Vault):**

1. Games Vault

List of games purchased through Fund Shares, or by ShareStation.

Updates with Fund Shares added and removed, each Title has:

1. Batch:
   * Can consists of one or more Title, funded together.
   * Batch #0, bought only by ShareStaion, not funded.
2. Next Share:
   * If current Share Value for Batch is <250, mark it Not Available for a New Share.
   * Decreases with each New Share.
3. Station Limit: Game Value
4. 4 Slots:
   * Price: Full / Primary PS5 / Primary PS4 / Secondary
   * Mark Not Available if sold or according to Sharing Options.
   * Only available by Non-Member, marks Slot with Yellow background.

**14.5 Entity (Admins):**

1. Balacne (Net Income)

Consists of:

1. Member Subscription Fees, splits evenly among Admins after their Join Date. (+)
2. Client Subscription Fees, splits evenly among Admins after their Join Date. (+)
3. Borrow Value Margin: 30% from Non-Games Vault titles borrowed, splits evenly among Admins after their Join Date. (+)
4. Borrow Value Revenue: 70% from Game Shares borrowed for each Admin. (+)
5. Games Value Margin: 100% from Games Vault titles borrowed, splits evenly among Admins after their Join Date. (+)
6. Games Value Revenue: 100% from Games Vault titles sold, splits evenly among Admins after their Join Date. (+)
7. Sell Value Margin: 10% from Non-Games Vault titles sold, splits evenly among Admins after their Join Date. (+)
8. Sell Value Revenue: 90% from Game Shares sold for each Admin. (+)
9. Refund: new Fund Shares for a previous Fund Share splits evenly among Main Funders. (+)
10. Expired Balance: expired Balance from Participants, splits evenly among Admins after their Join Date. (+)
11. Cash Out Fees: 20% from Participants Withdrawals from Balance, splits evenly among Admins after their Join Date. (+)
12. Cash In: Extra Cash. (+)
13. Withdrawal: Withdrawals from Balance. (-)
14. Sponsor: splits evenly among Admins after their Join Date. (-)
15. Games Vault Balance: Sony accounts recharges, splits evenly among Admins after their Join Date. (-)
16. Used Balance: borrow, buy, Fund Share transactions. (-)
17. Points: Points converted to Balance, splits evenly among Admins after their Join Date. (-)
18. Referrals: 20% of Subscription Fees or Borrow Fees of recruits, splits evenly among Admins after their Join Date. (-)
19. Net Income: Total of Admins Balance.