

Genshin impact gacha tracker

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Overview:

Genshin Impact is a video game, where it uses a “gacha” mechanic, where players can spend virtual currency to draw random items from 30 day limited time events. Each event features up to ten specific characters or possible weapons, with a 0.6% chance (“Wish | Genshin Impact Wiki | Fandom”) to pull the best item. The game also features a “pity” system where players are guaranteed to pull at least one of the best items after 90 pulls, after which the counter resets.

With roughly 17-18 events per year and users averaging 75 draws per month, a group of 1000 active players generates around 75,000 pulls each month. Manually logging each draw, and tracking when guaranteed reset is error prone. Our database driven website will record every wish, user, event, item and timestamp and provide an interface to show pull history and also calculate pity progress in real time.

Database Outline:

Users: Stores the player accounts

- userID: INT, auto_increment, Primary Key, unique, NOT NULL
- username: VARCHAR(32) unique, NOT NULL
- email: VARCHAR(64) unique, NOT NULL
- region: ENUM('NA','EU','ASIA','TW/HK/MO'), NOT NULL, default 'NA'
- Relationship: 1:M → Pulls (userID in Pulls as FK)
(Each pull must belong to exactly one user, so we link pulls back to the user who made it.)

Banners: Defines the 30 day time limited events

- bannerID: INT, AUTO_INCREMENT, PK, UNIQUE, NOT NULL
- bannerName: VARCHAR(64), NOT NULL
- bannerType: ENUM('Character','Weapon','Standard'), NOT NULL
- startDate: DATE, NOT NULL
- endDate: DATE, NOT NULL
- Relationships:
 - 1:M → pulls (bannerID as FK in Pulls)
 - M:N (Via BannerItems table)

(1:M: Each wish must be tied to the limited time event so a banner can have many pulls but each pull links to a banner.)

(M:N: We need the join table to model the many-to-many link between banners and items.)

Items: Stores all characters and weapons available in the current banner

- itemID: INT, AUTO_INCREMENT, PK , NOT NULL
- itemName: VARCHAR(64), NOT NULL
- itemType: ENUM('Character', 'Weapon'), NOT NULL
- rarity: ENUM('3','4','5'), NOT NULL
- description: VARCHAR(255), NULL
- Relationships:
 - M:N with Banners (via BannerItems intersection table)
 - 1:M with Pulls (itemID FK in pulls)

Pulls: Records all individual gacha pulls made by users

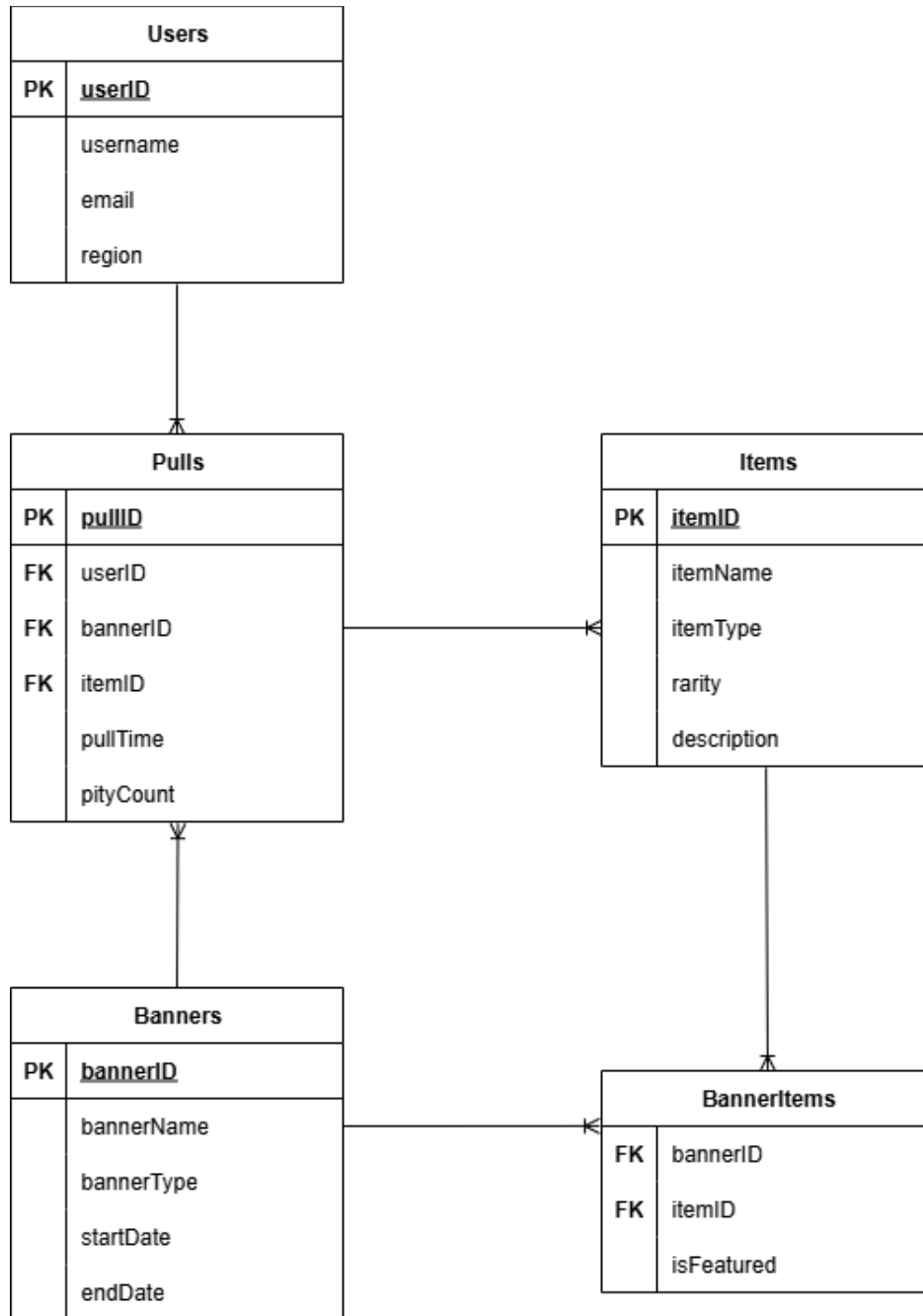
- pullID: INT, AUTO_INCREMENT, PK, NOT NULL
- userID: INT, FK references Users, NOT NULL
- bannerID: INT, FK references Banners, NOT NULL
- itemID: INT FK reference items, NOT NULL
- pullTimeStamp: DATETIME, NOT NULL
- pityCount: INT, NOT NULL (tracks how many pulls since last 5 star)
- Relationships:
 - M:1 to Users (userID fk)
 - M:1 to Banners (bannerID FK)
 - M:1 to Items (itemID FK)

BannerItems: Junction table with the M:N relationship between Banners and Items

- bannerID: INT, FK reference Banners, NOT NULL
- itemID: INT FK references ITEMS, not NULL
- isFeatured: BOOLEAN, NOT NULL
- Primary Keys: (bannerID, itemID)
- Relationships: M:N with banners and items

Entity relationship diagram:

Below is an entity relationship representation of the database outline given above.



Citations:

"Wish," *Genshin Impact Wiki*, Fandom, accessed 28 June 2025, <https://genshin-impact.fandom.com/wiki/Wish>.