



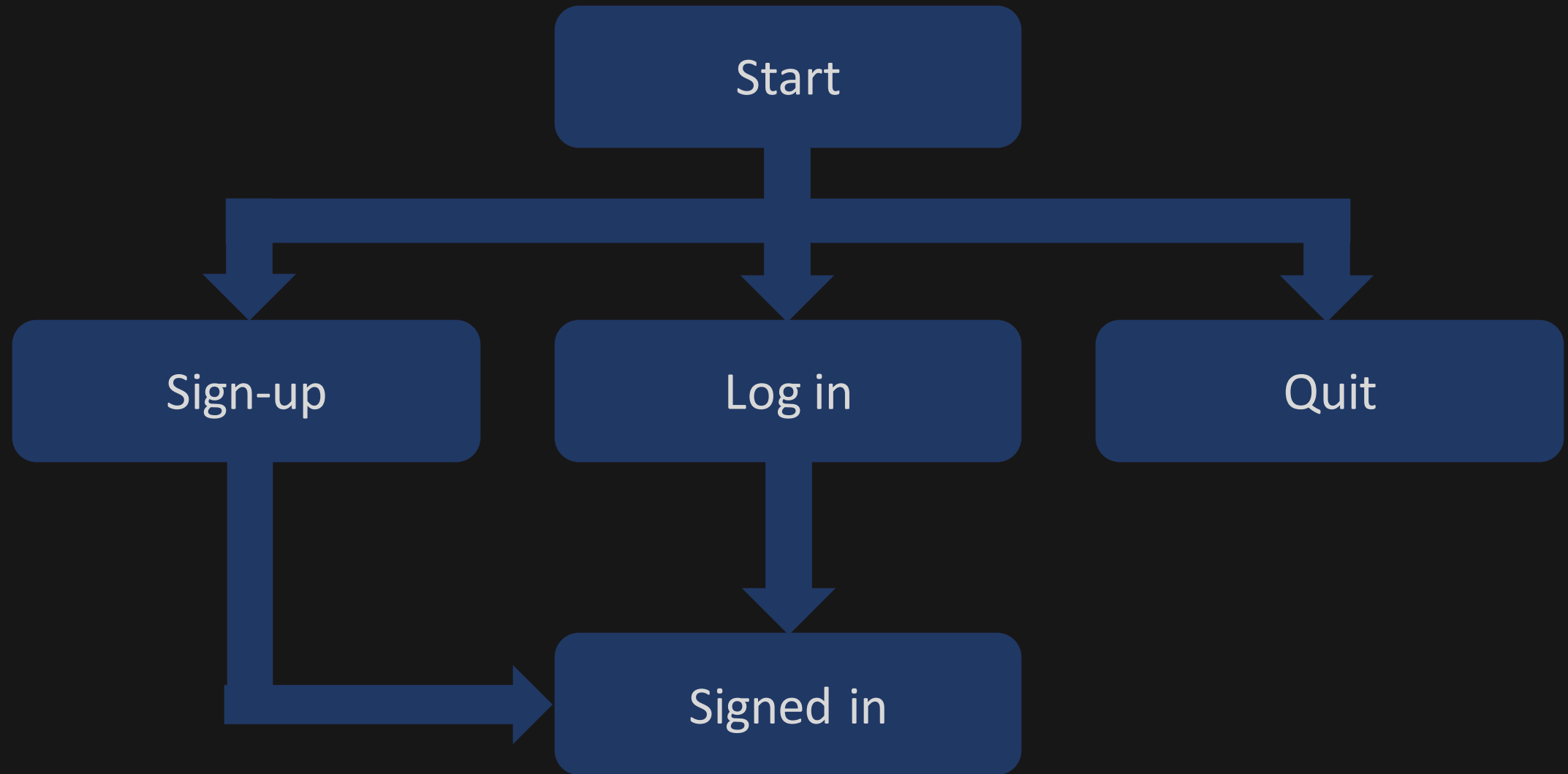
# What's GBM Helper?

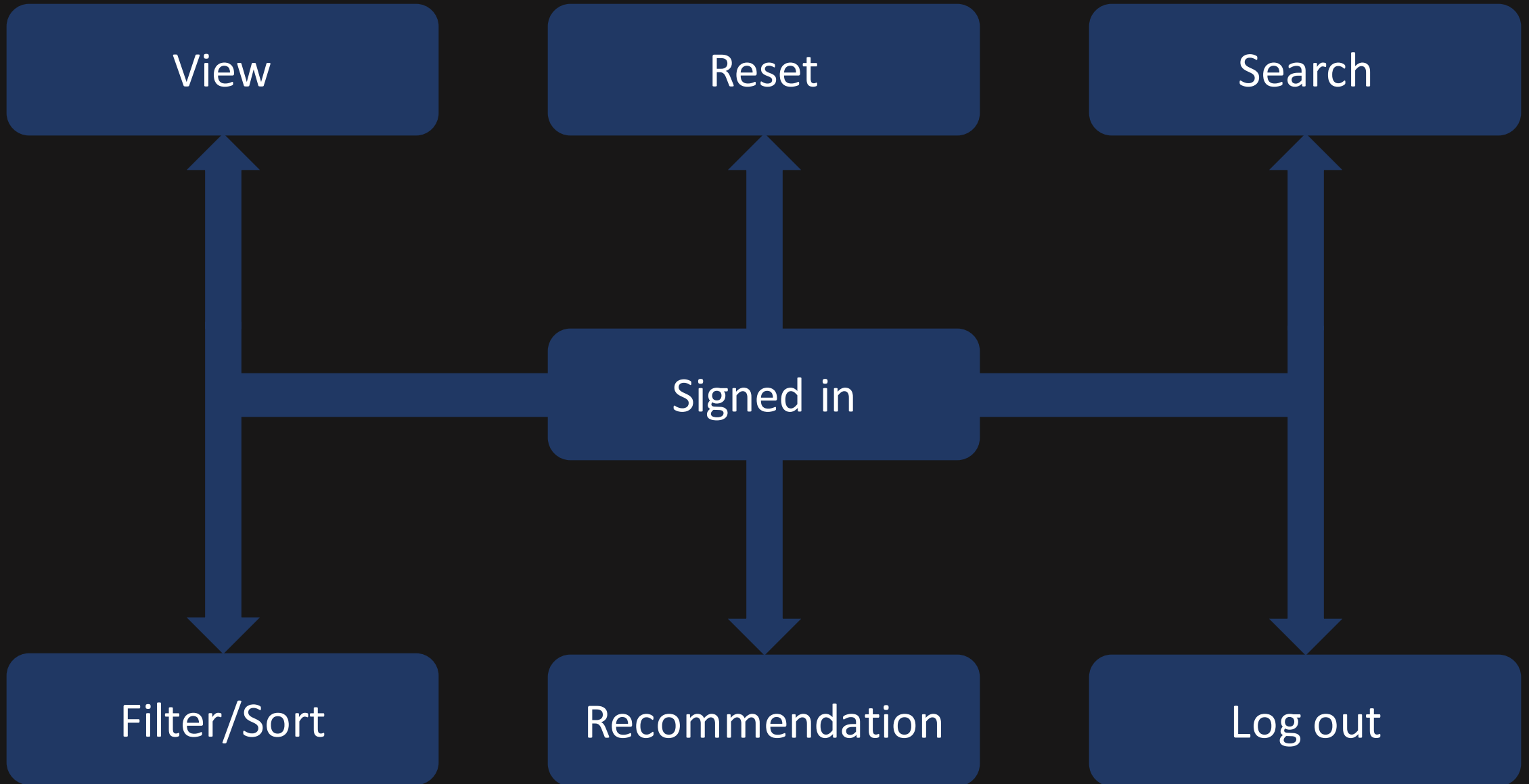
GBM Helper is developed with a sole purpose of helping players who are playing the mobile game of Gundam Breaker Mobile (Gundam Battle: Gunpla Warfare) but struggling with building a strong gundam from thousands of parts that the game provides.

Version 1.1.1 of this app helps players to find parts with features like:

- Search by name
- Filter by category
- Sort by attribute

Players can equip the parts inside the app to see how their build has improved.





# View my cuurent build

| Part          | Name                       | Type       | S           |
|---------------|----------------------------|------------|-------------|
| Head          | Altered ZZ Gundam          | Armor      | 29063       |
| Body          | Altered Strike Freedom ... | Melee ATK  | 29155       |
| Arm           | Altered ZZ Gundam          | Shot ATK   | 39704       |
| Leg           | Altered Delta Plus         | Melee DEF  | 18514       |
| Back          | Altered Infinity Justic... | Shot DEF   | 27133       |
| Melee Weapon  | Altered Super Lacerta B... | Beam RES   | 7760        |
| Ranged Weapon | Altered High-Energy Bea... | Phys RES   | 18447       |
| Shield        | Altered Gundam             |            |             |
| Pilot         | Kira Yamato [Destiny]      | Word Tag 1 | Gundam Type |
| Job License 1 | Long-Shooter               | Word Tag 2 | Ace Excl.   |
| Job License 2 | All-Rounder                | Word Tag 3 | -           |

- Users can view the parts that they are current using
  - It also sums up all the attributes

# Start a new build

| Part          | Name | Type       | - |
|---------------|------|------------|---|
| Head          | -    | Armor      | 0 |
| Body          | -    | Melee ATK  | 0 |
| Arm           | -    | Shot ATK   | 0 |
| Leg           | -    | Melee DEF  | 0 |
| Back          | -    | Shot DEF   | 0 |
| Melee Weapon  | -    | Beam RES   | 0 |
| Ranged Weapon | -    | Phys RES   | 0 |
| Shield        | -    |            |   |
| Pilot         | -    | Word Tag 1 | - |
| Job License 1 | -    | Word Tag 2 | - |
| Job License 2 | -    | Word Tag 3 | - |

- Users can start a new build from scratch

# Search for parts by name

- TTY Table to display user's current part and the new part.
- If the new part provides a higher value, the color will be blue, otherwise red

| Name           | Altered Delta Plus  | ⇒ | Altered Strike Freedom Gundam |
|----------------|---|---|-------------------------------|
| Type           | P   | ⇒ | S                             |
| Armor          | 1919  | ⇒ | 1911                          |
| Melee ATK      | 6601  | ⇒ | 10451                         |
| Shot ATK       | 0   | ⇒ | 7185                          |
| Melee DEF      | 2824  | ⇒ | 6110                          |
| Shot DEF       | 2824  | ⇒ | 8580                          |
| Beam RES       | 0   | ⇒ | 1850                          |
| Phys RES       | 0   | ⇒ | 3724                          |
| EX Skill       | -   | ⇒ | Beam Sword [METEOR]           |
| Skill Type     | -   | ⇒ | Beam Melee                    |
| Pierce         | -   | ⇒ | D                             |
| Power          | -   | ⇒ | A                             |
| Initial Charge | -   | ⇒ | 6s                            |
| Cooldown       | -   | ⇒ | 21s                           |
| Trait 1        | With Rifle category equipped Sp. Shot DMG taken reduced by 20 | ⇒ | -                             |
| Trait 2        | Middle-Shooter Job Shooting power boosted 30%                 | ⇒ | -                             |
| Word Tag 1     | Transformer   | ⇒ | Ace Excl.                     |
| Word Tag 2     | Federation  | ⇒ | Mid-Range                     |
| Source         | Event   | ⇒ | Limited                       |

# Filter/Sort by category

- Users will first filter all parts by category
- They can then choose an attribute to sort the selected category
- The result will be displayed by TTY Prompt
- Users then can choose which part they want to see the details

| Name           | Altered Infinity Justice Gundam | ⇒ | Altered ZZ Gundam                |
|----------------|---------------------------------|---|----------------------------------|
| Type           | T                               | ⇒ | S                                |
| Armor          | 2831                            | ⇒ | 3836                             |
| Melee ATK      | 3306                            | ⇒ | 1717                             |
| Shot ATK       | 2673                            | ⇒ | 4219                             |
| Melee DEF      | 3290                            | ⇒ | 2848                             |
| Shot DEF       | 2462                            | ⇒ | 3853                             |
| Beam RES       | 1417                            | ⇒ | 1432                             |
| Phys RES       | 2977                            | ⇒ | 1881                             |
| EX Skill       | Fatum-01                        | ⇒ | Double Cannon & Missile Launcher |
| Skill Type     | Beam Melee                      | ⇒ | Phys Shot                        |
| Pierce         | D                               | ⇒ | D                                |
| Power          | S                               | ⇒ | A-                               |
| Initial Charge | 20s                             | ⇒ | 6s                               |
| Cooldown       | 79s                             | ⇒ | 21s                              |
| Trait 1        | -                               | ⇒ | -                                |
| Trait 2        | -                               | ⇒ | -                                |
| Word Tag 1     | Close Combat                    | ⇒ | High Firepower                   |
| Word Tag 2     | High Mobility                   | ⇒ | Gundam Type                      |
| Source         | Limited                         | ⇒ | Exchange                         |



# Get a build recommendation

- I am looking for parts with a certain type and attribute  
This will first filter all parts by the selected type then display the parts with the highest value of the selected attribute in each category
- I am looking for a pilot with a certain job license and type  
This will first filter all pilots by a selected job license and type then display the result after sorting by a selected attribute
- I am looking for parts with a certain word tag and type  
This will first filter all parts by a selected word tag and type then display the result after sorting by a selected attribute

# Code Overview - Sign up

- After requesting users to input an username, `username_validation` method is called to ensure the username has:
  - ✓ Minimum 6 characters with at least 1 letter
  - ✓ Not been registered before
- `password_validation` method then ensure that the password has minimum 6 characters
- After users are signed up or logged in, `is_signed_in` will be set to true, and while `is_signed_in` is true, users will be able to use the main features until they choose to log out.

# Code Overview - View my current build

- The `create_user_data_table` method calls for 3 methods including `user_build_stats`, `get_polit_job`, and `get_active_word_tags` to display build attributes in a TTY Table.
- The `user_build_stats` method calls the `sum_stats` method which loops through all parts csv files to find the parts that the user is using and adds up the value of each attribute.

## Code Overview - Start a new build

- The `reset_build method` looks for the logged in user and run a loop to set all equipped parts' name to "-".
- These "-" parts have values of 0 for all their attributes, and has been coded so it won't show up in search/sort result.

# Code Overview - Search for parts by name

- The `search_parts` method will search for a Gundam name input by users after a category filter. Users have 5 chances to enter a correct match before they are redirected back to the main menu.
- Users can input upper or lower case letters, they will be changed to proper case before search.
- If a match is found, the part will be pushed to `search_result` array. If not found, `search_result.length` will be 0 which would trigger a `ZeroDivisionError`. The Error will be rescued and "Gundam not found" will be printed.

# Code Overview - Filter and sort parts

- The `filter_and_sort_by_category` method will first filter all parts by the selected category then sort the result by the selected attribute.
- The result is then passed to `sorted_parts_menu` method which will run a loop to display the sorted result array to display all filtered/sorted parts in a TTY Prompt menu.
- The `display_parts_data_table` method will then display the details of the selected part in a TTY table and ask users whether they want to update their build

# Code Overview - Get a build recommendation

## ➤ "I am looking for parts with a certain type and attribute"

The `display_parts_with_highest_param_table` method will take the user selected type and attribute and return a table which displays the parts with the highest value of the selected attribute and the selected type in each category.

## ➤ "I am looking for a pilot with a certain job license and type"

The `filter_and_sort_pilots method` loops over the `pilot.csv` to find pilots with the selected job license, then the `sorted_parts_menu` is called to display the result for user selection.

## ➤ "I am looking for parts with a certain word tag and type"

The `filter_and_sort_word_tags` methods will return parts that have the selected word tag in the selected category with the selected type to be displayed by the `sorted_parts_menu`.

# Challenges

- CSV and data input
- Keep it DRY and clean
- Class

# Favorite parts

- The learning
- Everything
- Except for writing documents