

BASE Version Control

SJTU-Software 2015

*This document specifies all the version upgrades of the **BASE** project.*

1. judge

- v1.0
Judge whether the biobrick in the database or not according to its ID.
- v2.0
Judge whether the biobrick of a certain type in the database or not according to its ID.

2. baseadvice

- v1.0
Find several bricks with higher scores on the basis of the type of biobrick and its description.
- v2.0
Use a score limit to filter the candidate parts with low score.
- v3.0
Use new default score to rank the candidate parts;
Return the result by printing the biobricks and their score.
- v4.0
The candidate parts in the existing parts group will not be recommended.

3. gscore

- v1.0
Use a few features to score the biobrick;
The weights of features are the same.
- v2.0
Add more features to score the biobrick;
The default weights of features are trained to be optimal.
- v3.0
The default weights of features are optimal;
Allow users to reset the weights to score the biobrick.

4. basearch

- v1.0
Search the database on the basis of the biobrick ID, type, and description;
Return a few features of biobrick.
- v2.0
Call *gscore* to score the candidate biobricks and rank them.
- v3.0
Allow users to reset the weights to score the biobrick.

- v4.0
Use a score limit given by users to filter the candidate biobricks with low score;
Return the score of each feature of the biobrick.

5. `evaluate_score`

- v1.0
Calculate the score of the device that depends on the score of each part.
- v2.0
Calculate the score of the device that depends on the score of each part and the interactional score of each two parts.
- v3.0
Calculate the score of the device that depends on the score of each part and the interactional score of each two parts, and the type of one part must be coding.

6. `evaluate`

- v1.0
Evaluate the best ten biobricks of each part users input and the biobrick we evaluate will make the score of the device higher if replacing the original biobrick.
- v2.0
Before evaluation, we will judge the completeness of the device.
- v3.0
Before evaluation, we will judge if the order of the parts in the device is correct.
- v4.0
The device will be judged complete if there is an *Inverter* or *Generator*.

7. `upload`

- v1.0
Upload the biobrick with a few features.
- v2.0
Upload the biobrick with more features;
Set some features a default value.

8. **The web development**

- v1.0
Finish the basic framework and implement all the main functions.
- v1.1
Add enter key function and warning when leaving the webpage.
- V1.2
Allow users to select weight themselves.
- V2.0
Modify the logic among the webpages and support the data transfer between functions.
- V2.1
Add the lower bound of the score, add home page, and show the total row number.
- v2.2
Finish *readme* file.
- V2.3
Fix the existing bugs.

9. The database development

- V1.0
There are 4,000+ biobricks.
- V2.0
By reconstructing the database table, we have about 14,000 biobricks. We give each biobrick a default score.
- V2.1
There are 28637 biobricks
- V3.0
With the new database table, our Scoring function and Advice function are faster.