

Data Modeling and Databases: Project Phase 2

Due on Sunday, November 1, 2015

Qiang Qu

Alexey Chernyshov, Vladislav Kravchenko, Murad Magomedov

Contents

| | | |
|----------|---|----------|
| 1 | Phase 2. Web-based User Interface. | 3 |
| 1.1 | Introducing | 3 |
| 1.2 | Setup Instructions | 3 |
| 1.3 | Functionality | 3 |
| 1.4 | Site map | 4 |

1 Phase 2. Web-based User Interface.

1.1 Introducing

According to Project Phase2 requirements we had to develop a web-based graphical user interface on top of physical database that we had created at Phase 1.

After considering different high-level programming languages we decided to use Python because of its clean, straightforward syntax and great support for building web apps. And as it was suggested by instructors on piazza.com we used PostgreSQL for the database management system and Tornado web framework for the web-based GUI.

1.2 Setup Instructions

1. Install Python: <https://www.python.org/download/releases/3.4.0/>
2. Install PostgreSQL: <http://www.postgresql.org/download/>
3. Import dump: execute in cmd in folder:

```
".../PostgreSQL/9.4/bin/ psql -U 'input your database username here' -f  
'path to dump file' 'name of your database' \"
```

4. Execute query to add auth table:

```
...\src\sql\auth\create_auth.sql
```

5. Configure Settings.py - set your username and password
6. Install Tornado: execute in cmd in folder

```
C:\Python34\Lib\site-packages\easy_install.py tornado
```

7. Run in cmd webserver.py
8. Go to <http://localhost:8000>

1.3 Functionality

According to the Phase 2 requirements only authorized/registered users are allowed to use the interface that we have created. The table with usernames and passwords can be stored in another database but in our case we decided to store it at the main database, even it is not logically connected with it. Authorized/registered users can carry out all the specified functionality, including search, insert (add), update () and delete. All the search results can be ranged in ascending or descending order.

1.4 Site map

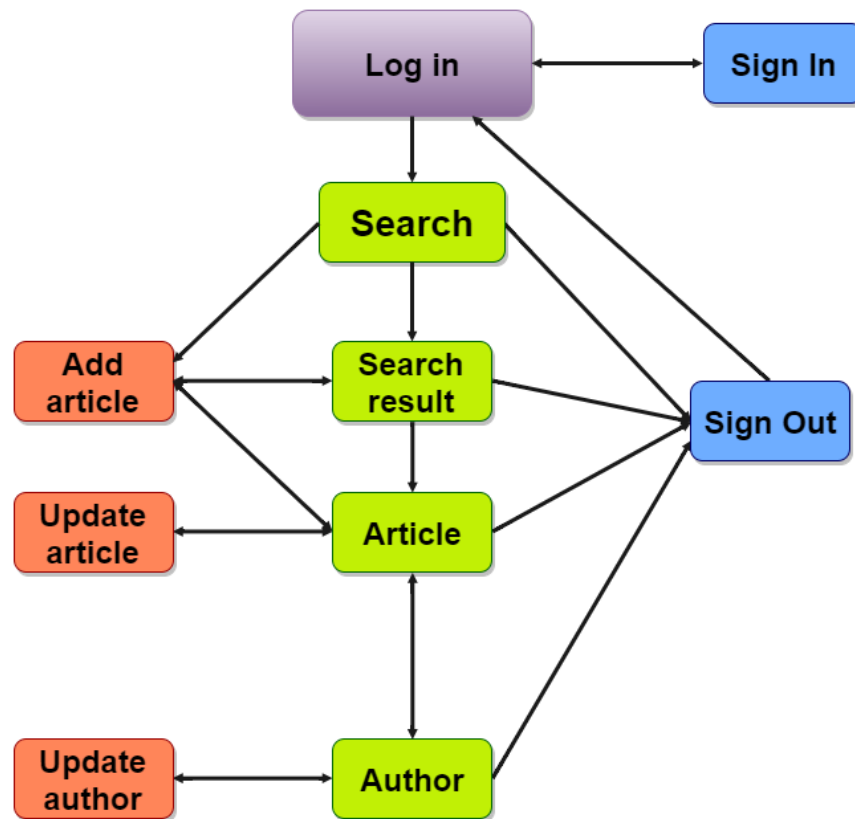


Figure 1: Site Map

References

- [1] <https://www.python.org/> Python v.3.4
- [2] <http://www.tornadoweb.org> Tornado v.4.2.1
- [3] Introduction to Tornado. O'Reilly Media, Inc., 2012. ISBN: 978-1-449-30907-7
- [4] <http://www.postgresql.org/> Postgresql v.9.4.5
- [5] <https://pypi.python.org/pypi/psycopg2> Psycopg2 v.2.6.1