INTERNET WHITEBOARD

DEVELOPER DOCUMENT

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1. INTRODUCTION

The primary aim of the project is to build the internet white board which basically works as acorrespondence path between employees of ConTech and clients, it helps them to communicate and work together.

1.1 PREFACE

The Developer document is organized into 4 sections, with each section describing respective requirements. The first section highlights the purpose. Section 2 describes the glossary and abbreviations of the document by stressing on the technical terms being used. Furthermore, section 3 describes the software description of the project.Section4 contains system architecture. Section 5 contains source code and finally section 6 contains structure of database.

1.2 PURPOSE OF THIS DOCUMENT

The main purpose of this project document is to provide technical aspects of our product.

2. GLOSSARY AND ABBREVIATIONS

2.1 GLOSSARY

The project organization for the Internet White Board has 10 WBS segments which are mentioned below, the work is divided based on WBS segments and members in the group are made responsible to one or multiple tasks. The alignment of members in the group to their respective tasks are listed as follows

1. **Generating frontend white board Structure**: This basically means to create a simple white board including registration and login pages for the Admin, User and Employee.

2. **Building the backend white board session**: In this segment, the created white board is developed based on the resources and it requires time to be done.

3. **Sheet Management:**This deals with managing and modification of sheets and adds different tools and features to the sheets, different access is determined to user, employee and admin respectively. 4. Server maintenance: This segment deals with server linkup and ensuring every modification that has been made is regularly updated in the database.

5. **Security:** Security plays a prominent roll and it deals with the encryption of communication thus, one member in the group has been assigned to complete the task.

6. **Interaction between user-user and user-server:** This segment deals with communication between one user with other users and users with server.

7. Debugging: This segment deals with identifying the errors and fixing them, this also included fixing errors that have been reported by the users

8. **Packaging:** The segment deals with the integration and packaging of different modules into the system.

9. **Testing:** Testing is expected to be wide and crucial, every member of the group is expected to perform each task individually and the whole package is tested by the group members accordingly.

10**. Documentation:** This segment deals with all the documentations needed that are Installation documentation and user documentation.

2.2 ABBREVIATIONS

1. **IP Address**: It is known as Internet Protocol Address. It is a unique number assigned to each system which is connected in a Network.
2. **SQL:** Standard Queuing Language. It is a special purpose language which is used to manage related data.
3. **GUI:** Graphical User Interface. It enables the user to interact with the system through visual indicators.
4. **Restful API:** Representational State Transfer (REST) is an architectural style that specifies constraint, such as the uniform interface, that if applied to a web service induces desirable properties, such as performance, scalability, and modifiability that enable services to work best on the Web. API is Application Programmable Interface.
5. **FLASK**: It is an implementation of the web brows able APIs like Django REST framework. It gives proper content negotiated responses. It also provides smart request parsing. we can start building kick-ass web brows able APIs using FLASK.
6. **PyMySQL:** PyMySQLis a database connector for Python programming language libraries and its used to enable Python programs to talk to a MySQL server [2]
7. **MySQLdB:** It's having same functionality as PyMySQL [2]
8. **Timestamp:** It is considered as a series of characters or encoded information that identify the occurrence of an event. Mostly expressed based on a calendar year.
9. **Python Tkinter:** Tkinter is one of the standard Pythons Graphical User Interface (GUI) package. [3]
10. **PHP:** Hyper Text Pre-processor is a server scripting programming language that is used for making dynamic and user interactive web based pages.

3. SOFTWARE DESCRIPTION OF THE PROJECT:

The backend of the product is written in the MySQL, and Flask. The front end of the product is written in Python and Tkinter which shows various contents like admin page, user page, employee page, login page, the status of the users on web-based GUI. We used MySQL for designing, storing the data of the user, employee and storing sheets of the user and in the Database.

Restful API:

Restful API is used between user to sever communication along with JSON data encoding. It is also used for changing the moderator.Restful web services are one way of providing interoperability between computer systems on the Internet. RESTFUL API is also used in communicating to database through different systems and also used to know if a page is locked or unlocked.

Restful API is implemented here for two cases:

1. While retrieving the lock status which is stored in database of admin using an API. For this respective feature, we run a flask server in admin. This flask server provides the information of the lock status by retrieving it from the database of admin.

2. While retrieving the information of moderator which is also done by using a flask server in admin that provides a response with the required information in it when a request is received to the flask server running in admin.

Restful-API is tested by checking whether the response is received or not. The response in the two cases above is lock status and information regarding moderator. By testing lock function and feature that includes moderator change, the restful API is tested and considered working.

4. SYSTEM ARCHITECTURE:

4.1 PROGRAMMING LANGUAGES USED:

- Python.
- Tkinter.
- MySql.

5. SOURCE CODE IS ORGANISED AS FOLLOWS

Front end:

- whiteboard.py
- tkfrontchooser.py
- logi.py
- sendmail_7-.py

Back end:

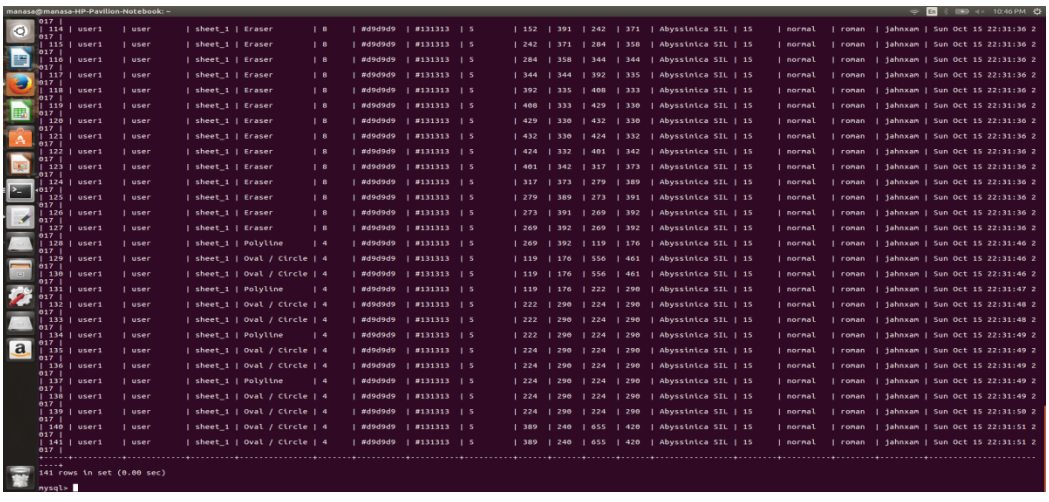
- apifor3.py

Database:

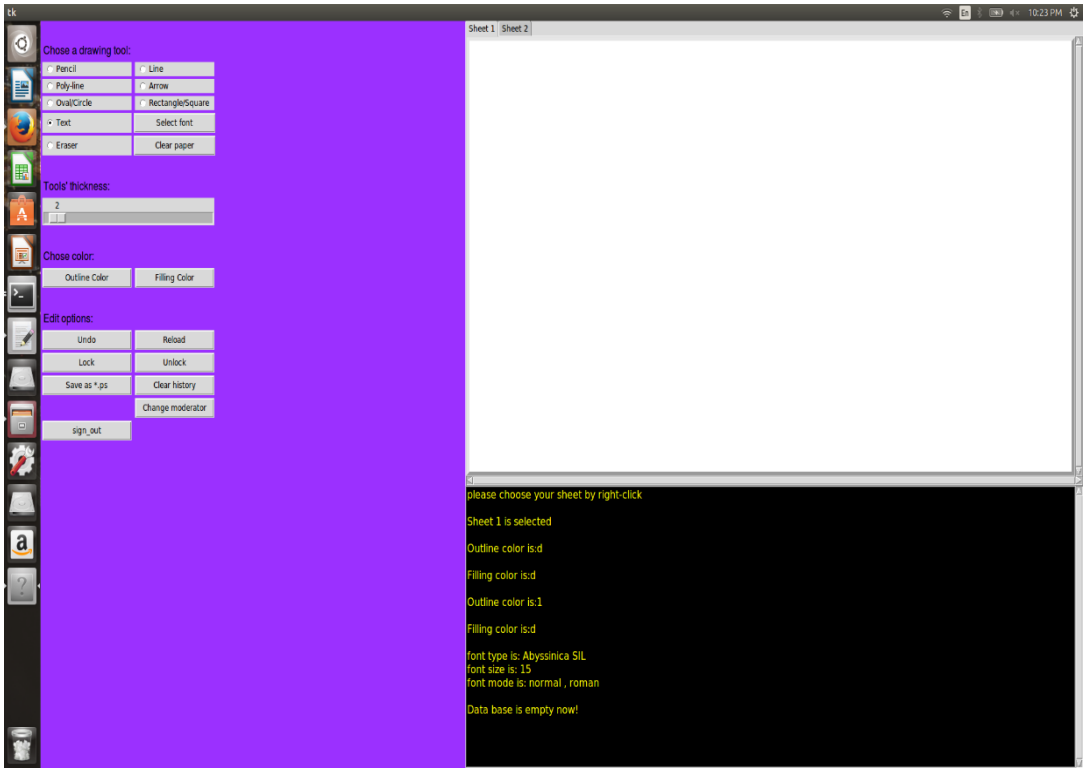
- MySql

6. STRUCTURE OF THE DATABASE:

This database contains login and logout information of the admin, employee, and user. It also contains the time of the user login, actions done during the session by the users between login to sign out time.All these above information will be stored in a table shown below.



This database also contains the sheets that are used by the users and employees will be their. In this, the tools that are used by the user will be stored and this is as shown in the below fig.



We can also clear the data in database by using the option clear, which will clear the history or previous drawings that are done by the user this will be shown in the below fig.

7.REFERENCES

[1] “W3Schools Online Web Tutorials.” [Online]. Available: https://www.w3schools.com/default.asp. [Accessed: 14-May-2017].

[2] “MySQL.” [Online]. Available: https://www.mysql.com/. [Accessed: 14-May-2017].

[3] “Tkinter - Tkinter Wiki.” [Online]. Available: http://tkinter.unpythonic.net/wiki/Tkinter. [Accessed: 14-May-2017].