INTERNET WHITEBOARD

INSTALLATION DOCUMENT

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1. Preface:

Aim of this project is to develop an White board application such that the employees of ConTech and customers can communicate with each other. This document is organised such that it shows step-by-step procedure to install the applications and run it.

Release version v1.2

- Updated database connection between admin and user.
- Updated Flask Server.
- Updated Rest-API which is used to change the moderator.

Release version v1.1

- Database setup is done using Mysql which is operated by admin.
- Tkinter module is imported in Python programming and used by user.
- Flask is used as server and it is used by admin.

Release version v1.0

Initial release

- Remainder of the document is organised as follows:
- Section 2: Glossary and abbreviations used in the document
- Section 3: Shows the steps to set-up the application and configure it.

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 add 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.

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

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

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

7. **Packaging:** The segment deals with the integration and packaging of different modulesinto the system.

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

9. **Documentation:** This segment deals with all the documentations needed that is 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 are 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 throughvisual indicators.

4. **RESTful API:** Representational State Transfer (REST) is an architectural style thatspecifies constraints, such as the uniform interface, that if applied to a web service induce 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 browsable APIs like Django REST framework. It gives proper content negotiated responses. It also provides smart request parsing. we can start building kick-ass web browsable APIs using FLASK.
6. **PyMySQL:** PyMySQLis a database connector for Python programming language librariesand 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 formaking dynamic and user interactive web based pages.

3. PYTHON Application set-up :

Python is a high level programming language that we have used for creating this whiteboard application.

3.1 How to install necessary libraries and run the application:

• Open the Terminal and type cd Apps/

• Before you can install Python, you'll need to change the permissions for the downloaded file so that it can be executed.

• Change the permissions and press Enter, entering your password if required:

In Ubuntu there will be a pre installed Python application we can update by using following commands

• Run the installer. After changing the permissions, you can run the installer to begin installing Python, Type the following command and press Enter:

• Sudo apt-get update.

• Sudo apt-get -y upgrade.

Then we should install Tkinter module in Python using the following command

• Sudo apt-get install python python-tk.

• Now we have done with the installation of Python and Tkinter application.

Now we can start the python in Linux by using the following command line.

• Python internetwhiteboard.py.

Before we run the application , the necessary installation of libraries are necessary as follows :

The computer which acts as Admin:

In Admin – computer main database , the application and Flask server need to be installed

Main database :

Our database should be created in mysql and permissions should be granted for other computers to access this database .

Two types of database :

1)Login details

2)Information of drawing tools of respective user .

The following commands are used to initialize the database :

```
mysql -u root -p

mysql> create table history1(
id INT NOT NULL PRIMARY KEY AUTO_INCREMENT,
username VARCHAR(40),
typeofuser VARCHAR(40),
sheet VARCHAR(9),
action VARCHAR(20),
value  VARCHAR(2),
F_Collor VARCHAR(10),
O_Collor VARCHAR(10),
```

```
thikness VARCHAR(2),
X0 VARCHAR(4),
Y0 VARCHAR(4),
X1 VARCHAR(4),
Y1 VARCHAR(4),
F_Type VARCHAR(20),
F_Size VARCHAR(2),
F_Weight VARCHAR(10),
F_Mode VARCHAR(10),
Text VARCHAR(255),
Dateandtime VARCHAR(80));

create table login1(
id INT NOT NULL PRIMARY KEY AUTO_INCREMENT,
type VARCHAR(40),
username VARCHAR(40),
password VARCHAR(40),
moderator VARCHAR(20),
lok_flag VARCHAR(20));
```

This database runs on official port of mysql which is 3306

The application :

As said before tkinter module , pymysql module should be installed in python
By using the command &python whiteboard.py , the application can be used .

Flask server :

To install flask :

sudo pip install virtualenv

sudo apt-get install python-virtualenv

pip install Flask

The server should be ON to use the application . Restapi.py source code is used to run the server which is connected to admin database .
The command to run : &python apifor3.py (apifor3.py is the source code)

The computer which acts as Employee or User :

The tkinter , pymysql and requests modules in python should be installed and should be in the same network as Admin .

To run the source code :
&python whiteboard.py , command is enough .

This application connects to main database mysql and flask server in Admin computer at port number : 3306 and 5000 and with the IP number of Admin.

5. 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].