

CITÉ DES JEUNES A.-M.-SORMANY

VOTE CDJ

Technical documentation

English only.

CONFIDENTIAL

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A technical documentation detailing the inner workings for VOTECDJ software. This document has been created for maintenance and use of the system.

Table of Contents	Page
Preface	3
Introduction	3
Design	4
Server	4
Users	4
Passwords	5
MYSQL Database Layout	6
Web server	7
Client	7
Conclusion	8

Preface

For a non-technical explanation in French, please refer to the user's manual.

Introduction

This project is meant to enable the students of the Cité des Jeunes to quick and easy voting for the student government. In this document, there will be a full technical documentation of the inner workings of the system. Included in this document are: explanations, code samples and diagrams to explain key concepts of the system. Expect this text to be fairly technical and the reader should be proficient in C#, PHP, HTML and SQL databases before making changes to the system. **This document is for the student government only, distribution of these papers and user's manual is unauthorized.**

Design (Server)

Users

To set up the MySQL users that the systems require you need to enable remote access on port 3306. Then edit the *my.cnf* or *my.ini* file and comment out:

```
bind-address = 127.0.0.1
```

Once you did that you can now create two users to be controlled by the system called *sec_user* and *sec_remote*.

```
CREATE USER 'sec_remote'@'%' IDENTIFIED BY '6EU01BE6ZRb';
```

```
CREATE USER 'sec_user'@'%' IDENTIFIED BY 'AiwnMpownKE';
```

Then give the users permissions using these queries:

```
GRANT SELECT, INSERT, UPDATE, DELETE ON `Vote`.* TO 'sec_remote'@'%';
```

```
GRANT SELECT, INSERT, UPDATE ON `Vote`.* TO 'sec_user'@'localhost';
```

Then add the test user into the database using:

```
INSERT INTO `Vote`.`members` VALUES(
1,
'test_user',
'00807432eae173f652f2064bdca1b61b290b52d40e429a7d295d76a71084aa96c0233b82f1fe
ac45529e0726559645acaed6f3ae58a286b9f075916ebf66cacc',
'f9aab579fc1b41ed0c44fe4ecdbfcdb4cb99b9023abb241a6db833288f4eea3c02f76e0d3520
4a8695077dcf81932aa59006423976224be0390395bae152d4ef',
0,
9
);
```

Passwords

The username and passwords for root access to the database are as follows **(Important note: do not use this account for anything other than maintenance and to log into myPHPAdmin votemysql.citedesjeunes.ca)**:

USERNAME: marqueri_vote

PASSWORD: BB&7y?6t%5r\$4ePP

The username and passwords used by the PHP login script are as follows:

USERNAME: sec_user

PASSWORD: AiwnMpowmKE

For the C# admin panel the username and password are:

USERNAME: sec_remote

PASSWORD: 6EU01BE6ZRb

The configuration of the database should not allow remote access to *sec_user* or *root*. In the final config of the system remote access is not required, therefore making it unsafe.

FTP: vote.citedesjeunes.ca

USERNAME: manuel@citedesjeunes.ca

PASSWORD: ?54RtyHgfvbn

MySQL Database Layout

In the case of a file system corruption or accidental deletion of important tables, this section aims to help the user understand the layout of the database itself. Below is the hierarchy of the database and the type of columns.

Vote: database name

1-**candidates**: table name

|**-id**: INT NOT NULL AUTO_INCREMENT PRIMARY KEY

|**-postID**: INT NOT NULL

|**-name**: CHAR(128) NOT NULL

|**-grade**: INT NOT NULL

|

2-**login_attempts**: table name

|**-user_id**: INT(11) NOT NULL

|**-time**: VARCHAR(30) NOT NULL

|

3-**members**: table name

|**-id**: INT NOT NULL AUTO_INCREMENT PRIMARY KEY

|**-username**: VARCHAR(30) NOT NULL

|**-password**: CHAR(128) NOT NULL

|**-salt**: CHAR(128) NOT NULL

|**-hasvoted**: INT NOT NULL <-- Boolean int (1 or 0)

|**-grade**: INT NOT NULL

|

4-**post**: table name

|**-id**: INT NOT NULL AUTO_INCREMENT PRIMARY KEY

|**-name**: CHAR(128) NOT NULL

|**-grade**: INT NOT NULL

|

5-**vars**: table name

|**-voteStarted**: INT NOT NULL <-- Boolean int (1 or 0)

|**-voteStartTime**: DATETIME NOT NULL

|**-voteEndTime**: DATETIME NOT NULL

|

6-**voteHistory**: table name

|**-id**: INT NOT NULL AUTO_INCREMENT PRIMARY KEY

|**-voteTime**: DATETIME NOT NULL

|**-candidateID**: INT NOT NULL

|**-postID**: INT NOT NULL

Web server

The web server used is *Apache v2.2.22* and *PHP v5.4.41*. Whether it's Linux or Windows it doesn't matter. The setup was built on a Raspberry Pi B+ but it was designed for multiple operating systems. To install the system, copy the files of the *www* folder (<https://github.com/AideTechBot/VoteCDJ/tree/master/www>) to the web server's index. You can test if the server is working by logging in using this test user:

USERNAME: test_user

PASSWORD: 6ZaxN2Vzm9NUJT2y

Design (Client)

The client is pretty straight forward, no config required, only copying the files over FTP using the passwords on page 5. The client is made of some PHP forms sending post requests over encrypted sessions so it's not much to worry about if you don't touch the code. To access the web client, tell the voters to go to:

vote.citedesjeunes.ca

Conclusion

I would like to thank Mr. Denis Dionne for giving me the idea and encouragement for this project. For any questions or concerns about the system you can contact me at:



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Made possible by:

