**MCQ Project**

**Vision:**

Automated Votarytech-MCQ Test with random question to the candidates.

**Requirements:**

H/W Requiremet:

One Server System with Multiple clients.

Skills Requirement:

C++, XML, MySql, libXL, Socket Programming, Multithreading.

**Description:**

Client will register for the test after entering Name and Mobile no,Multiple clients can request for the MCQ test,Server will send the different questions to different client having random sequence of questions requested by each client.It has two different modules having sub modules.

**Modules:**

***Server side required modules work***

1.Reading XML configuration file to fetch parameters required for the program (**XML\_Parser.cpp**):

* Get the Excel file path.
* Collect the DB details required for communication.

2. Parsing from Excel(**Quest\_Read.cpp**):

* Get the Data from excel sheet .
* Fill the structure .

3. Writing amnd Reading from Database(**msql\_conn\_api.cpp**):

* Create the Database with name test.
* Retrive the data from the structure and write in the database.
* For every reqest read the data from the database and fill the required structure for the client.
* Writing in the database should be only once and reading will be as per request.

4. Server will recieve the entered name by clent and make logs of entered answer , correct answer and total marks scored it will name the file as mobileno\_name(first 4 character of name)

***Client side required modules work***

Its socket client program with some analytics which sends set of random number(hardcoded to 25 questions) to server and reads back respective question structre for each random no and it pops up one by one question on the terminal and collect the answer of each.Client need to enter their name and mobile no based on which server will write in common log files.At the end it sends the collected answer to the server and reads the total marks score.

**Team Size: 4**

**Time Span: 80Hrs**

**Configuration file consists of :**

<file\_name> Questions2.xlsx

<file\_path> /home/

<DB\_usr> root

<DB\_psw> votary

<DB\_ip> localhost

<DB\_name> test

**libxml++: Chetan**

**libmysqlcppconn-dev : Satish (**[mysql c++ connector](http://www.mysql.com/downloads/connector/cpp)**)**

**libxl: Kathir**

**C++ Programming with Work flow: Subhasish**

**Execution**

**-> Run the Server(MCQ) executable with arguments as configuration file,IP address and portno.**

**./MCQ <Config\_xml\_file> <IP> <Port> <Question\_Count\_To\_Display> <Question\_Range\_From\_Excel>**

**->Run Client(candidate) executable**

**./candidate**

**Note: Question count should not be greater than no of range.**

**Enhancement:**

1.In client side ,server port no and Ip address are hardcoded,it has to enhanced by command line arguements.

2.Handle the signal SIGINT

3.Stopwatch timer for the Test

4.Handle with username and password

5.Repetetion of same username with multiple attempts of thetest to be avoided

6.Configurable parameter

>Test Duration

>No of Questions

>No of participant

>Choices to be added

7.Handling SIGSTOP(ctrl+z) signal

8.GUI Enhancement

9.Backword and forward traversal of questions

10.Categorization of Questions with section wise.