Virtual Classroom

(Android Application for Accessing Server using Wi-Fi Services)

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Abstract:

Virtual Classroom is an Android Application which establishes a network between the mobile device and server. Using this application user can access the videos and the files stored on the server. The medium to access the recourses is Wi-Fi. This would create a new revolution in Indian Education.

Index Terms— *Android, Mobile Application, Smart Phone, Wi-Fi, External Storage, JSON Parser.*

1. INTRODUCTION

Virtual Classroom is one of the education based tool developed on Android platform that helps in enhancing the level as well as provide ease in spreading knowledge based information to the students in no matter of time. The mode of retrieving information is Wi-Fi i.e. the connection with the established server. With the rapid growth of smart phones in India this idea will surely adhere to its main issues.

Using this android application a user can stream in the video lectures present in the server with which it is connected. One needs to enter the desired login constraints in order to gain access to the server. The only criteria it should match are that the given server is in the range of Wi-Fi network. After establishing the secure connection user can see the list of the video lectures currently present in the server.

2. EXISTING SYSTEM

In present there are various website like "youtube.com" which provides the facility to access the videos. For which the user must have the Internet available on his/ her device that may be Mobile Phones or the Computer System.

The physical presence to the system is needed which may feel cumbersome to the user. The user have to watch the videos present on the site which compulsorily requires the internet connection, even if the user wants to download those videos there is the issue of the storage space required.

3. PROPOSED SYSTEM

To overcome the above problems the proposed system has been developed, the implementation of the system uses the Wi-Fi services which gets connects to the server with authenticating the credentials of the user which has the stored videos and study materials like PPT's and PDF's.

The user has to register himself/herself after which the automatic ID will be generated through the internal implemented logic, using which the user can login and connect to the system, according to the data provided by the user the videos are differentiated with respect to the year, branch and subject, the list is been provided of their respective subject video list after which the user can play the videos through Wi-Fi.

The facility has been provided to the Staff in the system to upload, remove the videos, various data on the server or to make changes.

4. LITERATURE SURVEY

In the present scenario, there is considerable development in the accessibility of resources. The information sharing and internet facilities have embarked their presence in the current prospective Wi-Fi, a type of IEEE 802.11 WLAN (Wireless Local Area Network) that is a name for Wireless Fidelity defined by Wi-Fi Alliances. It is designed for cable replacement in corporate environment, providing IP connectivity.

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5. METHODOLOGY

5.1 Proposed Work

Virtual Classroom would definitely provide new revolution in our education system scenario. The portability it provides is beneficial from student's point of view. The feature it has makes it a better education tool for students.

The methods that will be implicated are useful for learning and saving time and effort. The application provides a real time streaming of video and is portable so the range within which one can operate is reasonable.

The Student can have the facilities of getting the other resources like PDF's and PPT's required for the academic education. The use of this application will embark a true mark in the education society and then learning would be affordable to distances.

Basic implementation of the application comprises of the following desired tasks. Starting with the feature that is the basic idea for the application prototype is video streaming from the server which is at the same network of android mobile client.

Basic implementation of this software can be summarized in following lines. Basically after installing the android application connects with the same network through which server is connected, on server video, lectures are stored. When you first start the application it will show the different users to which particular user will login using ID and password. As per the request the different screens will be displayed to particular user.

The tasks are developed using the tools like Eclipse, Android Development Tools, MySQL Database, Wi-Fi and JAVA language.

5.2 Design Approaches

5.2.1. DFD Level 0:-

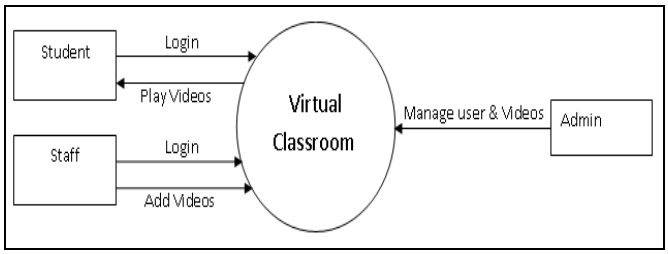

Figure 5.1 DFD Level 0

5.2.2 DFD Level 1:-

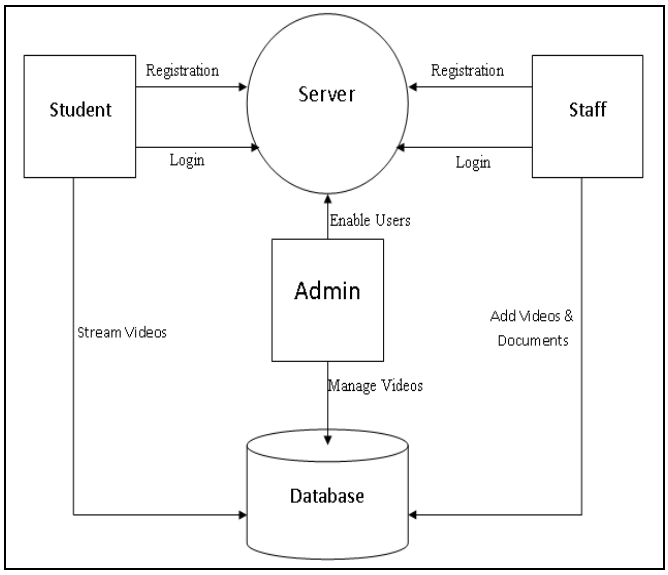

Figure 5.2 DFD Level 1

5.2.3 Sequence Diagram:

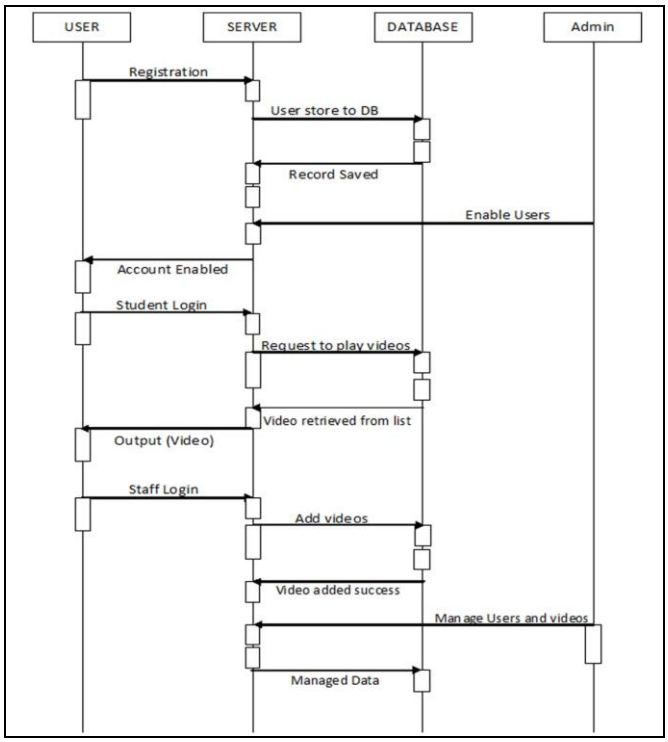

Figure 5.3 Sequence Diagram

5.2.4. Use Case Diagram:

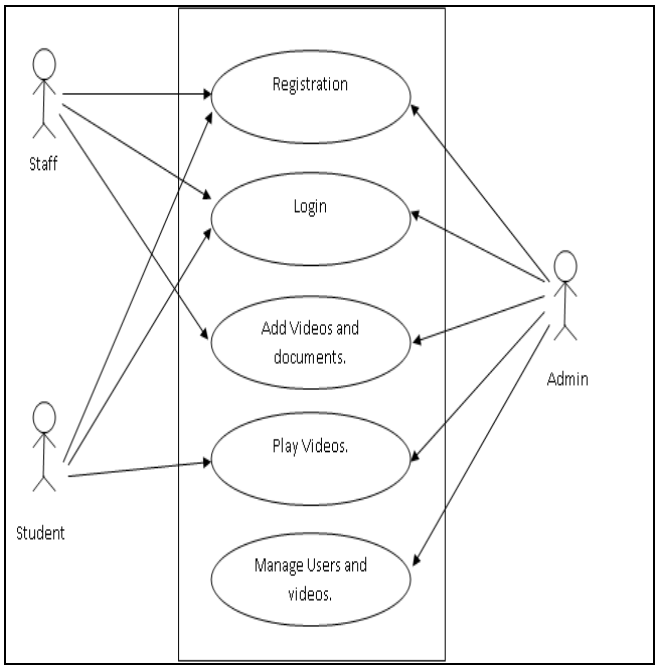

Figure 5.4 Use Case Diagram

5.2.5 Class Diagram:

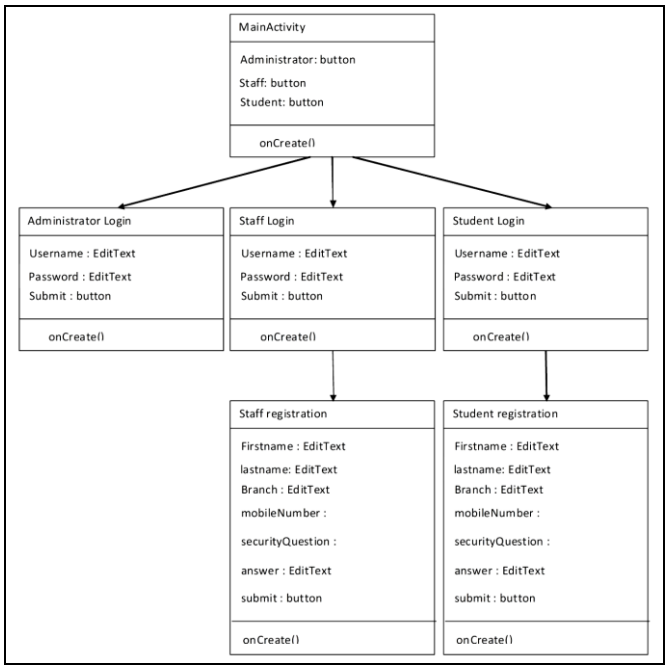

Figure 5.5 Class Diagram

6. CONCLUSION

Virtual Classroom would definitely provide new revolution in our education system scenario. The portability it provides is beneficial from student's point of view. The feature it has makes it a better education tool for students.

In the first phase of the project we have completed nearly two modules. The first module is for the registration of the user and generating the unique use ID and the second module is for the login. These all developed modules work fairly using the Wi-Fi services as decided. In this phase the connection to the server was a challenging task which was done using the JAVA JSON Parser code.

In the second phase we will be working for the remaining modules which will show video list according the user branch and streaming it live on the devices which have the application installed through the Wi-Fi services. In this phase will be streaming the live videos from the server.

Finally we can conclude that the use of this application will embark a true mark in the education society and then learning would be affordable to distances.

7. REFERENCES

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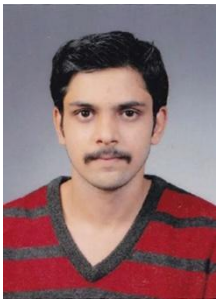

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