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UseofJMEforStudentInformationAcquisition.

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***Abstract*— The term student info acquisition using J2ME is often used in Mobile Technology. The project is a GPRS/J2ME based application. This project uses J2ME and java technology for the process.J2ME is used for mobile and java is used for PC. The records are maintained in the computer using java and My SQL. Users register themselves with the GPRS network by entering their ID the Information Lists are generated by the Server displayed on the Mobile of User. Two factor authentications is a mechanism which implements mentioned factors and is therefore considered stronger and more secure than the traditionally implemented one factor authentication system.**

1.INTRODUCTION

The Main Aim of the Project is to acquire Information from the Server.User can Login on a Server using internet/GPRS with his/her Mobile and Retrieve the Exam and Personal Information.For security purpose at admin end we will be providing two factor authentication in which admin will be **giving a second password by voice.**By definition, authentication is the use of one or more mechanisms to prove that you are who you claim to be. Once the identity of the human or machine is validated, access is granted.

Three universally recognized authentication factors exist today: what you know (e.g. passwords), what you have (e.g. ATM card or tokens), and what you are (e.g. biometrics). Recent work has been done in trying alternative factors such as a fourth factor, e.g. somebody you know, which is based on the notion of vouching. **Two factor authentications** is a mechanism which implements two of the above mentioned factors and is therefore considered stronger and more secure than the traditionally In Proposed system, while admin login process admin will be asked to enter username and regular password after that he will be asked for his registered voice password. This act as second way of login which improves the security level.

2.MOBILE APPLICATION:

Most mobile applications use the Java Micro Edition (Java ME) platform, which was developed for small devices like mobile phones, but is now used on a wide variety of devices. Java ME uses scaled down subsets of Java SE components, virtual machines and APIs. It also defines APIs that are specifically targeted at consumer mobile and embedded devices. NetBeans with Java ME supports two base configurations of the Java ME platform and two additional mobile and embedded platforms:

- **Connected Limited Device Configuration (CLDC)** is for devices with less memory and processing power than CDC-based devices. The Mobile Information Device Profile (MIDP) is based on CLDC and billions MIDP devices are in use worldwide.
- **Connected Device Configuration (CDC)** is for devices with much greater memory, processing power and network connectivity such as smart phones, set-top boxes, and embedded servers and devices.
- **Java Card platform** is now supported in NetBeans and enables application development for smart cards and other microdevices.

3. WEB APPLICATION:

A Java web application generates interactive web pages containing various types of markup language (HTML, XML, and so on) and dynamic content. It is typically comprised of web components such as JavaServer Pages (JSP), servlets and JavaBeans to modify and temporarily store data, interact with databases and web services, and render content in response to client requests.Because many of the tasks involved in web application development can be repetitive or require a surplus of boilerplate code, web frameworks can be applied to alleviate the overhead associated with common activities. For example, many frameworks, such as JavaServer Faces, provide libraries for templating pages and session management, and often promote code reuse.

Java EE (Enterprise Edition) is a widely used platform containing a set of coordinated technologies that significantly reduce the cost and complexity of developing, deploying, and managing multi-tier, server-centric applications. Java EE builds upon the Java SE platform and provides a set of APIs (application programming interfaces) for developing and running portable, robust, scalable, reliable and secure server-side applications. Some of the fundamental components of Java EE include:

- Enterprise JavaBeans (EJB): a managed, server-side component architecture used to encapsulate the business logic of an application. EJB technology enables rapid and simplified development of distributed, transactional, secure and portable applications based on Java technology.

- Java Persistence API (JPA): a framework that allows developers to manage data using object-relational mapping (ORM) in applications built on the Java Platform.

JavaScript is an object-oriented scripting language primarily used in client-side interfaces for web applications. Ajax (Asynchronous JavaScript and XML) is a Web 2.0 technique that allows changes to occur in a web page without the need to perform a page refresh. JavaScript toolkits can be leveraged to implement Ajax-enabled components and functionality in web pages.

4. JAVA SPEECH TO TEXT API :

Java API is not but a set of classes and interfaces that comes with the JDK. Java API is actually a huge collection of library routines that performs basic programming tasks such as looping, displaying GUI form etc.

In the Java API classes and interfaces are packaged in packages. All these classes are written in Java programming language and runs on the JVM. Java classes are platform independent but JVM is not platform independent.

Speech Recognition is the process of converting spoken input to digital output, such as text.

Speech recognition systems provide computers with the ability to listen to user speech and determine what is said.

The Speech Recognition process can be divided into these four steps:

1. Speech is converted to digital signals.
2. Actual speech sounds are extracted from the sounds (based on energy of the sounds).
3. The extracted sounds are put together into 'speech frames.'
4. The speech frames are compared with words from the grammar file to determine the spoken word.

This API is designed to be simple and efficient, using the speech engines created by Google to provide functionality for parts of the API. Essentially, it is an API written in Java, including a recognizer, synthesizer, and a microphone capture utility.

The API currently provides the following functionality,

- Microphone Capture API (Wrapped around the current Java API for simplicity)
- A speech recognizer using Google's recognizer service
    - Converts WAVE files from microphone input to FLAC Retrieves Response from Google, including confidence score and text.
- A speech synthesizer using Google's synthesizer service
    - Retrieves synthesized text in an InputStream (MP3 data ready to be played)
- Wave to FLAC API (Wrapped around the used API in the system.

5. CONCLUSION:

This paper shows that how a system can implement a java based font end that could be used to interact with the database. The paper also shows the basics of a java mobile application and the use of J2ME in that. The working of the java speech to text API is explained in a manner which shows the basics steps involved in converting the speech to text.. The API explains the use of the synthesizer and the grammar file. Further extensions to this system can be made required with minor modifications.

6. REFERENCES:

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