

EFFICIENT QUERY PROCESSING IN PAYMENT APPLICATION MODULE

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Abstract: This is a web-based relevance. In this paper we will be maintaining the complete details of the college through online i.e. maintaining the scholar data, management statistics, hostel data and also generate the reports. Student data like hostel listing and payment maintenance. Administration details like course details, information of student registration, fee information, assessment information, records reports etc. Career finder is a set of separate products for users of all ages with some beleaguered specifically for students in school. The products have been urban for persons to work through at their own swiftness. teacher and facilitators guides are provide and outcome mapped to the prospectus learning outcomes. Institution of higher education has a large number of students who pay all the university fees through hard cash deposits, electronic resources transfer or bank draft to the university's accounts in explicit bank branches. These method of paying fees have not been proficient enough especially during periods of tests and examinations when most of the students are paying fees to meet the necessities for entering examination rooms. The process of paying fees is characterized by long queue, too much in the making by students and overcrowding at banks where payments are made. It was upon such environment that the researchers embarked on the project to develop of a substitute system that enables online fees payment by students.

Index Terms: management, Career finder, curriculum learning, and substitute system.

I. Introduction

The project patrician as “EFFICIENT QUERY PROCESSING IN PAYMENT APPLICATION MODULE” is a web based application. An organization have different branches at poles apart locations want to control and uphold the accountant earnings and student personal and payment particulars. Web application provides capability for exposure, new student particulars, payment particulars, and adapt details of student and salary of the accountant. It allows you to make payment of your fees in your individual currency giving you transparency and a clear understanding of the cost of course fee. Make the payment using internet or mobile banking or at your bank. Ensures that 100% of the funds transfer reach the college and that no exclusive bank charges are deducted that may holdup your registration. Ensures that the payment can be easily recognized and allocated by the College generous you peace of mind. It is a secure and quick way to make the transfer ensuring that the College receives the payment at the appointed time. You will be notified upon proof of payment.

With the cutting edge expertise advancements in wireless and mobile computers, the query processing in a mobile surroundings has become the major research area. A mobile database is the one which can be connected to a mobile computing mechanism over a mobile set of connections. The mobile user and the back-end database server commune over wireless connections. Thus enabling the access to data at anytime and from any place. The aim of this paper is to describe the basic query processing mechanism in any database and show how data is coordinated between the mobile and backend databases. In Mobile background client and server are based on wireless connection. Using Mobile database Technology the user recover any type of information. Mobile database support client-server model, Peer-Peer model, Distributed server model. In client server model the server can become a single point of failure means that affect entire presentation. The problem of data contradiction occurred. In Peer-Peer database information are disseminated among all the clients. The most important issue in Peer-Peer environment is ensure about ease of use of preferred information.

In Mobile Database management mobile client needs small reminiscence for foot print, blaze optimized storage system, Data synchronization, security, and Low power utilization. Most of the mobile based application uses flat files to store information in the claim. Flat file is a one type of file contains compilation of record information. The challenge in mobile database are inadequate resources, power expenditure, restricted storage, and limited battery. Database Query processing refers to the set of actions in retrieving data from a database. Before handing out a query, database system must decode this query into usable appearance. The translation job is performed by a query Parser. Linear search, index based search algorithms are worn in mobile database query processing. Based on these technologies query optimization Minimize the cost of query can be evaluated.

II. Literature Survey

Literature review is the process of presenting the summary of the journal articles, conference papers and study resources. So in this section we have studied the related topics and summarized it below.

Naoual MOUHNI, Abderrafiaa EL KALAY, studied the existing projects that treat the query processing problem across heterogeneous data sources are considered. Example of some existing query processing architecture are discussed in this paper: XQuery Based processing system, OBSERVER to support Query processing. In this paper new track of research have been

discovered to optimize and improve existing systems and algorithm for data cleaning and query processing to meet the new data environment requirements such as handling big amount of data in an efficient way, integrate data from different data domains and eliminating duplicate data in case of big data sets with the minimum loss of information by improving the learning machine algorithms and minimizing the human intervention.

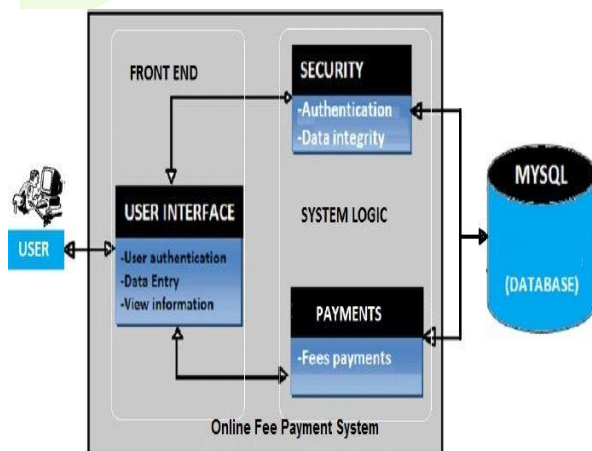
Continuous query and query optimization over data streams have become a hot spot in database research [HSU1999]. Series of continuous and orderly data produced in financial information monitoring, network monitoring, security, web applications manufacturing, telecommunications data management, sensor networks are called data streams [CEV1997]. It has the characteristics of great magnitude changing, frequently limiting the time for query. Therefore, it is difficult to control the order in which it flows out and it is impossible to save all the data. Thus, its query and storage must be converted from a traditional mode to a new method namely continuous query and dynamic processing historical data. There is much difference between the query of data stream and the query of conventional database. On the one hand, the query of data stream is real-time and permanent. It is an plan process which returns the query consequence along with the onset of data. On the other hand, its query is changeable while the arrangement of database is known in customary database which can be familiar dynamically by the size of the database. on the other hand, the data of data stream is changing constantly. The optimization of query must be processed energetically and the query results are estimated. It is impossible and pointless for the data to be processed in particular.

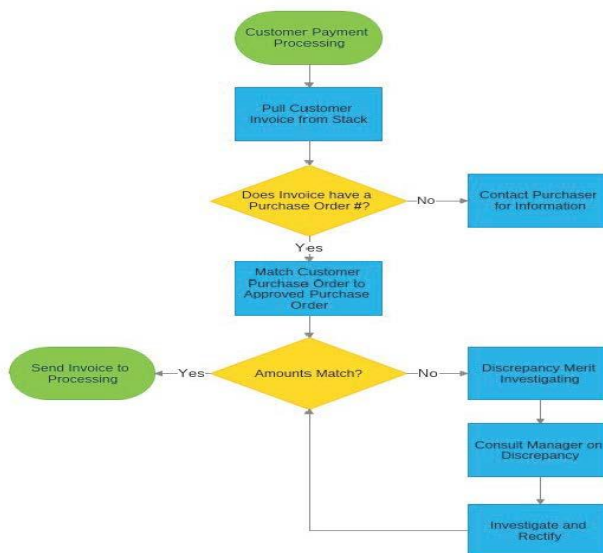
III. Overview of the system

The client-server model is a distributed application structure that partitions tasks or workloads between the providers of a resource or service, called servers, and service requesters, called clients. Often clients and servers communicate over a computer network on separate hardware, but both client and server may reside in the same system. A server host runs one or more server programs which share their resources with clients. A client does not share any of its resources, but requests a server's content or service function. Clients therefore initiate communication sessions with servers which await incoming requests. Examples of computer applications that use the client-server model are Email, network printing, and the World Wide Web.

When a bank customer accesses online banking services with a web browser (the client), the client initiates a request to the bank's web server. The customer's login credentials may be stored in a database, and the web server accesses the database server as a client. An application server interprets the returned data by applying the bank's business logic, and provides the output to the web server. Finally, the web server returns the result to the client web browser for display. In each step of this sequence of client-server message exchanges, a computer processes a request and returns data. This is the request-response messaging pattern. When all the requests are met, the sequence is complete and the web browser presents the data to the customer.

Mobile database are the database that allows the development and deployment of database applications for handheld devices, thus, enabling relational database based applications in the hands of mobile workers. Using Mobile Database Technology allows users to download and upload data and collect information. These databases work on Palm top and hand held devices providing a local data store for the relational data acquired from enterprise SQL databases. The main constraints for such databases are relating to the size of the Program as the handheld devices have RAM oriented constraints. In mobile environment, elements of the network are volatile and can move very dynamically. Consider a database representing information about moving objects and their position. For example, a mobile user looking for a hotel will obtain different results based on the time and the place he/she issued the query. As the location of other devices changes with respect to other entities and data sources it may not be possible to collect information about available data sources at any given point of time. The following figure shows a mobile environment with databases.





IV. Methodology

Node js: Node.js uses an event-driven, non-blocking I/O model that makes it lightweight and efficient, perfect for data-intensive real-time applications that run across distributed devices.

React js: React is a front-end library developed by Facebook . Allows us to create reusable UI components.

Postgres : As a database server, its primary functions are to store data securely and return that data in response to requests from other software applications. It can handle workloads ranging from small single-machine applications to large Internet-facing applications with many concurrent users.

Sequelize : it is a promise-based ORM for Node.js v4 and up. It supports the dialects PostgreSQL, MySQL, SQLite and MSSQL and features solid transaction support, relations, read replication and more.

Modules:

1. Login: there are three options to choose from like admin,mentor,student.by selecting any one of the option they can continue with the module.
2. Home:this is the main page of the application module,from where we can login to our account.
3. Adding students:we can add students in two ways like adding them on by one or adding them in bulk like 500 students at a time.
4. Student details:all the student details will be maintained by the admin or the mentor,for example if the student has paid the exam fee or not ,if he has not paid then his name will be sorted into pending list.
- 5.Adding courses module:as university contains many courses and separate fees. We need to mention for which course we are paying the fee.
6. Payment module: this is where the username and password is given in order to continue the payment.there is a start up called insta mojo which is linked to the module through which payments can be done easily.
7. Update or edit:there will be many students who will be joining the university,there details can be added accordingly and the existing students details can be edited in case of change of number or change of address .

V. Result and Discussion

In order to overcome the drawbacks in existing system we developed a new online transfer system. It is very easy and time saving process. In this project, we give access to three users i.e. Admin,Student and mentor.This project is based on client-server model.It is a two tier architecture.Each user will have their own enrollment number and password for login. Operations such as checking the balance , transferring the amount by the user with the help of basic details like their account number,user name and password.

VI. Conclusion

The project sought to develop an online fees payment system that provides relief of the long endured problems of the current modes. of paying fees in University. Problems that students and their sponsors faced regarding paying fees to the university were identified and a solution was designed. Researchers developed a web based system that enables students and their sponsors to pay university fees from wherever they are using credit and debit cards. This system was welcomed by all its users who believed it would solve most of the problems and improve conditions regarding paying fees in University.

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