SYSTEMS AND METHODS FOR AUTOMATED ADMISSION ALLOCATION SYSTEM USING DISTRIBUTED ARCHITECTURE

FIELD OF THE INVENTION:

This invention relates to the field of Education and Academia.

BACKGROUND OF THE INVENTION:

In the present art, systems and very primitive and are known to have following disadvantages:

1. The current system in place is laborious wherein applicants have to fill up and submit physical application forms.
2. The authority has to accept and keep a track of all the applications manually which leads to wastage of multiple valuable resources like manpower, time and paper.
3. All the automated systems available or proposed do not allow seamless allocation of admission seats over multiple rounds.
4. The database for storing records is centralized and leaves the system vulnerable via Single Point of Failure.

Thus there is a need to address the above mentioned disadvantages. The present invention aims to address the above mentioned disadvantages.

REVEIW OF PRIOR ART SEARCH

It is observed that this process of seat allocation is being done manually at multiple places. There exists automated versions of the process. But any such system proposed until now fails to address the issue of Single Point of Failure. If the centralized server was to crash, the entire system would fail and risk the crucial process of admission. Thus the proposed systems fail to be fault tolerant. They also lack in providing facility of conducting multiple admission rounds in series if the authority decides to conduct. Thus, it is apparent that the current system in not seamless. Specifically, after submission of the application form, the applicant is forced to visit the authority office for the payment of processing charges. This fails to full take advantage of having digitized forms. Summary of the survey suggests that this process have a lot of scope for further exploration. This process – being highly repetitive – can be automated further for efficient working.

SUMMARY OF THE INVENTION:

The present invention in a preferred embodiment provides systems and methods involving:

A system for stream allocation of students for admissions. This is based on students' merit and the stream preferences entered during application. The applicant pays the required processing charges through the integrated payment gateway. The system also lets the authority conduct further allocation rounds by asking students to 'Freeze' or 'Float' the seat if allocated. Algorithm that will be used to find a stable match between students and streams is Gale Shapely.

A distributed system will be used to ensure that the system is fault tolerant. The large amount of data that will need to be stored and accessed by the application will also need to be maintained for further integration with college formal records. In this case, if the centralised database fails, all records will be lost and we will be unable to recover them.
Another important factor is the storage capacity. For the distributed system, we can define the space required for each node as and when required.

A NoSQL database will make the system more flexible and provide more abstraction. Using the concept of Sharding, a distributed environment will be setup.

The present invention in a preferred embodiment provides systems and methods involving:

A method for

a) Applying for admissions
b) Finding a stable match between students and streams
c) Conducting multiple admission rounds

BRIEF DESCRIPTION OF THE DRAWINGS:

Figure 1 provides an example of the flowchart of the invention

DESCRIPTION OF THE INVENTION:

In accordance with an embodiment of this invention, Figure 1 shows the system block diagram of the process flow of the system.

The input is taken from the student applicant. This includes the student's academic details and stream preferences. This data is stored in a distributed database. The authority then chooses to conduct the admission round by entering the round details and vacant seats in each stream. When the allocation algorithm is run, seats are allocated to students based on their merit and entered preferences. The authority can also decide to conduct further allocation round. The students, in such a case will be expected to choose an option of 'Float' od 'Freeze' their current allocated seat. Principles of atomicity, consistency, integrity and durability will be maintained throughout the process under a distributed system.

ABSTRACT

SYSTEMS AND METHODS FOR AUTOMATED ADMISSION ALLOCATION SYSTEM USING DISTRIBUTED ARCHITECHTURE

The invention is an application developed to manage the admissions of an institute across all its branches/streams. The system encompasses all the subprocesses that are involved in the admission process. The application can be used by both students and the institute administrative personnel. Institute administration needs to keep a record of all the students enrolled for the administrative process, which would result in an extremely large database. To improve processing capability and reliability, a distributed approach is used to store the records of students. Both users interact with web interfaces to access the application. Current status of admission process is also accessed through the application. This system ensures reduction of wastage of resources like time, manpower and physical resources like paper involved in the traditional method, and provides an easier and more efficient alternative.

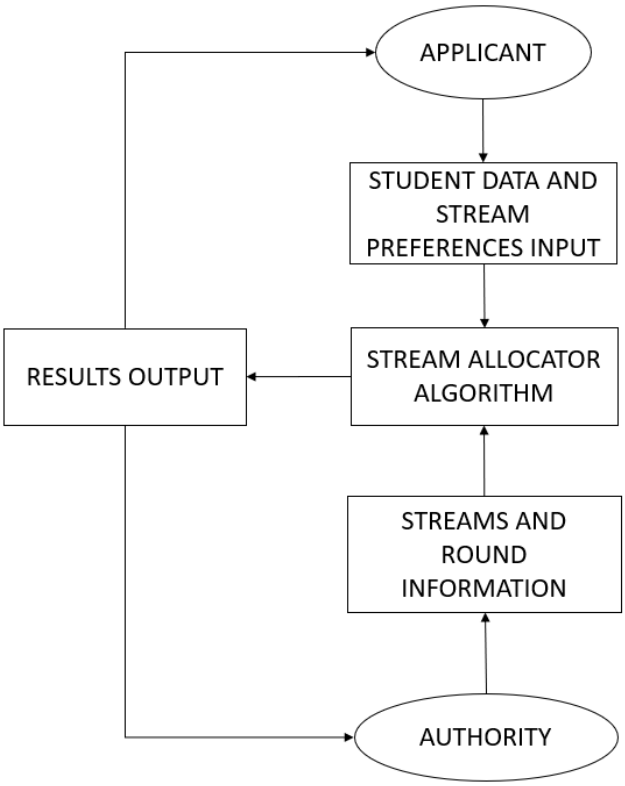

FIGURE 1

Signature

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