PROJECT PROPOSAL FOR CS 632

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TEAM DETAILS:-
BIDYA SARLAR(18111011)
NIRJHAR ROY(18111409)

TITLE- Implementation and design of a student database using the concept of Compact Distributed Objects.

INTRODUCTION- There will be main centralized database comprising details of students. The client requests for database services are supplied in form of compact objects which contains the mutable and nonmutable fields, permitted mutating operations on data with range checks, last modified, version number, and any other field which can be used to store log for the purpose of recoveries. The client gets the object and operates on the field as per specification and returns the same to the servers. Server will resolve the non conflicting updates and will only perform only the non conflicting updates in the main database. Conflicting updates will be stored in server logs.

MODULES TO BE IMPLEMENTED:-

1) Create new Data
2) Update Existing Data
3) Delete Data
4) Read/Fetch data
5) Handle Conflicts
6) Send Data to clients
7) Receive client requests
8) Different types of error handling(due to network issues, data issues)
9) Object compaction/wrapping
10) Object serialization and de serialization.

PLAN OF ACTION

1) We will be designing the database using oracle db.
2) Fill in with random data.
3) Writing the code for serving different client requests in form of compact objects.

4) Developing the client side using java to make requests to the centralized database.
5) Testing the system with multiple clients

TOOLS AND LIBRARIES TO BE USED:-

1) Protobuff 3 for serializing and deserializing of objects.
2) Java RMI for network communication
3) Oracle Db for database
4) Java with SDK 1.8 for programming.