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Deccan Education Society’s

Fergusson College (Autonomous), Pune.

**Department Of Computer Science**

CERTIFICATE

This is to certify that the project entitled

**“Database System”** Submitted By

1. dagde Suresh Laxman (Roll.NO.1521)

2. Jadhav Sudhakar Baban (Roll.NO.1558)

In partial fulfillment of the requirement of the completion of M.Sc. (C.S)- II [Semester-III], has been carried out by them under our guidance satisfactorily during the academic year 2018-2019.

Place: Pune

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**Head of Department**

**Department Of Computer Science**

**Fergusson College, Pune.**

**Project Guide:**

1. **Mrs. Arati Nimgaonkar**

**Examiners Name Sign**

**1.**

**2.**

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Introduction:-

If we are going to study about existing system there are lot of examples like Mysql, MongoDb,Oracle,DB2.we are trying to create our own database management system in a very simple way and its easy to understand and use.

1. There are many database management system are available in the network.
2. But when we are using those DBMS we have to know the system of DBMS and its structure.
3. Our system will provide you easy way to maintain and manipulate the database.
4. They ensure the integrity, consistency, automasity.
   1. Overview
      1. Existing System:-

There are lot of database management system in the network and each DBMS has its own structure and queries.

When we are working with RDBMS there are having a relation of table, rows and columns but this system is relational.

Existing system is fixed structured system that is its a fixed attributes with care of Datatype.

* + 1. Need of the System:-

**Schema less:** Searcher is a document database in which one collection holds different documents.

Number of fields, content and size of the document can differ.

**No complex joins:** Deep query-ability.

searcher supports **dynamic queries** on documents using a document-based query language that's nearly as powerful as SQL.

Uses **internal memory** for storing the (windowed) working set, enabling **faster access** of data.

* + 1. Overview of the Project:-

**Searcher:-**

Searcher is a cross-platform, document oriented database that provides, high

performance, high availability, and easy scalability.Searcher works on concept of

collection and document.

**Database:-**

Database is a physical container for collections. Each database gets its own set of files on the file system. A single Searcher server typically has multiple databases.

**Collection:-**

Collection is a group of Searcher’s documents. It is the equivalent of an RDBMS table. A collection exists within a single database. Collections do not enforce a schema. Documents within a collection can have different fields. Typically, all documents in a collection are of similar or related purpose.

**Document:-**

A document is a set of key-value pairs. Documents have dynamic schema. Dynamic schema means that documents in the same collection do not need to have the same set of fields or structure, and common fields in a collection's documents may hold different

**Syntax**

Basic syntax of use DATABASE statement is as follows:

**1)create login :-**

Create the login to your database.[must be need to login to database];

Example

You can change the login.

>>create login

NOTE:screate the login and must be remember the username and password

enter the UserName:suresh

enter the password:

conform the UserName and Password

Confermation:enter the UserName:suresh

Confermation:enter the password:

**Your Login Created Succesfully**

**2)change login:-**

Change the login [username,password]

Example

>>change login

enter the old username: suresh

enter the old password:

you can change

enter the new username:fergusson

enter the new password:

conform the UserName and Password

Confermation:enter the UserName:fergusson

Confermation:enter the password:

**login changed successfully**

**3)connect:-**

Database Connectivity,Login to use searcher ‘s(database) servise

Example

>>connect

enter the username:fergusson

enter the password:\_\_\_\_\_\_\_\_

**connection establised succesfully.**

**4)disconnect:-**

Disconnect Database Connectivity.

Example

>>disconnect

**disconnected**

**5)help:-**

Syntax and command help

Example

>>help

**1)create login --> create login for user database**

**[NOTE:you need to remember the login to connect the database ]**

**2)change login --> to change the login**

**[NOTE:you can not change**

**the login withaout the previouse login**

**.............and much more**

**6)help any\_syntax:-**

Help related to specific command

Example

>>help connect

**connect : to connect the database ;**

**7)create db db\_name:-**

create the new database

Example

>>create db Bank

**Database created succesfully**

**8)show dbs:-**

Dispay the all databases,If you want to check your databases list, use the command show dbs.

Example

>>show dbs

**Bank**

**9)use DATABASE\_NAME:-**

If you want to create a database with name <Teacher>, then use DATABASE statement

would be as follows:

Example

>>use Bank

**mount**

**10)**[**db:-**](db:-)

To check your currently selected database, use the command db

Example

>>db

**Bank**

**11)rm db db\_name:-**

remove the database (imcomplate)

Example

>>rm db db\_name

imcomplate output;

**12)rm db all:-**

remove all databases

Example

>>rm db all

incomplate

**13)insert collection\_name {attribute1:value1,attribute2:value2,attribute3:value3}**

collection is automatically created and record is stored in collection

Example

>>insert Teacher {name:suresh,add:pune,salary:50000}

content in the file look like

name add salary

suresh pune 50000

>>insert Teacher {name:ramesh,add:latur,salary:60000}

content in the file look like

name add salary

suresh pune 50000

ramesh latur 60000

**14)show c:-**

Display all collection in the switched database

Example

>>show c

village

school

Teacher

**15)select collection\_name \***

dispaly the all content of collection

Example

>>select teacher \*

name add salary

suresh pune 50000

ramesh latur 60000

**16)rm c collection\_name**

remove the collection from the swiched collection

Example

>>rm c Teacher

Teacher collection deleted successfully.

**17)rm c all**

Remove the all collection from the swiched collection [need to login for security purpose]

Example

>>rm c all

>rm c all

enter the username:fergusson

enter the password:

connection establised succesfully

Removed Successfully

**18)find collection\_name value\_to\_search**

find the value in the collection

Example

>>find Teacher suresh

suresh pune 50000

**19)find collection\_name value\_to\_search limit**

find the limited value in the collection

Example

>>find Teacher suresh 1

suresh pune 50000

**20)count collection\_name**

Count of the record in the collection

Example

>>count teacher

3

**21)h**

check the command history

Example

>>h

h

rm c all

rm c Teacher

select Teacher \*

show c

connect

**22)c**

check the last command

Example

>>c

h

**23)c n**

check last n command

Example

>>c 4

h

c

rm c all

rm c Teacher

**24)r all**

clear the history

Example

>>r all

clear history

**25)r**

remove the last command from history

Example

>>r

r all removed from history

.

* 1. Detail description of hardware and software requirement

For running the developed system, the following specification of the Hardware and Software including operating system is required

**Hardware specification**:

Standard computer With PC 386/486/Intel/Pentium inside TM

Processor Speed 133 MHz or greater.

4 GB RAM or greater

**Software Specification**:

Ubuntu as Operating System16.04LTS

Sublime Text editor

command prompt

1. System development lifecycle
   1. Requirements from user:-

This system is single user system having login in system.

Without login user cant access the database.

Follow the syntax and rules correctly.

If any problem occurs use the help command

* 1. Feasibility study:-
     1. Technical feasibility:-

It is the study of hardware & software i.e. technical requirements of the system in order to inform the management & end user about the requirements of technical resources. The system is technically feasible. No additional software or hardware is required for the implementation, as the system is developed using Java JDBC, HTML Technology as front-end tool & Oracle DB as back-end tool.

* + 1. Operational feasibility:-

It is the most frequently used technique for evaluating the effectiveness of the proposed system. The most commonly known as cost/benefit analysis. It determines the benefits & savings that are expected from the proposed system & compare them with costs. The system is economically feasible since it would not entail additional hardware or software thereby savings on the costs.

* + 1. Time Feasibility:-

It is mainly related with the human factor. It checks the operating environment of the proposed system. Since the proposed system is computerized, it is finding that the system is very easy to use. There is no need of expert person for handle it. Therefore our system is operationally feasible.

* 1. Testing
     1. Importance of testing:-

Once a system has been changed, it is necessary to undergo an exhaustive testing before implementing the system. This is important because, in some cases, a small system error, which is not detected and corrected early before installation, may implode into a much larger problem later on. Testing is classified into two types:

1. Types of testing(testing which are performed for your project):-

## **i) Logical Testing**

As per the logical testing is concerned, the project is tested fully with the help of logical flow of the data. In this, we are checking whether we are getting the required output or not. If the required output is matching with the expected output, then only we can declare that the system is working properly.

While entering records in the database, a unique key is necessary. If primary key is not given or wrong values are entered, an error occurs. So in this system, the user\_name is the primary key, which is unique for every user. This primary key is used in other tables as foreign key so there will be no confusion.

## **ii)Error Testing**

All the errors in our system (if any) should be tested with the help of an error test. Here we have to check if some data is missing or is not linked properly. All such types of errors must be taken care of in the system.

After completing these two types of testing, the system is supposed to be logically fit for the further process.

1. Drawbacks and limitations of our project
2. The user must know the proper commands.
3. Database connectivity
4. security
5. Future enhancement and conclusion
6. System could be modified if the users are suggest.
7. In future we provide a facility to give the high security, database connectivity.
8. Additional commands.

Bibliography

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