Project :

GYM management system

Group members :

Zubair , Wahab ,shafiqullah

Faculty :

6ᵗʰ semester , computer science , Kandahar

Lecturer :

Ahmad shakir naeemy

Course :

Advanced java programing

INTRODUCTION OF THE PROJECT

This project will be designed to facilitate a gymming and fitness center to automate its operations of keeping records and store them in form of a large and user friendly database further facilitating easy access to the personnel.

OBJECTIVES OF THE PROJECT

What is the Problem?

1. Existing system is manual.

2. Time consuming as data entry which include calculations take lot of time.

3. Searching is very complex as there would be 1000's of entry every year.

4. The proposed system will be expected to be faster than the existing system.

5. The Project is made in order to effectively and efficiently cater to requirements of the fitness center. Very frequently the person who generally holds the tasks to manage the center needs to keep records of all the transactions as well as data   manually. Generally, in order to structure these tasks Separate Registers are maintained. This whole process thus becomes quite cumbersome for them to control manually. Moreover, any wrong data entered mistakenly can brings serious results.

6. This Manually Managed system of the fitness center is also heavily proned to data loss due to certain causes Misplacement of Registers, Destruction of Registers, Unauthorized access to registers etc. which can bring in disastrous Consequences.

7. The cost of maintenance of data and records of occurrence is so though and head ache.

8. Searching a particular data specific to particular requirements is also very tedious in such system. In order to retrieve records, The responsible person needs to manually locate the appropriate register and locate the appropriate placement of that particular record which may be very time consuming.

9. Data redundancy is also a great issue in such kind of system. "redundancy" means repetition; Thus, data modified or updated at a particular place may not be data modified or updated at the other related place which may create inconsistencies in data handling, Destroys Data Integrity and creates confusion for the owner.

System requirments

- **<u>Module 1: Member's Module</u>**

    In this module, owner can insert, update ,delete a member in the system and Owner can see the membership details which includes :

    ➢ MEMBER DETAILS
    - i. Member id
    - ii. Name
    - iii. Gender
    - iv. Address
    - v. Date of birth
    - vi. Phone number
    - vii. Photo
        Fingerprint

    ➢ MEMBERSHIP DETAILS
    - i. Membership type
    - ii. Expiration date
    - iii. Due date
    - iv. Amount Due
    - v. Amount Paid
    - vi. Days late
    - vii. Balance

- **<u>Module 2:Employee's Module</u>**
    In this module owner can insert ,delete , update , search an employee and owner can see the employee details including the fields:
    1. ID
    2. Name
    3. Gender
    4. Address
    5. Date of birth
    6. Phone number
    7. Payroll calculation
        - i. Pay date
        - ii. ID
        - iii. Name
        - iv. Hours worked
        - v. Net pay

- **Module 3:** <u>equipment's Module</u>
  In this module owner can add , remove , search and see the current available assets details including the fields:

  Assets or equipment's

  1. Id
  2. Device Id
  3. Device code
  4. Device price
  5. Buying date

- **Module 4:Expenses's Module**
  In this module owner can add and modify the expenses of GYM and see the expense details including the fields:
  1. Id
  2. Name
  3. Amount
  4. Date

- **Module 5:bio metric Module**
  In this module owner can see member's attendance according to paying fee including the fields:
  1. Id
  2. Date

What Will the Software Provide?

The software will be capable enough to allow the concerned person to store and retrieve any type of record with just a single click of mouse. The software will allow Interactive, Self-describing Graphic User Interface environment where even standalone users would work very comfortably and easily.

All the data pertaining to transactions or other important entities will be kept at central database from where its attributes would be easily controlled .But, Such kind of technical details are hidden from the standalone User. He just needs to type in correct details of the given entity and then click the save button with the help of mouse.However,That central repository of data could be easily accessed if required.

Data Redundency will not be the problem anymore .The data modified from one particular data entry form will reflect the modifications at the other related forms too.This has thus reduced the chances of data inconsistency in our data storage.

There is no need to manage bulky registers now as data stored in the backend database can be radily retrieved either from the frontend form itself or directly from the database.

Requires one time investment of setting up required Hardware and Software after which no more headache is required by the Managers .Moreover,It will also be reduce dependence on Man Power.

Effective Search measures will be present at each and every data transactional forms from where by just entering a Unique keyword for that data its whole records can be readily seen within microseconds.Moreover,Facillity of Updation and Deletion of data through search will also be available.

Collection of money amont on time using new method of fingerprint allowence device . Econamical.

System Analysis will be conducted with the following objectives

1. Identify the customer's need.

2. Evaluate the system concept for feasibility.

3. Perform economic and technical analysis.

4. Allocate functions to hardware, software people, database and other system elements.

5. Establish cost and schedule constraints.

6. Create a system definition that forms the foundation for all the subsequent engineering work.

Identification of Customer's Need

This step is initiation of System Analysis. An overview of the client's requirement are done. The basic need of the client to opt for such kind of project is analysed. As per current marketing scenario, an entire system is required to track day-to-day transactions.

Client is following a Manual Process, which is not at all compatible with its current working conditions. It is not only time consuming, but also lacks accuracy. Security point of view the manual system is failed to hide the information from any unauthenticiated staff or any outside person. Therefore, there is an urgent requirement of

such Computerised System which can fullfill all of its current as well as future requirements. Further more, data handling is also posing a serious problem for them.

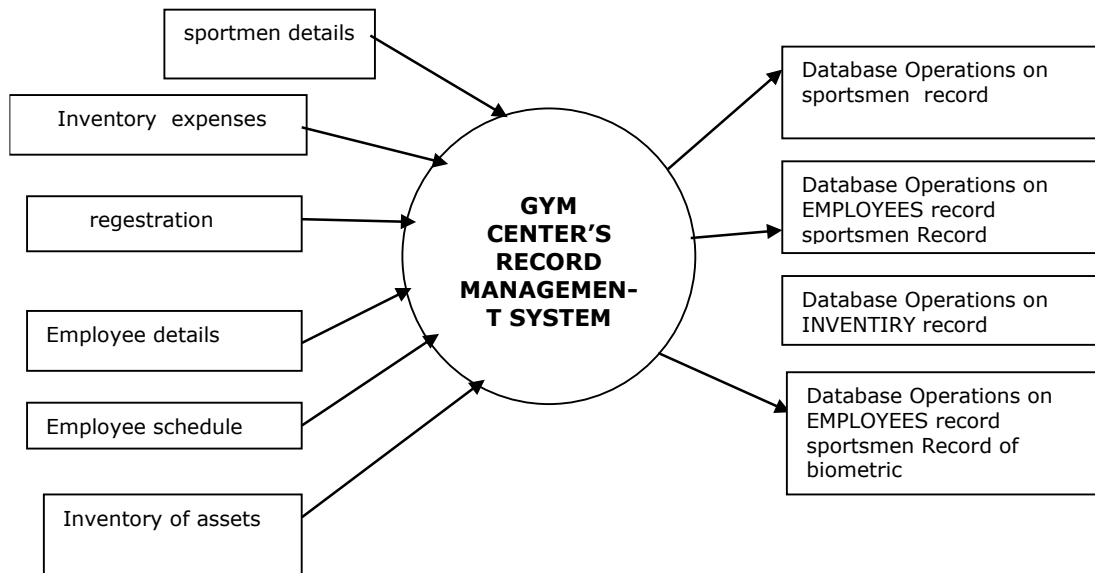# DATABASE DESIGN
Introduction

DBMS : mysql
Which is relational database dbms so we gonna use this in our project .

Relational database
The purpose of the relational model is to provide a declarative method for specifying data and queries: we directly state what information the database contains and what information we want from it, and let the database management system software take care of describing data structures for storing the data and retrieval procedures for getting queries answered.
As this project data is not too much so to handle the dataflow a relational database is required.

Database Tables

IMPLEMENTATION

Hardware Requirement

Hardware is the term given to machinery itself and to various individual pieces of equipment. It refers to the physical devices of a computer system. Thus the input, storage, processing control and output devices are hardware.

Minimum Hardware Requirement Of Client Side:

Processor: core i5
RAM: 4GB
HDD: 500GB
14 inches Color Monitor
104 Keys Keyboards
Printer: DeskJet 670 C
Bio metric fingerprint scanner

Software Requirement

Software means a collection of program where the objective is to enhance the capabilities of the hardware machine.

Minimum Software Requirement of Client Side:

Operating System   : Windows 10/11
Database   : mysql
Front-end   : javafx
Backend   : pure java