CSE2004 Database Management Systems

J Component - Project Report

SaneTime - A Students Time Management app

By
18bce1281 Saswat Panda
18bce1133 Divyansh Jain

B.Tech CSE

Submitted to

Dr.Pradeep K V,
Assistant Professor,
SCOPE, VIT, Chennai

School of Computer Science and Engineering

VIT®
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

July 2021

ABSTRACT

In this competitive world time plays a key role to keep you ahead of others. So, managing time efficiently is very important to survive as well as to achieve your goal. Not only this but also if you manage your time efficiently you feel satisfied at the end of the day. Since android apps have increasing popularity these days, In this project we develop an android app that will primarily focus on managing time of a student.

TABLE OF CONTENTS

1. Introduction

1.1 Objective and goal of the project

In today's competitive environment, time is crucial for staying ahead of the competition. So, in order to thrive and achieve your goals, you must effectively manage your time. Not only that, but if you effectively manage your time, you will feel satisfied at the end of the day. Because android apps are becoming increasingly popular, we will create an android app for this project that will largely focus on student time management.

1.2 Problem Statement

Our problem statement is developing a user friendly android app that will help the students to manage their time comfortably and get academic success.

1.3 Motivation

Time management is one of the most important factor that is ignored by most of the students, and later they feel depressed that they are not intelligent enough. So, we decided to build an app that will help the students manage their time well and make them confident.

1.4 Challenges

Since, our team is working remotely it will be difficult for us to have a common codebase. To overcome it we are planning to use GitHub. Also, we might not test several volunteers to test the apps efficiency properly.

2. Literature Survey

There have been various research on Time Management, Automated Time Manager (ATM), a smartphone application, was developed to give users with visualisations of their physical activities and phone usage statistics, as well as to collect smartphone sensor and usage data[1]. Setting realistic objectives, prioritising, and maximising planning are among the tactics recommended by the editorial board of the Western

Journal of Nursing Research to improve time management. Maintaining focus on a research programme can be made easier by including a team, overcoming obstacles, and addressing any distractions early on[2]. Another study discovered that students' perceived control of time was a key factor that connected with cumulative grade point average[3]. In a separate study, data was collected from Qurtuba University of Science and Technology students in order to determine how well they manage their time in order to meet their academic goals[4]. Another study discovered that students' time management behaviours are significantly positively associated to their academic achievement, however the link is weak. The most significant correlated predictor is time planning[5].

3. Requirements Specification

3.1 **Hardware Requirements**

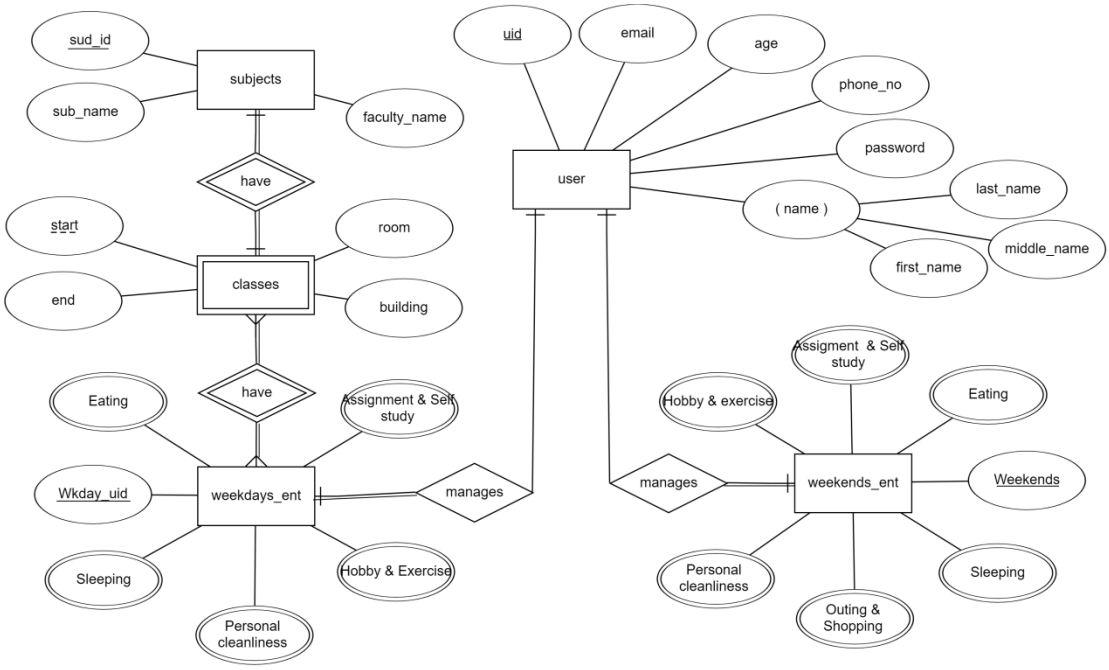
The hardware requirements are as follows:-

- x86_64 CPU architecture;
- 2nd generation Intel Core or newer, or AMD CPU with support for a Windows Hypervisor.
- 8 GB RAM or more.
- 8 GB of available disk space minimum (IDE + Android SDK + Android Emulator)
- 1280 x 800 minimum screen resolution.

3.2 **Software Requirements**

A proper installation of android studio will be fine to build an android app. I will have support for java, kotlin and xml. As we will be using java instead of kotlin we will also need to install jdk.

4. Database Structure

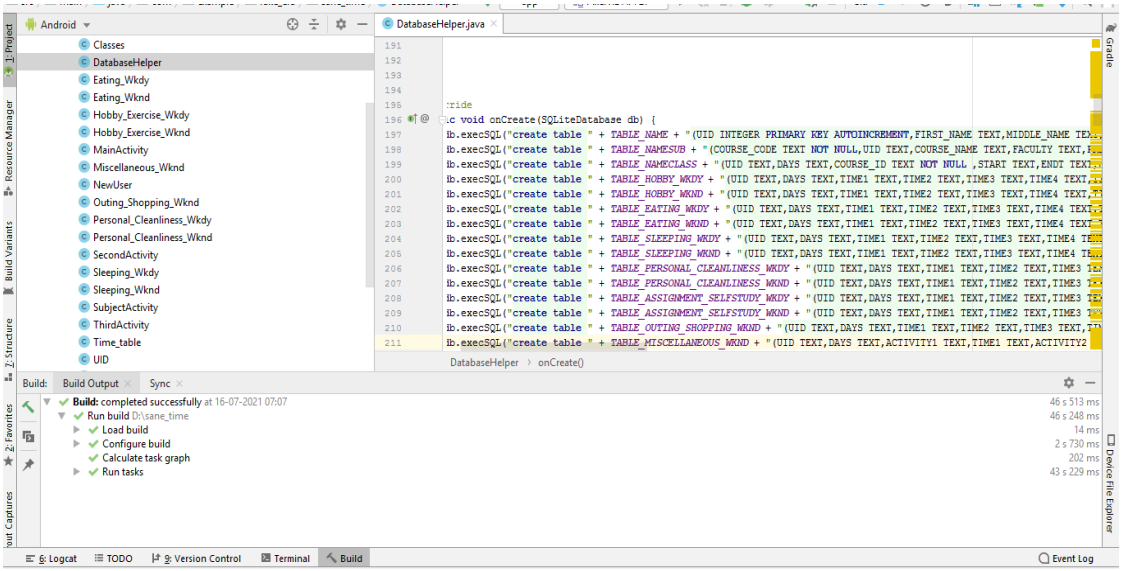


Above diagram represents the entity relationship diagram(ER Diagram) for our project Sane Time. In this section we will discuss how the database structure is using the entity relationship model. The reason for using the ER Model for describing the database structures are:- It will assist you in defining words associated with entity relationship modelling**,** give a glimpse of how all of your tables should relate, as well as which fields will be on each table**,** It aids in the description of entities, properties, and relationships**,** ER diagrams may be converted to relational tables, allowing you to quickly create databases**,** Database designers can utilize ER diagrams as a roadmap for integrating data into specific software applications**,** With the help of an ERP diagram, the database designer acquires a better knowledge of the information that will be stored in the database**,** The ERD Diagram lets you to communicate with users about the database's logical structure.

Now, let us discuss the various symbols used in the above ER Diagram. Entity types are represented by rectangles in this Entity Relationship Diagram symbol. Ellipses are a type of ellipsis. Attributes are represented using symbols. Diamonds: This symbol signifies various forms of relationships. It connects characteristics to entity types and entity types to other relationship types using lines. The primary key is that the properties are highlighted. Multi-valued qualities are represented by double ellipses. Users manages both weekends and weekdays on a 1 on 1 relationship. But, weekdays have classes, the classes have subjects, and these relationship are many to many relationship, one class can be on many weekdays and one weekday can have many classes and similarly for classes and subjects.

5. Implementation

The app was completely implemented on android studio using java and xml. The database that was used was sqlite3. Since, creating the database was to be done in java, therefore the library SQLiteDatabase, and SQLiteOpenHelper were used. The drag and drop UI making together with xml was used for making the UI of the app. As, the user id is the most important feature and is in all the tables therefore it is set as Auto increment, and assigned to each user. Below is a code snippet of our app from android studio.

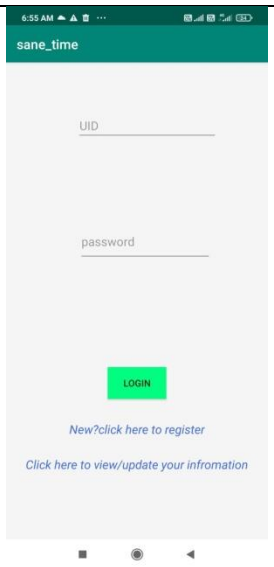


6. App Description

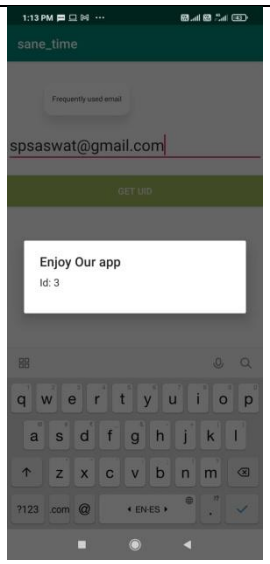
Our application will store your data in safe and structured manner using sqlite3. We have used various database operations like join, insert, update, delete etc. in order to ensure comfort while using our app. We have also included constraints in email, mobile, age and time to ensure that correct data is being entered. If you are running an institution and want to partner with us then we can make you the admin by which you can monitor activities of users registered in your database. In order to use our app

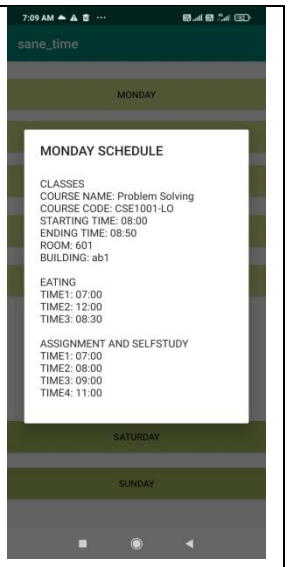
1)First you have to register providing all your details.
2)Give your email id and get your UID.
3)Enter all your classes and subjects.
4)Enter all your basic activities and co-curricular activities.
5)Then click on a particular date to find your schedule.

Below are some screenshots of the app.


sane_time
UID
password
LOGIN
New?click here to register
Click here to view/update your infromation


sane_time
Saswat
middlename(optional)
Panda
21
spsaswat@gmail.com
9876543210
Registered Successfully
back to login
REGISTER
CLICK HERE TO KNOW UID


sane_time
spsaswat@gmail.com
GET UID
Enjoy Our app
Id: 3


sane_time
MONDAY
MONDAY SCHEDULE
CLASSES
COURSE NAME: Problem Solving
COURSE CODE: CSE1001-LO
STARTING TIME: 08:00
ENDING TIME: 08:50
ROOM: 601
BUILDING: ab1
EATING
TIME1: 07:00
TIME2: 12:00
TIME3: 08:30
ASSIGNMENT AND SELFSTUDY
TIME1: 07:00
TIME2: 08:00
TIME3: 09:00
TIME4: 11:00
SATURDAY
SUNDAY

7. References

1. Kim, Bogoan & Lee, Seok-Won & Hong, Hwajung & Han, Kyungsik. (2019). Automated Time Manager: Effectiveness of Self-Regulation on Time Management Through a Smartphone Application. IEEE Access. PP. 1-1. 10.1109/ACCESS.2019.2926743.
2. Chase, Jo-Ana & Topp, Robert & Smith, Carol & Cohen, Marlene & Fahrenwald, Nancy & Zerwic, Julie & Benefield, Lazelle & Anderson, Cindy & Conn, Vicki. (2012). Time Management Strategies for Research Productivity. Western journal of nursing research. 35. 10.1177/0193945912451163.
3. Richelle V. Adams & Erik Blair. Impact of Time Management Behaviors on Undergraduate Engineering Students' Performance
4. Nasrullah_Phd, Shazia & Saqib Khan, Muhammad. (2015). The Impact of Time Management on the Students' Academic Achievements. 11.
5. S N A M Razali & M S Rusiman & W S Gan & N Arbin. The Impact of Time Management on Students' Academic Achievement