DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
THE UNIVERSITY OF TEXAS AT ARLINGTON

DETAILED DESIGN SPECIFICATION
CSE 4317: SENIOR DESIGN II
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TEAM VOYAGER
TRAVEL WEBSITE: TOP 10 LAKES IN DFW

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REVISION HISTORY

Revision	Date	Author(s)	Description
0.1	06/20/2021	AY, GK, MP, NS	document creation
0.2	06/22/2021	AY, GK, MP, NS	complete draft
0.3	06/24/2021	AY, GK, MP, NS	section 1,2,3
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1.1	06/28/2021	AY, GK, MP, NS	editing and reviewing

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1 INTRODUCTION

Our web page name is "Voyager" and it is designed to help travelers find some beautiful lakes and campaign sites in Texas. A user of Voyager will be able to make reservations of cabins, look for hotels, restaurants, boat rental located nearby the lakes and share his or her experience and stories to the world with the review from their account.

2 SYSTEM OVERVIEW

Here is the diagram that shows how data flow between different subsystem.
This figure 2 shows that different sub layers and modules that are involved in the front-end and back-end layers of the application. The front-end is divided into different modules related to a main functionality of the web app, registration, logging in and creating new user account which is based on website UI subsystem. The back-end is separated into layers for interacting with the front-end, preforming business logic, data handling, updating, reading and deleting information from database for all of the web app functionalities.
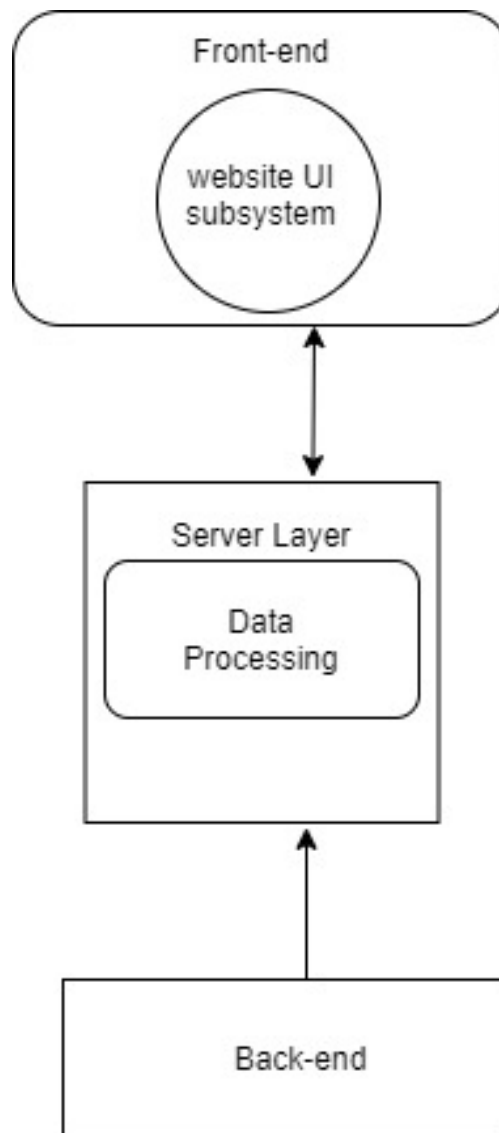The figure explain how data flow in this subsystem.

Figure 1: System architecture

3 WEBSITE LAYER SUBSYSTEMS

The front end layer will have three major subsystem: sign in page, user profile page and album page. The general purpose of each page is:

sign in page: : allow a user to sign up for an account or sign in into the existing account

profile page: allow a user to edit and view personal information.

album page: allow a user to upload and post comments to the lakes and review them.

The figure explain how data flow in this subsystem.

3.1 LAYER HARDWARE

- No hardware will be used.

3.2 LAYER OPERATING SYSTEM

- Not any specified OS is used.

3.3 LAYER SOFTWARE DEPENDENCIES

- Some of the software dependencies are : VS Code, fire base, packages .json file.
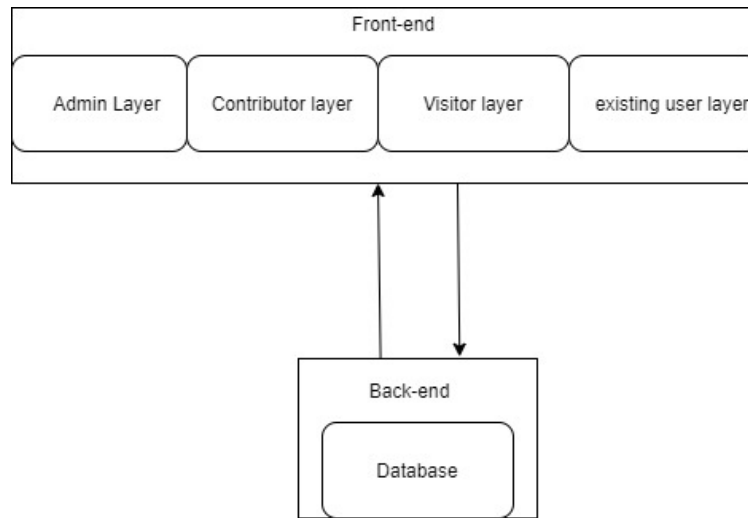

Figure 2: Example subsystem description diagram

Some of the responsibilities and features of the sub system are:
admin layer: perform administrative task such as design, develop, maintain and troubleshoot website.
contributor layer: upload traveling photos and videos, and add comment, criticise and share their opinion.
visitor layer: get quick insight and scroll down the page
existing user layer: user can add, edit and delete their personal information

3.3.1 SUBSYSTEM OPERATING SYSTEM

- No OS will be used.

3.3.2 SUBSYSTEM SOFTWARE DEPENDENCIES

- JavaScript libraries , CSS libraries are used.

3.3.3 SUBSYSTEM PROGRAMMING LANGUAGES

- React, HTML, CSS.

4 SERVER LAYER SUBSYSTEMS

4.1 LAYER HARDWARE

No specific hardware is involved.

4.2 LAYER OPERATING SYSTEM

No specific operating system but a newly updated will be highly recommended.

4.3 LAYER SOFTWARE DEPENDENCIES

some of the software dependencies are visual studio.

4.4 SUBSYSTEM 1

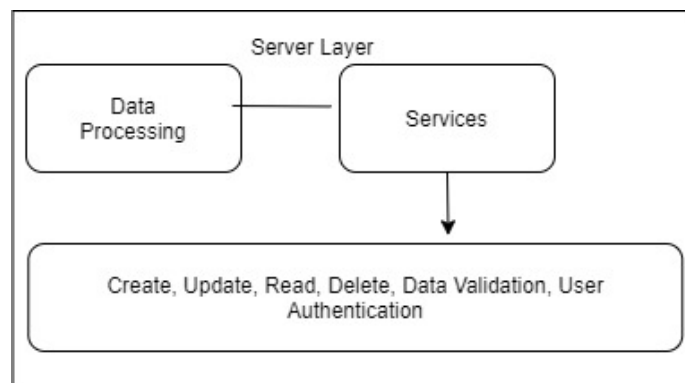There is a server layer which makes the connection between the server, user and the back-end developer.

Figure 3: Example subsystem description diagram

4.4.1 SUBSYSTEM HARDWARE

No specific hardware will be used

4.4.2 SUBSYSTEM OPERATING SYSTEM

No specific OS will be used.

4.4.3 SUBSYSTEM SOFTWARE DEPENDENCIES

We will not have any software dependencies.

4.4.4 SUBSYSTEM PROGRAMMING LANGUAGES

CSS , HTML and JavaScript is used as a programming language.

4.4.5 SUBSYSTEM DATA STRUCTURES

No specific data structures are used.

4.4.6 SUBSYSTEM DATA PROCESSING

No specific subsystem data processing will be used.

5 BACK-END SUBSYSTEM

We have designed a web service which will make accesible to rent and view the information about nearby lakes. Our website will be user friendly. It will be simply based on java program where admin panel will control the website information.We have used google fire-base as our data storage and authentication. Some SQL query are also used and HTML is used to design our home pages and back ends. We will run our website in local host either by MYSQL workbench or XAMPP.

5.1 LAYER HARDWARE

No specific hardware is involved

5.2 LAYER OPERATING SYSTEM

No specific operating system but a newly updated will be highly recommended.

5.3 LAYER SOFTWARE DEPENDENCIES

Some of the software dependencies are mysql-connector-java, org.apache.tomcat.embed and java.version>1.8

5.4 SUBSYSTEM 1

Firebase will be accessible to admin panel where we can add and remove the information about lakes and rental services.All the data and user information will be stored in google firebase.
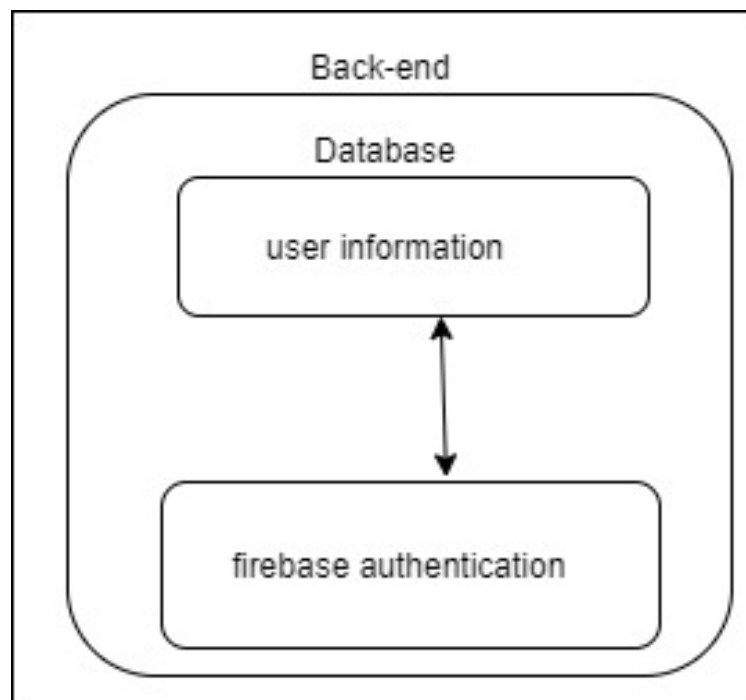

Figure 4: Example subsystem description diagram

5.4.1 SUBSYSTEM HARDWARE

No specific hardware will be required

5.4.2 SUBSYSTEM OPERATING SYSTEM

No specific operating System will be required

5.4.3 SUBSYSTEM SOFTWARE DEPENDENCIES

our website will not have any software dependencies but a latest update of the software will be highly recommended

5.4.4 SUBSYSTEM PROGRAMMING LANGUAGES

Programming languages that we use are Java, HTML and JavaScript

5.4.5 SUBSYSTEM DATA STRUCTURES

No data structures are used

5.4.6 SUBSYSTEM DATA PROCESSING

As for our website, we will be not be using any subsystem data processing.

6 APPENDIX A

N/A

REFERENCES