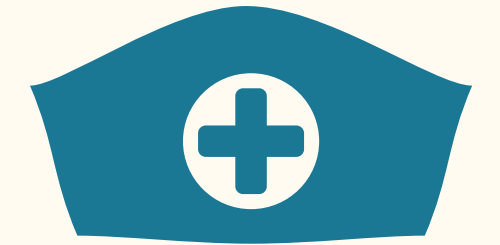# NSched

ALMARIEGO - ANCHUVAS - MENDOZA - SOTIAR - VILLAMONTE

Problem Statement

- **THE INCONVENIENCE OF HAVING A PAPER-BASED SCHEDULING SYSTEM**

- **OUTDATED DATA STORAGE**

- **SECURITY RISK**

- **ACCURACY**

NSched manages your nurses' schedules accurately and easily. This is an efficient and intuitive schedule creation and management system. NSched can also function as a vehicle to empower nurses, providing a level of work or life balance, and helping to improve overall employee satisfaction. NSched is the solution to the old and time consuming process of nurse scheduling.

PROJECT DESCRIPTION

Project Objectives

To store data with accurate and sufficient storage

To create accurate work shifts and schedules efficiently

To create a secure database to avoid irretrievable data loss

To implement drag and drop feature for convenient and easy creation of schedule

Significance of the Study

The project could benefit the following people:

FOR THE NURSE MANAGERS OR SCHEDULERS

- The project can make the process of scheduling more convenient and efficient.

- It can save time by avoiding manual paper-based schedule revisions and handling requests.

FOR THE NURSES

- The project will help the nurses to view their schedules easily.

- Rest day or leave requests also become easier to send to the Nurse Manager.

Drag and Drop feature for creating and updating of Schedule

Easy way of requesting for leave, day off or change of schedules

Accept or reject requests at real time without dealing with papers

Project Features

Scope of the Study

schedulers can create, update, or delete a schedule.

Schedulers can see requests given by the nurseS.

Schedulers can create and delete nurses' accounts.

Nurses can check their schedules.

Nurses can send requests for leave or days off to the schedulers.

Delimitation of the Study

It will only be available for web and mobile browsers locally.
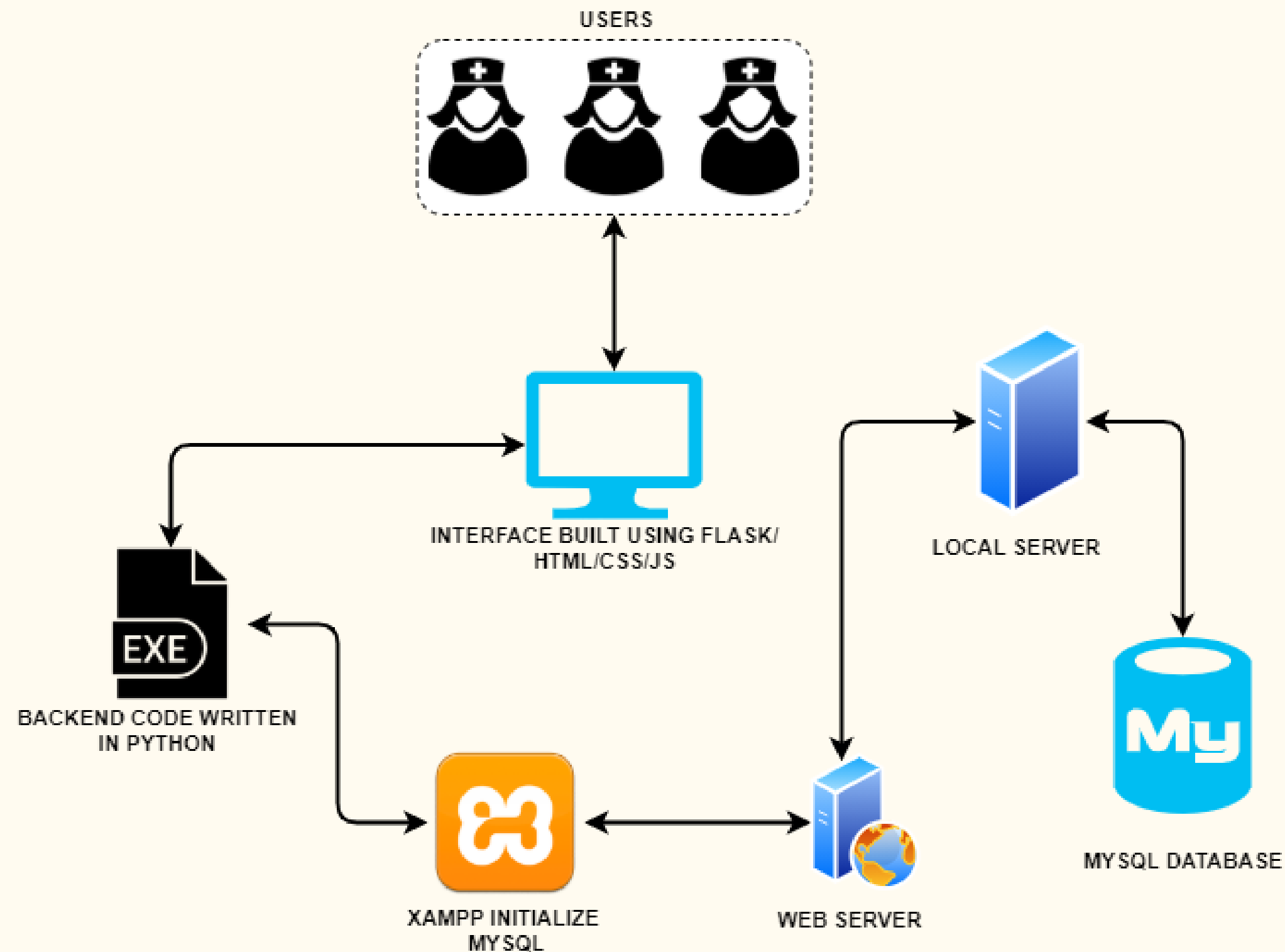
Schedulers cannot create schedules in a mobile browser setup.

It will not be able to monitor the attendance of the nurses.

It will not be able to generate a random or suggested schedule.

NURSE SCHEDULING SYSTEM (ARCHITECTURE DIAGRAM)
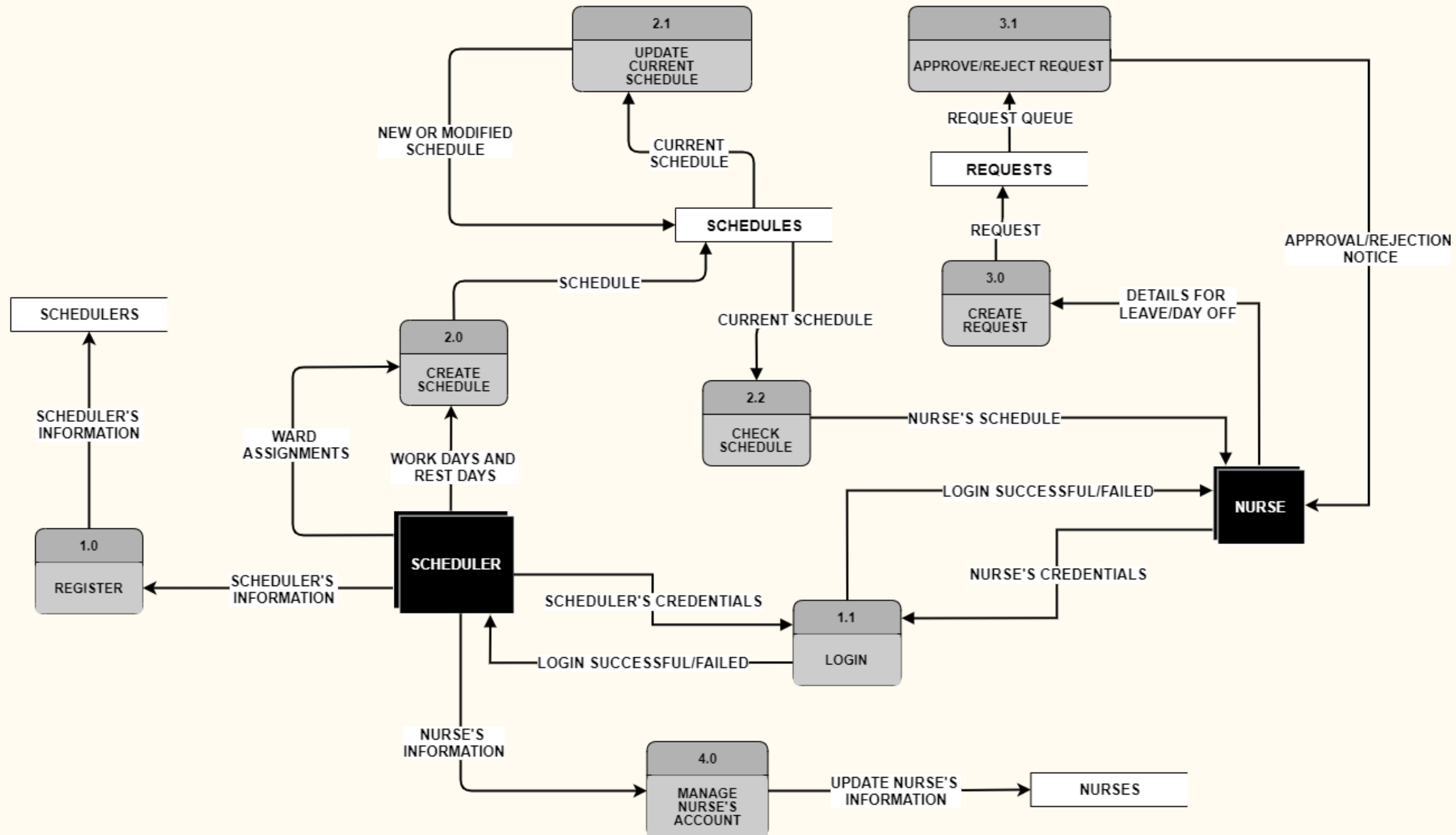
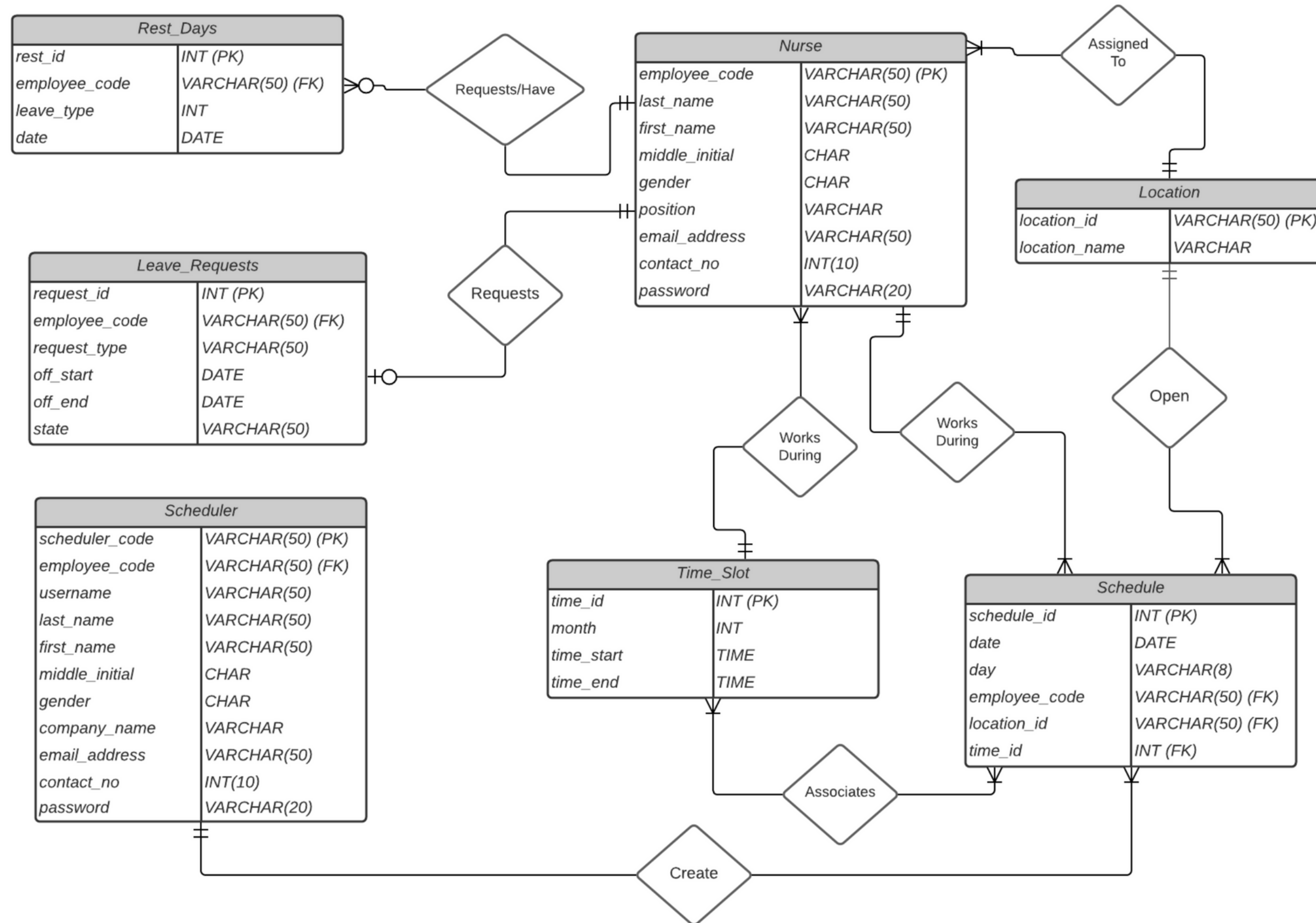USERS

INTERFACE BUILT USING FLASK/ HTML/CSS/JS

BACKEND CODE WRITTEN IN PYTHON

XAMPP INITIALIZE MYSQL

WEB SERVER

LOCAL SERVER

MYSQL DATABASE

System Architecture

NURSE SCHEDULING SYSTEM (DFD LEVEL 2)

Data Flow Diagram

NURSE SCHEDULING SYSTEM (ERD)

Rest_Days

rest_id	INT (PK)
employee_code	VARCHAR(50) (FK)
leave_type	INT
date	DATE

Leave_Requests

request_id	INT (PK)
employee_code	VARCHAR(50) (FK)
request_type	VARCHAR(50)
off_start	DATE
off_end	DATE
state	VARCHAR(50)

Scheduler

scheduler_code	VARCHAR(50) (PK)
employee_code	VARCHAR(50) (FK)
username	VARCHAR(50)
last_name	VARCHAR(50)
first_name	VARCHAR(50)
middle_initial	CHAR
gender	CHAR
company_name	VARCHAR
email_address	VARCHAR(50)
contact_no	INT(10)
password	VARCHAR(20)

Nurse

employee_code	VARCHAR(50) (PK)
last_name	VARCHAR(50)
first_name	VARCHAR(50)
middle_initial	CHAR
gender	CHAR
position	VARCHAR
email_address	VARCHAR(50)
contact_no	INT(10)
password	VARCHAR(20)

Location

| location_id | VARCHAR(50) (PK) |
| location_name | VARCHAR |

Time_Slot

time_id	INT (PK)
month	INT
time_start	TIME
time_end	TIME

Schedule

schedule_id	INT (PK)
date	DATE
day	VARCHAR(8)
employee_code	VARCHAR(50) (FK)
location_id	VARCHAR(50) (FK)
time_id	INT (FK)

Relationships: Requests/Have, Assigned To, Requests, Works During, Works During, Open, Associates, Create

Database Design

Software Development Model
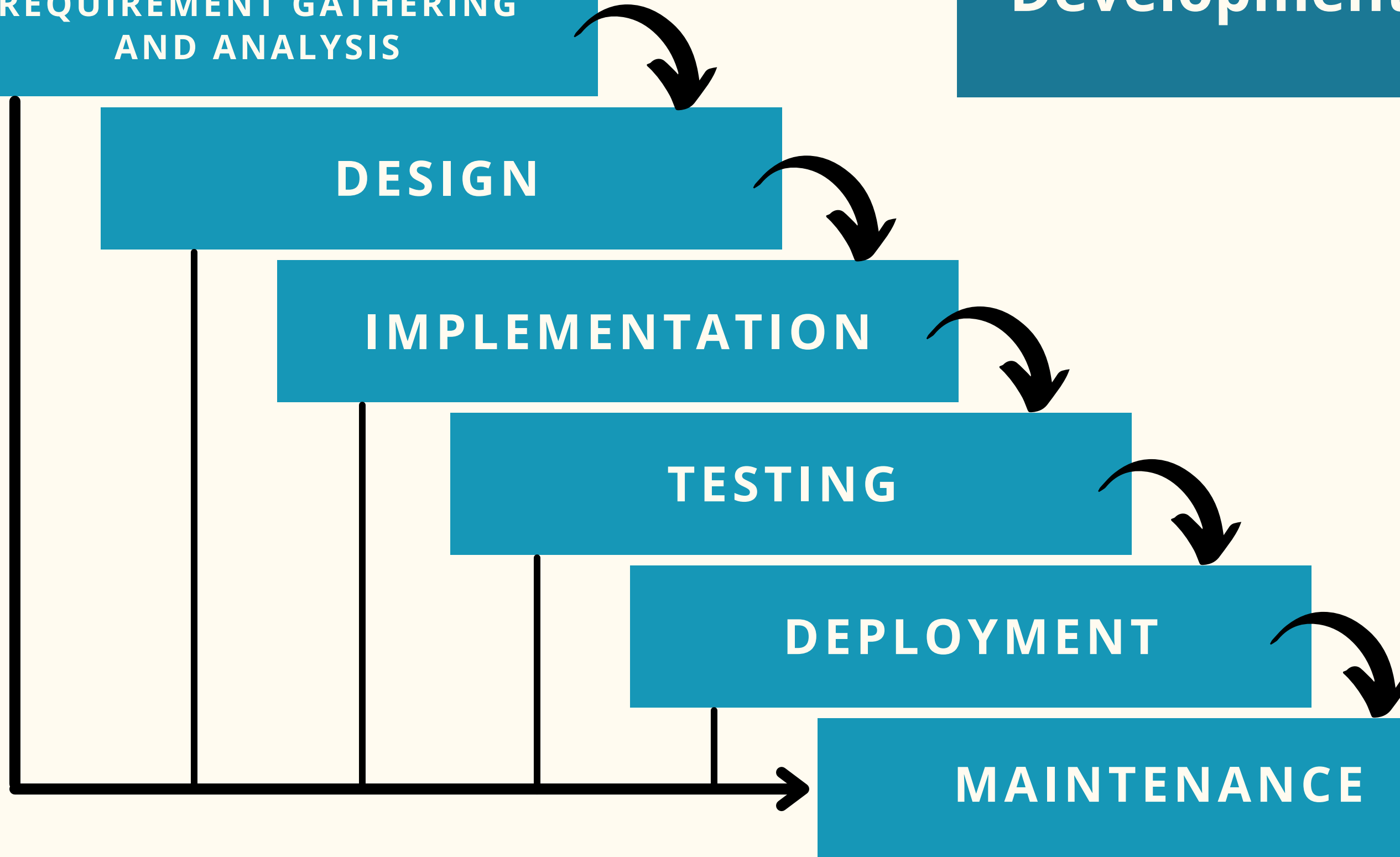
REQUIREMENT GATHERING AND ANALYSIS

DESIGN

IMPLEMENTATION

TESTING

DEPLOYMENT

MAINTENANCE

Tools used or to use in the Development

DIAGRAMS.NET

For the development of the diagrams.

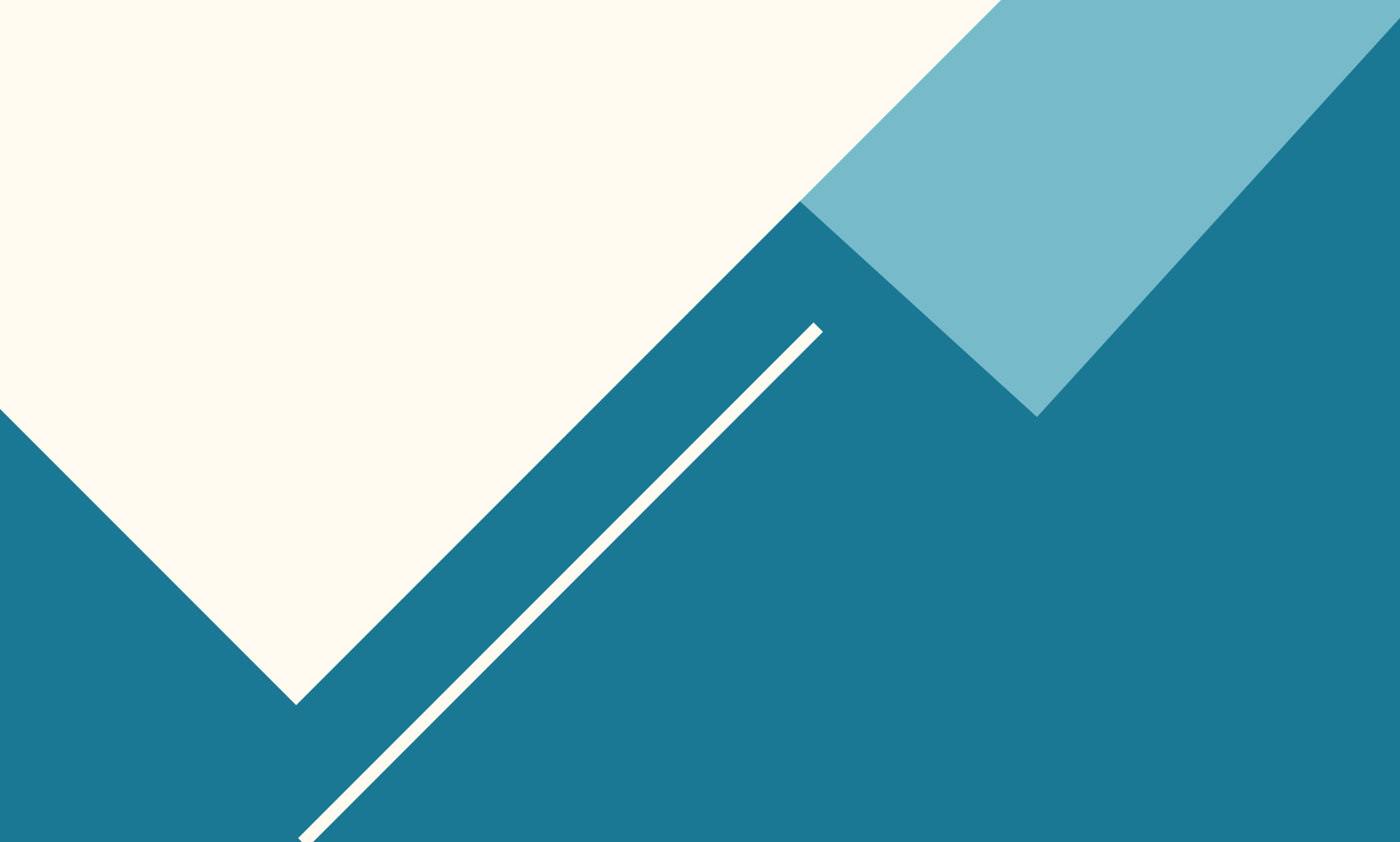### ADOBE XD

For the prototype.

XAMPP

For compiling and executing the back-end code. Also for managing and storing data with MySQL database.

BOOTSTRAP STUDIO

For the front-end development.

VISUAL STUDIO CODE AND SUBLIME TEXT

For developing the algorithm and code.

Project Timeline

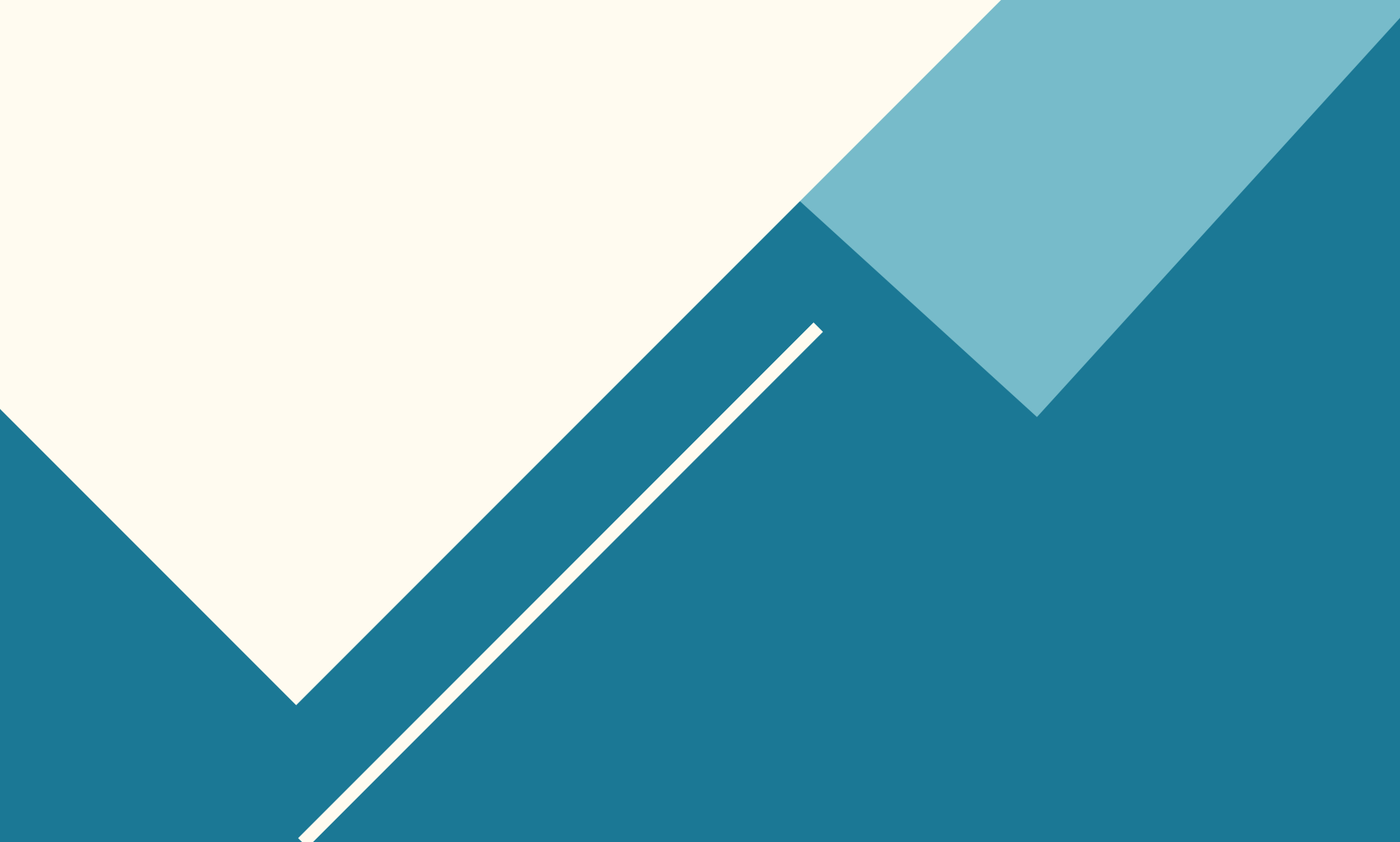DEC 7 - DEC 29, 2020

Research

DEC 14 - DEC 20, 2020

Conceptualization of System and Use Case Definition

DEC 21, 22, 28, AND 29, 2020

Use Case Diagram and Conceptualization of Database

JAN. 4 - JAN. 10, 2021

Entity-Relationship Diagram and Data Flow Diagram

Project Timeline

JAN. 4 - JAN. 17, 2021

Database Design

JAN. 11 - JAN. 23, 2021

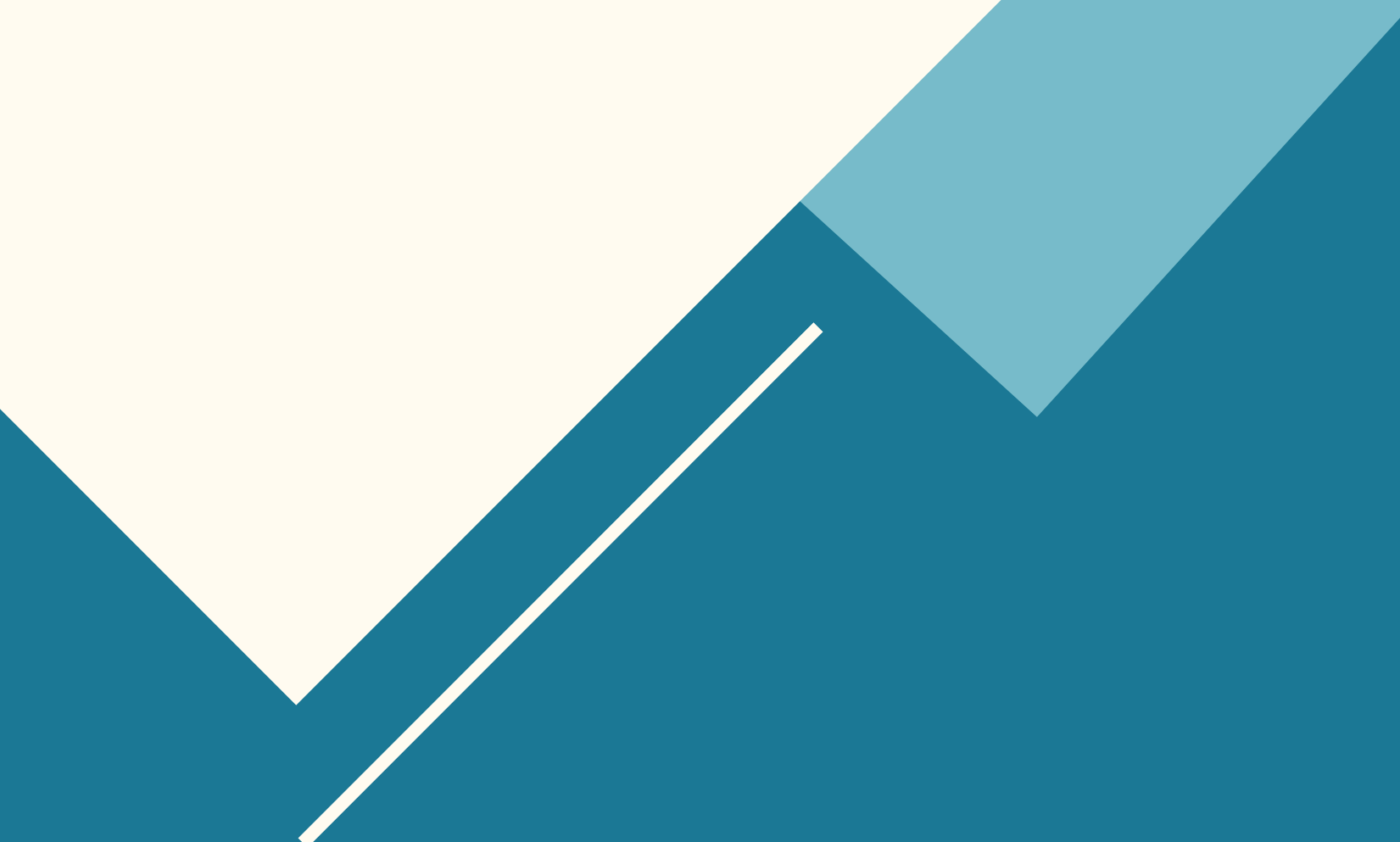Architecture & Framework, UI Mockup, UX Concept, and Wireframing

JUNE 20 - 27, 2021

Creation of Database Tables

JUNE 20 - JULY 4, 2021

User Interface Development

Project Timeline

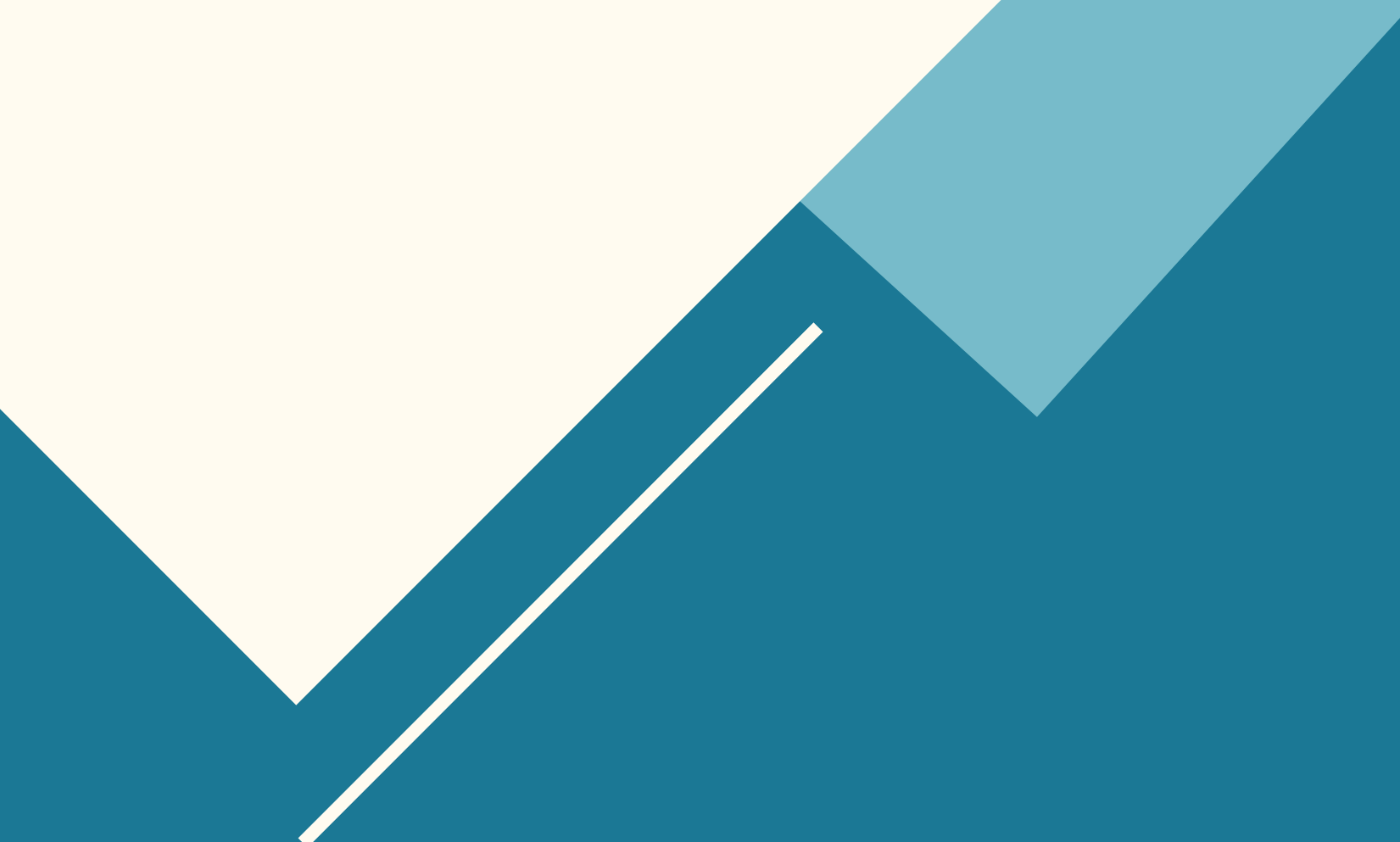**JUNE 20 - AUG. 1, 2021**

UX Optimization

JUNE 20 - AUG. 1, 2021

Documentation

JUNE 28 - JULY 18, 2021

User Scouting and Program Maintenance

JUNE 28 - AUG. 1, 2021

Debugging

Project Timeline

JUNE 28 - AUG. 1, 2021

Module Creation

JULY 5 - AUG 1, 2021

Publication of Application

MEMBERS CONTRIBUTION

ALMARIEGO, GILBERT S.

SYSTEM ANALYST

ANCHUVAS, KIMBERLY B.

PROJECT LEADER AND UI/UX DEVELOPER

MENDOZA, MICKAELA JEORGE L.

TESTER (QA)

SOTIAR, MIKAELA S.

UI/UX DEVELOPER

VILLAMONTE, REECE PHILIPPE E.

BACK-END DEVELOPER