System Requirements

# Server Requirements

* Apache 2.4.39 Web server
* MariaDB 10.3.16 Database server
* PHP 7.3.7

## Packages used

(All these packages are included in the project files)

* PHPSpreadsheet
* PHPMailer
* Bootstrap 4
* Gijgo
* JQuery
* Popper

## Setting up PHPMailer

* PHPMailer requires an internet connection to connect to a Google SMTP server.
* The username, password, and other account details for the email ID need to be set in maildetails.php

## Maintenance

* The server name, username, password, and database name must be set up in db.php to allow the project to connect the database server
* The projects needs 13 tables to be created. The SQL to create these has been given at the end of the document
* Information for the class, student, and teacher tables needs to be entered
  + Teacher name, email ID and access level
    - Access Level 0 – Admin
    - Access Level 1 – Head of Department
    - Access Level 2 – Lab In-Charge
    - Access Level 3 – Regular Teacher
  + Class name and the id of the class CT
  + Student Roll. No (as id), student name, and the id of their class
* The student table will have to be updated every year to account for new students and class changes
* The teacher table will have to be updated when required to accommodate new users

# Client Requirements

* Mozilla Firefox or Google Chrome
* The project may not work on Internet Explorer

# SQL Code

create database labs;

use labs;

create table teacher(

id int not null unique,

teacher\_name varchar(50) not null unique,

teacher\_pass varchar(60) not null,

levels int(1) not null,

email varchar(40) default "<-- no email provided -->",

primary key(id)

);

create table class(

id int not null auto\_increment unique,

class\_name varchar(6) not null unique,

class\_teacher int not null unique,

primary key(id),

foreign key (class\_teacher) references teacher(id)

);

create table student(

id int not null unique,

student\_name varchar(50) not null unique,

class\_id int not null,

primary key(id),

foreign key (class\_id) references class(id)

);

create table item(

id int not null auto\_increment unique,

item\_name varchar(50) not null,

lab\_location varchar(10),

specs varchar(100) default '',

min\_quantity int default 0,

lost\_quantity int default 0,

quantity int default 0,

price decimal(10,2) not null default 0,

lab varchar(1) not null default "p",

recon date,

primary key(id)

);

create table student\_checkout(

id int auto\_increment not null unique,

student\_id int not null,

item\_id int not null,

quantity int not null,

returned varchar(1) not null default "N",

checkout\_date date default now(),

lab varchar(1) not null default "p",

returned\_date date,

lost varchar(1) not null default "N",

primary key(id),

foreign key (student\_id) references student(id),

foreign key (item\_id) references item(id)

);

create table purchase\_request(

id int not null auto\_increment unique,

teacher\_id int not null,

item\_name varchar(50) not null,

quantity\_ordered int not null,

quantity\_received int,

specs varchar(100) not null,

link varchar(150) not null,

cost decimal(10,2),

date\_ordered datetime not null default now(),

arrived bit not null,

date\_arrived datetime not null default now(),

comments varchar(100),

bill\_code varchar(10) default "<No Bill>",

lab varchar(1) not null default "p",

primary key(id),

foreign key (teacher\_id) references teacher(id)

);

create table dept\_transaction(

id int not null auto\_increment,

from\_lab varchar(1) not null,

item\_id int not null,

quantity int not null,

to\_lab varchar(1) not null,

transfer\_date datetime not null default now(),

comments varchar(100),

primary key(id),

foreign key (item\_id) references item(id)

);

create table lab\_borrow(

id int not null auto\_increment,

from\_lab varchar(1) not null,

item\_id int not null,

quantity int not null,

to\_lab varchar(30) not null,

transfer\_date datetime not null default now(),

return\_date datetime,

comments varchar(100),

item\_status varchar(10) not null default 'PENDING',

primary key(id),

foreign key (item\_id) references item(id)

);

create table lab\_booking(

id int not null auto\_increment,

booked\_date date,

booked\_time varchar(15),

teacher\_id int,

class\_id int,

lab varchar(1) default "p",

primary key (id),

foreign key (teacher\_id) references teacher(id),

foreign key (class\_id) references class(id)

);

create table experiment(

id int not null auto\_increment,

exp\_name varchar(50) not null,

lab varchar(1) not null,

primary key (id)

);

create table experiment\_item(

id int not null auto\_increment,

exp\_id int not null,

item\_id int not null,

quantity int not null,

primary key (id),

foreign key (exp\_id) references experiment (id)

);

create table item\_booking(

id int not null auto\_increment,

labbooking\_id int not null,

exp\_id int not null,

quantity int not null default 1,

returned varchar(1) default "N",

primary key (id),

foreign key (exp\_id) references experiment (id),

foreign key (labbooking\_id) references lab\_booking (id)

);

create table missing(

id int not null auto\_increment,

item\_id int not null,

quantity int not null,

entry\_date date default now(),

comments varchar(100) not null,

accounted varchar(1) default "N",

checkout\_id int,

primary key (id),

foreign key (item\_id) references item (id)

);