

PES University
Department of Computer Science & Engineering

Database Management System
UE20CS301

Student Attendance Management

Submitted By:

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V Semester Section G

Short Description and Scope of the Project

Student attendance management is one place solution for providing a tool for managing student attendance management system. Which consists of 2 main module as Admin & Teacher modules. This a android based application which providing access to the teachers to take attendance. Android application written in Java programming language to support with all android smartphones which uses SQLite database which is specially supported for providing database for the android smartphones. And also created PHP based simple web page to perform backend CRUD operation, due to SQLite doesnt support to run some of the MySQL queries.

Major Roles:

- Administrator
- Teacher

Administrator:

- ➔ Can create a class
- ➔ Modify class name
- ➔ Delete class
- ➔ Create a section for respective classes
- ➔ Modify section name
- ➔ Delete section
- ➔ Add a faculty to the respective classes
- ➔ Modify class & section assigned for a faculty
- ➔ Add a student & Assign to respective class and section
- ➔ Add & Manage session details

Teacher:

- ➔ Can take attendance
- ➔ Can view attendance by date or individual student
- ➔ Can view individual student attendance pie chart
- ➔ Can download attendance report of the class in excel format
- ➔ Can search for a student

Query Executer:

The screenshot shows the 'Query Executer' page within the 'Attendance' system. The interface has a green header bar with a search icon and a user profile 'Welcome Pavan Kumar Hegde'. A left sidebar contains navigation links: Dashboard, CLASS AND SECTIONS (Manage Classes, Manage Class Sections), TEACHERS (Manage Teachers), STUDENTS (Manage Students), SESSION & TERM (Manage Session & Term), and Query Executer (highlighted). The main content area is titled 'Query Executer' and includes a link 'Run Your MySQL Query HERE -->'. Below this is a large text input field labeled 'Enter Your Query To Execute'. At the bottom, there is a 'Show' dropdown set to '10 entries' and a 'Search:' input field. The version 'Version 1.0.3' is noted in the bottom left corner.

Query executer is one of the function which will be able to perform MySQL query execution in frontend and read result in table. Currently it have some limitations of executing single query at a time. But can use Union operator or something else to perform multiple queries.

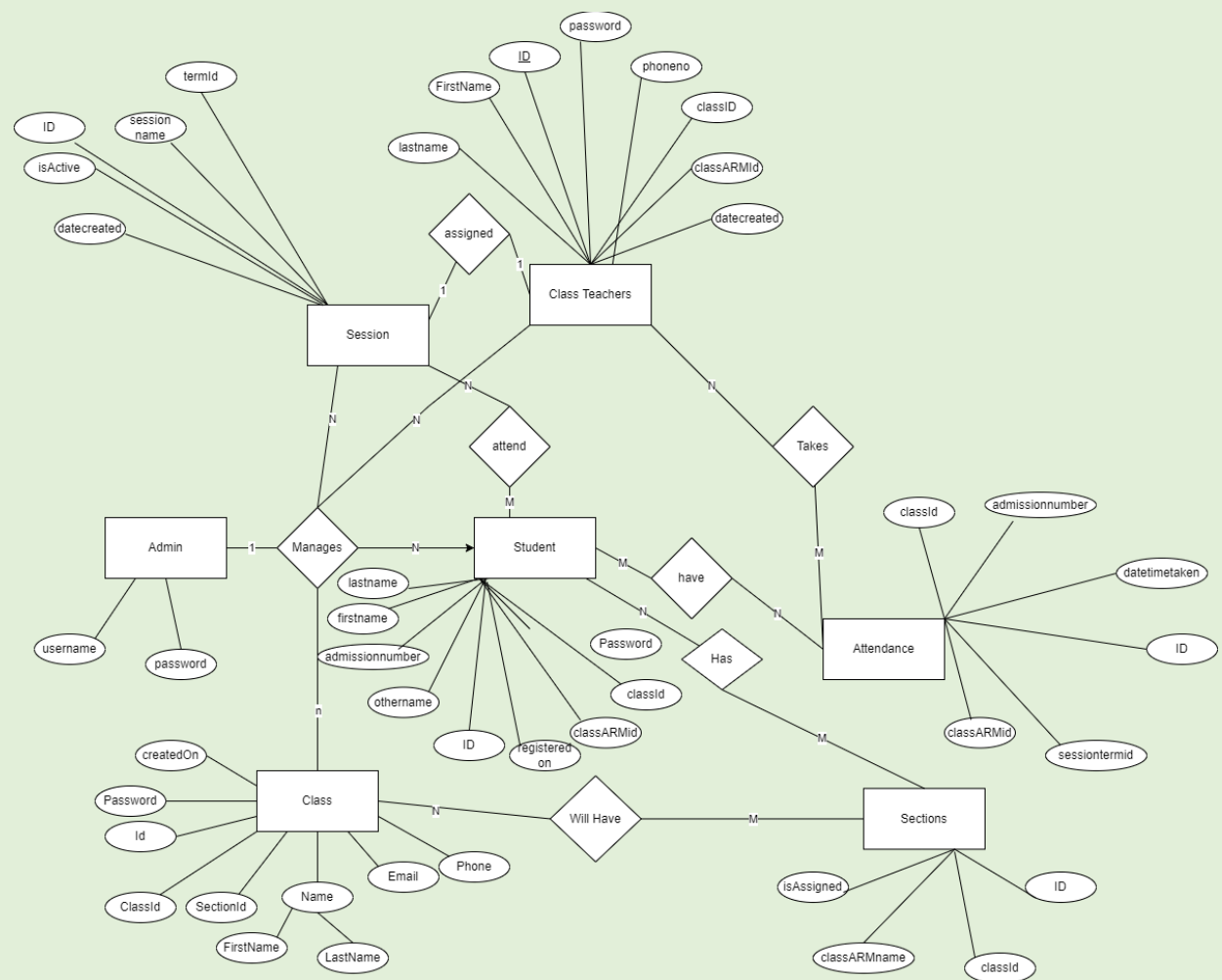
Can use a function **isAttended('SRN','yyyy-mm-dd')** to know whether a student present on given date or not.

Can call procedure **CALL getFacultyExp(faculty_id)** to know total working experience of a teacher

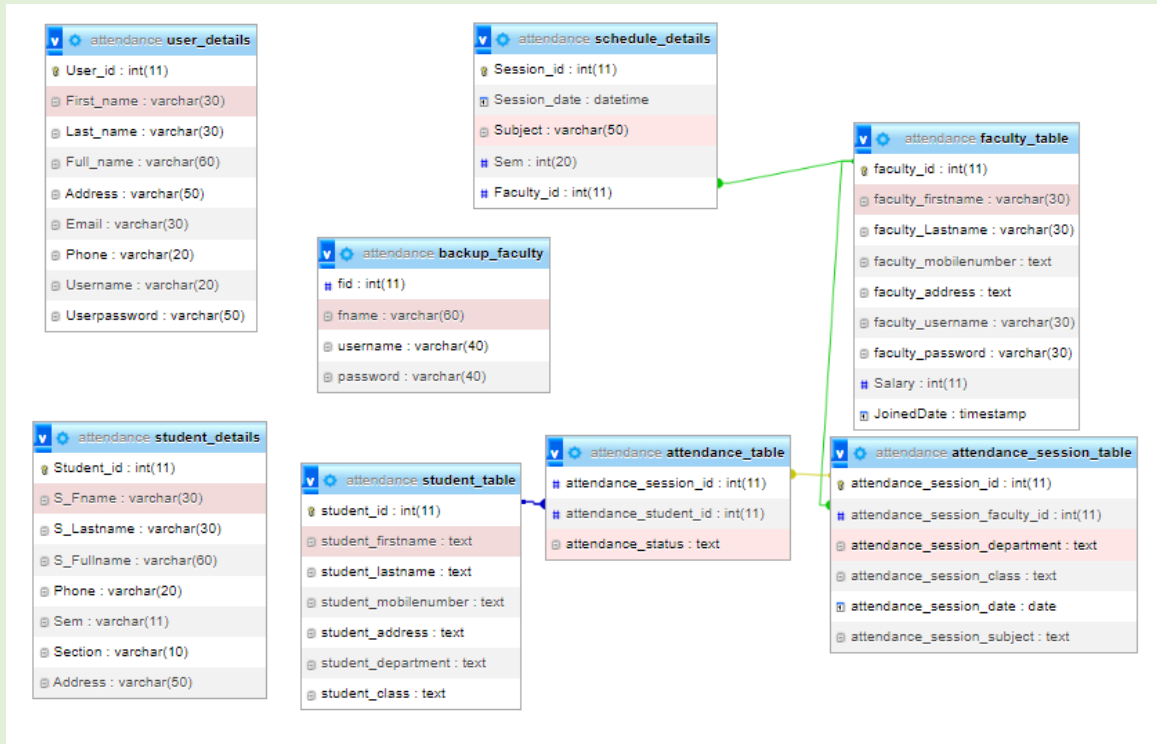
Can call procedure **CALL Backup_Faculty()** to take backup of faculty details

Trigger student_details is created which will stores the student information as inserted into the table tblstudents.

ER Diagram



Relational Schema



DDL statements - Building the database

```
CREATE TABLE `tbladmin` (  
  `Id` int(10) NOT NULL,  
  `firstName` varchar(50) NOT NULL,  
  `lastName` varchar(50) NOT NULL,  
  `emailAddress` varchar(50) NOT NULL,  
  `password` varchar(50) NOT NULL  
) ENGINE=MyISAM DEFAULT CHARSET=latin1;
```

```
CREATE TABLE `tblattendance` (  
  `Id` int(10) NOT NULL,  
  `admissionNo` varchar(255) NOT NULL,  
  `classId` varchar(10) NOT NULL,  
  `classArId` varchar(10) NOT NULL,  
  `sessionTermId` varchar(10) NOT NULL,  
  `status` varchar(10) NOT NULL,  
  `dateTimeTaken` varchar(20) NOT NULL  
) ENGINE=MyISAM DEFAULT CHARSET=latin1;
```

```
CREATE TABLE `attendance_table` (  
  `attendance_session_id` int(11) NOT NULL,  
  `attendance_student_id` int(11) DEFAULT NULL,  
  `attendance_status` text DEFAULT NULL  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

```
CREATE TABLE `tblsessionterm` (  
  `Id` int(10) NOT NULL,  
  `sessionName` varchar(50) NOT NULL,  
  `termId` varchar(50) NOT NULL,  
  `isActive` varchar(10) NOT NULL,  
  `dateCreated` varchar(50) NOT NULL  
) ENGINE=MyISAM DEFAULT CHARSET=latin1;
```

```
CREATE TABLE `tblstudents` (  
  `Id` int(10) NOT NULL,  
  `firstName` varchar(255) NOT NULL,
```

```
`lastName` varchar(255) NOT NULL,  
`otherName` varchar(255) NOT NULL,  
`admissionNumber` varchar(255) NOT NULL,  
`password` varchar(50) NOT NULL,  
`classId` varchar(10) NOT NULL,  
`classArmId` varchar(10) NOT NULL,  
`dateCreated` varchar(50) NOT NULL  
) ENGINE=MyISAM DEFAULT CHARSET=latin1;
```

```
CREATE TABLE `tblterm` (  
  `Id` int(10) NOT NULL,  
  `termName` varchar(20) NOT NULL  
) ENGINE=MyISAM DEFAULT CHARSET=latin1;
```

```
ALTER TABLE `tbladmin`  
  ADD PRIMARY KEY (`Id`),  
  ADD UNIQUE KEY `emailAddress` (`emailAddress`);
```

```
ALTER TABLE `tblattendance`  
  ADD PRIMARY KEY (`Id`),  
  ADD KEY `classId` (`classId`),  
  ADD KEY `classArmId` (`classArmId`),  
  ADD KEY `sessionTermId` (`sessionTermId`);
```

```
ALTER TABLE `tblclass`  
  ADD PRIMARY KEY (`Id`);
```

```
ALTER TABLE `tblclassarms`  
  ADD PRIMARY KEY (`Id`),  
  ADD KEY `classId` (`classId`);
```

```
ALTER TABLE `tblclassteacher`  
  ADD PRIMARY KEY (`Id`),  
  ADD KEY `classId` (`classId`),  
  ADD KEY `classArmId` (`classArmId`);
```

```
ALTER TABLE `tblsessionterm`  
  ADD PRIMARY KEY (`Id`),  
  ADD KEY `termId` (`termId`);
```

```
ALTER TABLE `tblstudents`  
  ADD PRIMARY KEY (`Id`),  
  ADD UNIQUE KEY `admissionNumber` (`admissionNumber`),  
  ADD KEY `classId` (`classId`),  
  ADD KEY `classArmId` (`classArmId`);
```

```
ALTER TABLE `tblterm`  
  ADD PRIMARY KEY (`Id`);
```


Populating the Database

- Admin Details

Server: 127.0.0.1 » Database: attendancesystem » Table: tbladmin

Browse Structure SQL Search Insert Export Import Privileges Operations Triggers

Showing rows 0 - 0 (1 total, Query took 0.0004 seconds.)

```
SELECT * FROM `tbladmin`
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all Number of rows: 25 Filter rows: Search this table

Extra options

	Id	firstName	lastName	emailAddress	password
<input type="checkbox"/> Edit Copy Delete	1	Pavankumar	Hegde	admin@admin.com	21232f297a57a5a743894a0e4a801fc3

Check all With selected: Edit Copy Delete Export

Show all Number of rows: 25 Filter rows: Search this table

-Student Details

Server: 127.0.0.1 » Database: attendancesystem » Table: tblstudents

Browse Structure SQL Search Insert Export Import Privileges Operations Triggers

Showing rows 0 - 24 (33 total, Query took 0.3184 seconds.)

```
SELECT * FROM `tblstudents`
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

1 > >> Show all Number of rows: 25 Filter rows: Search this table Sort by key: None

Extra options

	Id	firstName	lastName	otherName	admissionNumber	password	classId	classArmId	dateCreated
<input type="checkbox"/> Edit Copy Delete	46	NAGARATNA	MANJUNATH NAIK	Nagaratna	PES1UG21CS821	12345	5	7	2022-11-23
<input type="checkbox"/> Edit Copy Delete	19	SHREYANSH	SRIVASTAVA	SHREYANSH	PES1UG20CS404	12345	5	7	2022-11-22
<input type="checkbox"/> Edit Copy Delete	20	SHREYAS	BATULA	SHREYAS	PES1UG20CS405	12345	5	7	2022-11-22
<input type="checkbox"/> Edit Copy Delete	21	SHREYAS	HIEMATH	SHREYAS	PES1UG20CS406	12345	5	7	2022-11-22
<input type="checkbox"/> Edit Copy Delete	22	SHREYAS	JAISWAL	SHREYAS	PES1UG20CS407	12345	5	7	2022-11-22
<input type="checkbox"/> Edit Copy Delete	23	SHREYAS	S	SHREYAS	PES1UG20CS408	12345	5	7	2022-11-22
<input type="checkbox"/> Edit Copy Delete	24	SHREYAS S	KAUNDINYA	SHREYAS	PES1UG20CS409	12345	5	7	2022-11-22
<input type="checkbox"/> Edit Copy Delete	25	SHREYAS	CHATARJEE	SHREYAS	PES1UG20CS410	12345	5	7	2022-11-22
<input type="checkbox"/> Edit Copy Delete	26	SHRIYA	GUNTUR	SHRIYA	PES1UG20CS411	12345	5	7	2022-11-22
<input type="checkbox"/> Edit Copy Delete	27	SHRINIDHI	K J	SHRINIDHI	PES1UG20CS412	12345	5	7	2022-11-22

-Class Teachers Details

Server: 127.0.0.1 » Database: attendancemsystem » Table: tblclassteacher

Showing rows 0 - 4 (5 total, Query took 0.0005 seconds.)

```
SELECT * FROM `tblclassteacher`
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Extra options

				Id	firstName	lastName	emailAddress	password	phoneNo	classId	classArMid	dateCreated
<input type="checkbox"/>	Edit	Copy	Delete	10	Teacher	Teacher	teacher@teacher.com	8d788385431273d11e8b43bb78f3aa41	1234567890	5	13	2020-11-23
<input type="checkbox"/>	Edit	Copy	Delete	26	Ramana	Naik	sharath@gmail.com	khfjeahjnhfdj	0987654321	5	11	2022-11-28
<input type="checkbox"/>	Edit	Copy	Delete	27	Ramana	Naik	sharath@gmail.com	khfjeahjnhfdj	0987654321	5	11	2022-11-28
<input type="checkbox"/>	Edit	Copy	Delete	7	Pavankumar	Hegde	pavankumar@gmail.com	8d788385431273d11e8b43bb78f3aa41	8310411389	5	7	2020-11-22
<input type="checkbox"/>	Edit	Copy	Delete	12	Krishna	hegde	ram@gmail.com	ftfygugyvgvj	34758752925	5	11	2022-11-28

Check all | With selected: Edit Copy Delete Export

-Class Details

Server: 127.0.0.1 » Database: attendancemsystem » Table: tblclass

Showing rows 0 - 1 (2 total, Query took 0.0004 seconds.)

```
SELECT * FROM `tblclass`
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Extra options

				Id	className
<input type="checkbox"/>	Edit	Copy	Delete	5	CSE5
<input type="checkbox"/>	Edit	Copy	Delete	6	CSE7

Check all | With selected: Edit Copy Delete Export

-Section Details

Server: 127.0.0.1 » Database: attendancemsystem » Table: tblclassarms

[Browse](#) [Structure](#) [SQL](#) [Search](#) [Insert](#) [Export](#) [Import](#) [Privileges](#) [Operations](#) [Triggers](#)

✓ Showing rows 0 - 14 (15 total, Query took 0.0005 seconds.)

```
SELECT * FROM `tblclassarms`
```

☐ Profiling [\[Edit inline \]](#) [\[Edit \]](#) [\[Explain SQL \]](#) [\[Create PHP code \]](#) [\[Refresh \]](#)

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Extra options

				Id	classId	classArmName	isAssigned
<input type="checkbox"/>	Edit	Copy	Delete	7	5	G	1
<input type="checkbox"/>	Edit	Copy	Delete	8	5	F	0
<input type="checkbox"/>	Edit	Copy	Delete	9	6	I	1
<input type="checkbox"/>	Edit	Copy	Delete	10	5	A	0
<input type="checkbox"/>	Edit	Copy	Delete	11	5	B	1
<input type="checkbox"/>	Edit	Copy	Delete	12	5	C	0
<input type="checkbox"/>	Edit	Copy	Delete	13	5	D	1
<input type="checkbox"/>	Edit	Copy	Delete	14	5	E	0
<input type="checkbox"/>	Edit	Copy	Delete	15	5	H	1
<input type="checkbox"/>	Edit	Copy	Delete	16	5	I	0

-Class Session Details

Server: 127.0.0.1 » Database: attendancemsystem » Table: tblsessionterm

[Browse](#) [Structure](#) [SQL](#) [Search](#) [Insert](#) [Export](#) [Import](#) [Privileges](#) [Operations](#) [Triggers](#)

✓ Showing rows 0 - 2 (3 total, Query took 0.0010 seconds.)

```
SELECT * FROM `tblsessionterm`
```

☐ Profiling [\[Edit inline \]](#) [\[Edit \]](#) [\[Explain SQL \]](#) [\[Create PHP code \]](#) [\[Refresh \]](#)

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Extra options

				Id	sessionName	termId	isActive	dateCreated
<input type="checkbox"/>	Edit	Copy	Delete	1	10:10AM Machine Intelligence	1	1	2020-10-31
<input type="checkbox"/>	Edit	Copy	Delete	3	9:10AM Software Engineering	2	0	2020-10-31
<input type="checkbox"/>	Edit	Copy	Delete	4	8:10AM Database Management	1	0	2022-11-22

-Class Attendance Details

Server: 127.0.0.1 » Database: attendancemsystem » Table: tblattendance

BrowseStructureSQLSearchInsertExportImportPrivilegesOperationsTriggers

Showing rows 0 - 24 (153 total, Query took 0.0004 seconds.)

SELECT * FROM `tblattendance`

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

1 > >> Show all Number of rows: 25 Filter rows: Search this table Sort by key: None

Extra options

				Id	admissionNo	classId	classArmlId	sessionTermId	status	dateTimeTaken
<input type="checkbox"/>	Edit	Copy	Delete	235	PES1UG20CS417	5	7	2	1	2022-11-24
<input type="checkbox"/>	Edit	Copy	Delete	234	PES1UG20CS416	5	7	1	0	2022-11-24
<input type="checkbox"/>	Edit	Copy	Delete	233	PES1UG20CS415	5	7	1	1	2022-11-24
<input type="checkbox"/>	Edit	Copy	Delete	232	PES1UG20CS414	5	7	1	1	2022-11-24
<input type="checkbox"/>	Edit	Copy	Delete	231	PES1UG20CS413	5	7	1	0	2022-11-24
<input type="checkbox"/>	Edit	Copy	Delete	230	PES1UG20CS412	5	7	3	0	2022-11-24
<input type="checkbox"/>	Edit	Copy	Delete	229	PES1UG20CS411	5	7	1	0	2022-11-24
<input type="checkbox"/>	Edit	Copy	Delete	228	PES1UG20CS409	5	7	1	0	2022-11-24
<input type="checkbox"/>	Edit	Copy	Delete	227	PES1UG20CS409	5	7	1	0	2022-11-24
<input type="checkbox"/>	Edit	Copy	Delete	226	PES1UG20CS408	5	7	1	0	2022-11-24
<input type="checkbox"/>	Edit	Copy	Delete	225	PES1UG20CS407	5	7	1	0	2022-11-24

Console

Query Executer

Implemented Frontend Query Executer For Executing All The Queries

Attendance

Dashboard

CLASS AND SECTIONS

Manage Classes >

Manage Class Sections >

TEACHERS

Manage Teachers >

STUDENTS

Manage Students >

SESSION & TERM

Manage Session & Term >

Query Executer

Version 1.0.3

Query Executer

Home / Query

Run Your MySQL Query HERE -->

Enter Your Query To Execute

All Student

Show

10

entries

Search:

Join Queries

1. Using Join Query To Read Student Attendance Status Based on Attendance Date

```
SELECT tblattendance.admissionNo, CONCAT(tblstudents.firstName,' ',tblstudents.lastName) AS Name, tblattendance.status, tblattendance.dateTimeTaken AS Date FROM tblattendance JOIN tblstudents ON tblattendance.admissionNo=tblstudents.admissionNumber;
```

Show

10

entries

Search:

admissionNo	Name	status	Date
PES1UG20CS417	SHRUTHI MANOHAR KARANDE	1	2022-11-24
PES1UG20CS416	Shruthi Pai	0	2022-11-24
PES1UG20CS415	SHRUJAN	1	2022-11-24
PES1UG20CS414	SHRIYA S SHASTRY	1	2022-11-24
PES1UG20CS413	SHRINITHI NATARAJAN	0	2022-11-24
PES1UG20CS412	SHRINIDHI K J	0	2022-11-24
PES1UG20CS411	SHRIYA GUNTUR	0	2022-11-24
PES1UG20CS409	SHREYAS S KAUNDINYA	0	2022-11-24
PES1UG20CS409	SHREYAS S KAUNDINYA	0	2022-11-24
PES1UG20CS408	SHREYAS S	0	2022-11-24
PES1UG20CS407	SHREYAS JAISWAL	0	2022-11-24

2. Read student details with srn, name, sem, section, class teacher name

Query Executor

Version 1.0.3

```
SELECT tblstudents.admissionNumber AS SRN, tblstudents.firstName AS Name, tblclass.className AS Class, tblclassarms.classArmName AS Section, tblclassteacher.firstName AS ClassTeacher FROM tblstudents JOIN tblclass ON tblstudents.classId=tblclass.Id JOIN tblclassarms ON tblstudents.classArmId=tblclassarms.Id JOIN tblclassteacher ON tblstudents.classArmId=tblclassteacher.classArmId AND tblstudents.classId=tblclassteacher.classId;
```

Show

10

entries

Search:

SRN	Name	Class	Section	ClassTeacher
PES1UG21CS821	NAGARATNA	CSE5	G	Pavankumar
PES1UG20CS404	SHREYANSH	CSE5	G	Pavankumar
PES1UG20CS405	SHREYAS	CSE5	G	Pavankumar
PES1UG20CS406	SHREYAS	CSE5	G	Pavankumar
PES1UG20CS407	SHREYAS	CSE5	G	Pavankumar
PES1UG20CS408	SHREYAS	CSE5	G	Pavankumar
PES1UG20CS409	SHREYAS S	CSE5	G	Pavankumar
PES1UG20CS410	SHREYAS	CSE5	G	Pavankumar
PES1UG20CS411	SHRIYA	CSE5	G	Pavankumar
PES1UG20CS412	SHRINIDHI	CSE5	G	Pavankumar

3. Read each attendance session date with faculty name

Query Executor

Version 1.0.3

```
SELECT tblclassteacher.Id, tblclassteacher.firstName, tblclass.className,
tblclassarms.classArmName, tblattendance.dateTimeTaken FROM tblclassteacher JOIN
tblattendance ON tblclassteacher.classId=tblattendance.classId AND
tblclassteacher.classArmId=tblattendance.classArmId JOIN tblclass ON
tblattendance.classId=tblclass.Id JOIN tblclassarms ON tblattendance.classArmId=tblclassarms.Id
GROUP BY tblclassteacher.Id, tblattendance.classId, tblattendance.classArmId,
tblattendance.dateTimeTaken;
```

Show

10

entries

Search:

Id	firstName	className	classArmName	dateTimeTaken
7	Pavankumar	CSE5	G	2022-11-23
7	Pavankumar	CSE5	G	2022-11-24
7	Pavankumar	CSE5	G	2022-11-25
7	Pavankumar	CSE5	G	2022-11-26
7	Pavankumar	CSE5	G	2022-11-27
7	Pavankumar	CSE5	G	2022-11-28
11	Sharath	CSE5	B	2022-11-23
11	Sharath	CSE5	B	2022-11-25

4. Attendance Taken on each section with respective subject details

Query Executor

Version 1.0.3

```
SELECT tblsessionterm.sessionName, tblclass.className, tblclassarms.classArmName,
tblattendance.dateTimeTaken FROM tblsessionterm JOIN tblattendance ON
tblsessionterm.Id=tblattendance.sessionTermId JOIN tblclass ON tblattendance.classId=tblclass.Id
JOIN tblclassarms ON tblattendance.classArmId=tblclassarms.Id GROUP BY tblsessionterm.Id;
```

Show

10

entries

Search:

sessionName	className	classArmName	dateTimeTaken
10:10AM Machine Intelligence	CSE5	G	2022-11-24
9:10AM Software Engineering	CSE5	G	2022-11-24

No data available in table

5. Perform Right join on Faculty table and Students table

Query Executor

Version 1.0.3

```
SELECT CONCAT(tblstudents.firstName,' ',tblstudents.lastName) AS StudenTName,
CONCAT(tblclassteacher.firstName,' ',tblclassteacher.lastName) AS TeacherName,
tblstudents.classId, tblstudents.classArmId, tblclassteacher.classId, tblclassteacher.classArmId FROM
tblstudents RIGHT JOIN tblclassteacher ON tblstudents.classId=tblclassteacher.classId AND
tblstudents.classArmId=tblclassteacher.classArmId;
```

Show

10

entries

Search:

StudenTName	TeacherName	classId	classArmId	classId	classArmId
	Teacher Teacher			5	13
	Samyukta Patil			6	9
	Nagesh Gowda			5	15
NAGARATNA MANIUNATH NAIK	Pavankumar Hegde	5	7	5	7
SHREYANSH SRIVASTAVA	Pavankumar Hegde	5	7	5	7
SHREYAS BATULA	Pavankumar Hegde	5	7	5	7
SHREYAS HIREMATH	Pavankumar Hegde	5	7	5	7
SHREYAS JAISWAL	Pavankumar Hegde	5	7	5	7
SHREYAS S	Pavankumar Hegde	5	7	5	7

6. Perform Left Join on student table and faculty table

Query Executor

Version 1.0.3

```
SELECT CONCAT(tblstudents.firstName,' ',tblstudents.lastName) AS StudenTName,
tblstudents.classId, tblstudents.classArmId,CONCAT(tblclassteacher.firstName,' ',
tblclassteacher.lastName) AS TeacherName, tblclassteacher.classId, tblclassteacher.classArmId
FROM tblclassteacher LEFT JOIN tblstudents ON tblstudents.classId=tblclassteacher.classId AND
tblstudents.classArmId=tblclassteacher.classArmId;
```

Show

10

entries

Search:

StudenTName	classId	classArmId	TeacherName	classId	classArmId
			Teacher Teacher	5	13
			Samyukta Patil	6	9
			Nagesh Gowda	5	15
NAGARATNA MANIUNATH NAIK	5	7	Pavankumar Hegde	5	7
SHREYANSH SRIVASTAVA	5	7	Pavankumar Hegde	5	7
SHREYAS BATULA	5	7	Pavankumar Hegde	5	7
SHREYAS HIREMATH	5	7	Pavankumar Hegde	5	7
SHREYAS JAISWAL	5	7	Pavankumar Hegde	5	7
SHREYAS S	5	7	Pavankumar Hegde	5	7
SHREYAS S KAUNDINYA	5	7	Pavankumar Hegde	5	7

Aggreagate Functions

1. Calculate total attendance of each students

Query Executer

Version 1.0.3

```
SELECT tblstudents.admissionNumber, COUNT(*) AS attendance FROM tblattendance INNER JOIN
tblclass ON tblclass.Id = tblattendance.classId INNER JOIN tblclassarms ON tblclassarms.Id =
tblattendance.classArmId INNER JOIN tblsessionterm ON tblsessionterm.Id =
tblattendance.sessionTermId INNER JOIN tblterm ON tblterm.Id = tblsessionterm.termId INNER JOIN
tblstudents ON tblstudents.admissionNumber = tblattendance.admissionNo WHERE status=1
GROUP BY tblattendance.admissionNo;
```

Show
10
entries

Search:

admissionNumber	attendance
PES1UG20CS404	6
PES1UG20CS405	6
PES1UG20CS406	3
PES1UG20CS407	1
PES1UG20CS408	1
PES1UG20CS414	6
PES1UG20CS415	3
PES1UG20CS417	5
PES1UG20CS418	6

2. Count total number of students

SESSION & TERM

Manage Session & Term >

Query Executer

Version 1.0.3

All Student

```
SELECT COUNT(tblstudents.admissionNumber) FROM tblstudents;
```

Show
10
entries

Search:

COUNT(tblstudents.admissionNumber)
33

3. Count No Of Total Classes Taken On Each Subject

```
SELECT COUNT(tblattendance.sessionTermId), tblsessionterm.sessionName FROM
tblattendance JOIN tblsessionterm ON tblattendance.sessionTermId=tblsessionterm.Id GROUP
BY tblattendance.sessionTermId;
```

Show
10
entries

Search:

COUNT(tblattendance.sessionTermId)	sessionName
151	10:10AM Machine Intelligence
1	9:10AM Software Engineering

No data available in table

Showing 0 to 0 of 0 entries

PreviousNext

4. Count Total Attendance of Each Student

Query Executer

Version 1.0.3

```
SELECT tblattendance.admissionNo, CONCAT(tblstudents.firstName, ' ',tblstudents.lastName)
AS Name, COUNT(tblattendance.admissionNo) AS Attendance FROM tblattendance JOIN
tblstudents ON tblattendance.admissionNo=tblstudents.admissionNumber GROUP BY
tblattendance.admissionNo;
```

Show
10
entries

Search:

admissionNo	Name	Attendance
PES1UG20CS404	SHREYANSH SRIVASTAVA	6
PES1UG20CS405	SHREYAS BATULA	6
PES1UG20CS406	SHREYAS HIREMATH	6
PES1UG20CS407	SHREYAS JAISWAL	6
PES1UG20CS408	SHREYAS S	6
PES1UG20CS409	SHREYAS S KAUNDINYA	10
PES1UG20CS410	SHREYAS CHATARJEE	2
PES1UG20CS411	SHRIYA GUNTUR	6

Set Operations

Showcase at least 4 Set Operations queries

Write the query in English Language, Show the equivalent SQL statement and also a screenshot of the query and the results

1. UNION operation on student table and faculty table

Query Executer

Version 1.0.3

```
SELECT * FROM tblclassteacher UNION SELECT * FROM tblstudents;
```

Show: 10 entries

Search:

Id	firstName	lastName	emailAddress	password	phoneNo	class
10	Teacher	Teacher	teacher@teacher.com	8d788385431273d11e8b43bb78f3aa41	1234567890	5
26	Ramana	Naik	sharath@gmail.com	khfjeahjnhfdj	0987654321	5
27	Ramana	Naik	sharath@gmail.com	khfjeahjnhfdj	0987654321	5
7	Pavankumar	Hegde	pavankumar@gmail.com	8d788385431273d11e8b43bb78f3aa41	8310411389	5
12	Krishna	hegde	ram@gmail.com	ftfygugyvgvj	34758752925	5
46	NAGARATNA	MANJUNATH	Nagaratna	PES1UG21CS821	12345	5

2. UNION operation on Class table and Class schedule term

Query Executer

Version 1.0.3

```
SELECT * FROM tblclass UNION ALL SELECT * FROM tblterm;
```

Show: 10 entries

Search:

Id	className
5	CSE5
6	CSE7
1	8.15AM
2	9.15AM
3	10.15AM

No data available in table

Showing 0 to 0 of 0 entries

Previous Next

3. Common Firstname in both faculty table and student table

SESSION & TERM

Manage Session & Term

Query Executer

Version 1.0.3

All Student

```
SELECT tblstudents.firstName AS Name FROM tblstudents INTERSECT SELECT tblclassteacher.firstName FROM tblclassteacher;
```

Show: 10 entries

Search:

Name
Pavankumar

No data available in table

Showing 0 to 0 of 0 entries

Previous Next

4. Common class and section details on both faculty table and student table

Query Executer

Version 1.0.3

```
SELECT tblclass.className, tblclassarms.classArmName FROM tblstudents, tblclass,
tblclassarms WHERE tblstudents.classId=tblclass.Id AND
tblstudents.classArmId=tblclassarms.Id INTERSECT SELECT tblclass.className,
tblclassarms.classArmName FROM tblclassteacher, tblclass, tblclassarms WHERE
tblclassteacher.classId=tblclass.Id AND tblclassteacher.classArmId=tblclassarms.Id;
```

Show

10

entries

Search:

className	classArmName
CSE5	G
CSE5	B

No data available in table

Showing 0 to 0 of 0 entries

Previous

Next

Functions and Procedures

Create a function isAttended(SRN, Date) To Know the attendance status of a student

DELIMITER \$\$

```
CREATE FUNCTION `isAttended`(admissionNumber VARCHAR(20), date DATE
```

```
) RETURNS varchar(20) CHARSET utf8mb4
```

```
    DETERMINISTIC
```

```
BEGIN
```

```
IF (SELECT COUNT(*) FROM tblattendance WHERE status=1 AND
```

```
admissionNo=admissionNumber AND dateTimeTaken=date )>=1 THEN
```

```
RETURN (" Student is Attended ");
```

```
ELSE
```

```
RETURN (" Student Not Attended");
```

```
END IF;
```

```
END$$
```

```
DELIMITER ;
```

The screenshot displays a web interface for a query executor. On the left, a sidebar contains links for 'Manage Session & Term' and 'Query Executor', with 'Version 1.0.3' noted below. The main area shows two query results. The first query, executed on 2022-11-28, returns 'Student is Attended'. The second query, executed on 2022-12-1, returns 'Student Not Attende'. Both results are shown in a table with a header 'isAttended'.

isAttended
Student is Attended

isAttended
Student Not Attende

Create a Procedure To get Experience of Faculty

DELIMITER \$\$

CREATE DEFINER=`root`@`localhost` PROCEDURE `getFacultyExp`(IN `id` INT)

SELECT TIMESTAMPDIF(YEAR, dateCreated, CURDATE()) AS exp FROM tblclassteacher

WHERE tblclassteacher.Id=id\$\$

DELIMITER ;

```
CALL getFacultyExp('7');
```

exp

2

Faculty table data

				Id	firstName	lastName	emailAddress	password	phoneNo	classId	classArmId	dateCreated
<input type="checkbox"/>	Edit	Copy	Delete	10	Teacher	Teacher	teacher@teacher.com	8d788385431273d11e8b43bb78f3aa41	1234567890	5	13	2020-11-23
<input type="checkbox"/>	Edit	Copy	Delete	26	Ramana	Naik	sharath@gmail.com	khfjeahjnhfdj	0987654321	5	11	2022-11-28
<input type="checkbox"/>	Edit	Copy	Delete	27	Ramana	Naik	sharath@gmail.com	khfjeahjnhfdj	0987654321	5	11	2022-11-28
<input type="checkbox"/>	Edit	Copy	Delete	7	Pavankumar	Hegde	pavankumar@gmail.com	8d788385431273d11e8b43bb78f3aa41	8310411389	5	7	2020-11-22
<input type="checkbox"/>	Edit	Copy	Delete	12	Krishna	hegde	ram@gmail.com	ftfygugyvgvj	34758752925	5	11	2022-11-28

Triggers & Cursors

Create a trigger to store backup details of a teacher after deletion on faculty table With the date when faculty left

```
CREATE TRIGGER `classteacher_backup` BEFORE DELETE ON `tblclassteacher`  
FOR EACH ROW BEGIN  
INSERT INTO tblclassteacher_backup VALUES(old.Id, old.firstName, old.lastName,  
old.emailAddress, old.password, old.phoneNo, old.classId, old.classArmId, old.dateCreated,  
CURRENT_DATE);  
END
```

Data stored in backup table

Showing rows 0 - 1 (2 total, Query took 0.0005 seconds.)

```
SELECT * FROM `tblclassteacher_backup`
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 | Filter rows: Search this table

Extra options

Id	firstName	lastName	emailAddress	password	phoneNo	classId	classArmId	dateCreated	dateLeft
12	Ram	Krishna	ram@gmail.com	dsmnhbchbdsyndbxqjdsf	34758752925	5	11	2022-11-28	2022-11-28
11	Sharath	Krishna	sharath@gmail.com	21232f297a57a5a743894a0e4a801fc3	0987654321	5	11	2022-11-23	2022-11-29

Data Before Deletion on faculty table

Showing rows 0 - 4 (5 total, Query took 0.0005 seconds.)

```
SELECT * FROM `tblclassteacher`
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Extra options

	Id	firstName	lastName	emailAddress	password	phoneNo	classId	classArmId	dateCreated
<input type="checkbox"/> Edit Copy Delete	10	Teacher	Teacher	teacher@teacher.com	8d788385431273d11e8b43bb78f3aa41	1234567890	5	13	2020-11-23
<input type="checkbox"/> Edit Copy Delete	26	Ramana	Naik	sharath@gmail.com	khfjeahjnhfdj	0987654321	5	11	2022-11-28
<input type="checkbox"/> Edit Copy Delete	27	Ramana	Naik	sharath@gmail.com	khfjeahjnhfdj	0987654321	5	11	2022-11-28
<input type="checkbox"/> Edit Copy Delete	7	Pavankumar	Hegde	pavankumar@gmail.com	8d788385431273d11e8b43bb78f3aa41	8310411389	5	7	2020-11-22
<input type="checkbox"/> Edit Copy Delete	12	Krishna	hegde	ram@gmail.com	ftfyguyvgvj	34758752925	5	11	2022-11-28

Records After Deletion on Faculty Table

Showing rows 0 - 4 (5 total, Query took 0.0005 seconds.)

```
SELECT * FROM `tblclassteacher`
```

☐ Profiling [[Edit inline](#)] [[Edit](#)] [[Explain SQL](#)] [[Create PHP code](#)] [[Refresh](#)]

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Extra options

				Id	firstName	lastName	emailAddress	password	phoneNo	classId	classArmId	dateCreated
<input type="checkbox"/>	Edit	Copy	Delete	10	Teacher	Teacher	teacher@teacher.com	8d788385431273d11e8b43bb78f3aa41	1234567890	5	13	2020-11-23
<input type="checkbox"/>	Edit	Copy	Delete	26	Ramana	Naik	sharath@gmail.com	khfjeahjnhfdj	0987654321	5	11	2022-11-28
<input type="checkbox"/>	Edit	Copy	Delete	27	Ramana	Naik	sharath@gmail.com	khfjeahjnhfdj	0987654321	5	11	2022-11-28
<input type="checkbox"/>	Edit	Copy	Delete	7	Pavankumar	Hegde	pavankumar@gmail.com	8d788385431273d11e8b43bb78f3aa41	8310411389	5	7	2020-11-22

Deleted teacher details stored safely on backup table

Showing rows 0 - 2 (3 total, Query took 0.0004 seconds.)

```
SELECT * FROM `tblclassteacher_backup`
```

☐ Profiling [[Edit inline](#)] [[Edit](#)] [[Explain SQL](#)] [[Create PHP code](#)] [[Refresh](#)]

☐ Show all | Number of rows: 25 | Filter rows: Search this table

Extra options

Id	firstName	lastName	emailAddress	password	phoneNo	classId	classArmId	dateCreated	dateLeft
12	Ram	Krishna	ram@gmail.com	dsmnhbchbdsdvndbxqjdsf	34758752925	5	11	2022-11-28	2022-11-28
11	Sharath	Krishna	sharath@gmail.com	21232f297a57a5a743894a0e4a801fc3	0987654321	5	11	2022-11-23	2022-11-29
12	Krishna	hegde	ram@gmail.com	ftfygugyvvgvj	34758752925	5	11	2022-11-28	2022-12-02

Create a Cursor to store backup of faculty table & Display Details that is stored in backup

```
DELIMITER $$
CREATE DEFINER=`root`@`localhost` PROCEDURE `Backup_Faculty`()
BEGIN
    DECLARE done INT DEFAULT 0;
    DECLARE fid INT;
    DECLARE name1, lastName VARCHAR(30);
    DECLARE username1, password1 VARCHAR(40);
    DECLARE phoneno1, classid1, sectionid1 VARCHAR(40);
    DECLARE cur CURSOR FOR SELECT Id, firstName, emailAddress, password, phoneNo,
classId, classArmId FROM tblclassteacher;

    DECLARE CONTINUE HANDLER FOR NOT FOUND SET done=1;
    OPEN cur;
    label: LOOP

        FETCH cur INTO fid, name1, username1, password1, phoneno1, classid1, sectionid1;

        INSERT INTO backup_faculty VALUES(fid, name1, username1, password1, phoneno1,
classid1, sectionid1);

        IF done = 1 THEN LEAVE label;
        END IF;
    END LOOP;
    CLOSE cur;

    SELECT * FROM backup_faculty;
END$$
DELIMITER ;
```

CALL `Backup_Faculty`());

fid	name	username1	password1	phoneno	classid	sectionid
10	Teacher	teacher@teacher.com	8d788385431273d11e8b43bb78f3aa41	1234567890	5	13
8	Samyukta	smyukta@gmail.com	5f4dcc3b5aa765d61d8327deb882cf99	8383773876	6	9
9	Nagesh	nagesh@gmail.com	8dc47d1615068325c0188eab8b6e80	9278367273	5	15
7	Pavankumar	pavankumar@gmail.com	32250170a0dca92d53ec9624f336ca24	8310411389	5	7
11	Sharath	sharath@gmail.com	21232f297a57a5a743894a0e4a801fc3	0987654321	5	11
11	Sharath	sharath@gmail.com	21232f297a57a5a743894a0e4a801fc3	0987654321	5	11
10	Teacher	teacher@teacher.com	8d788385431273d11e8b43bb78f3aa41	1234567890	5	13
8	Samyukta	smyukta@gmail.com	5f4dcc3b5aa765d61d8327deb882cf99	8383773876	6	9
9	Nagesh	nagesh@gmail.com	8dc47d1615068325c0188eab8b6e80	9278367273	5	15

Backup table in phpMyAdmin

✓ Showing rows 0 - 24 (44 total, Query took 0.0004 seconds.)

`SELECT * FROM `backup_faculty``

☐ Profiling [[Edit inline](#)] [[Edit](#)] [[Explain SQL](#)] [[Create PHP code](#)] [[Refresh](#)]

1 ▾

>

>>

☐

Show all

Number of rows:

25 ▾

Filter rows:

Extra options

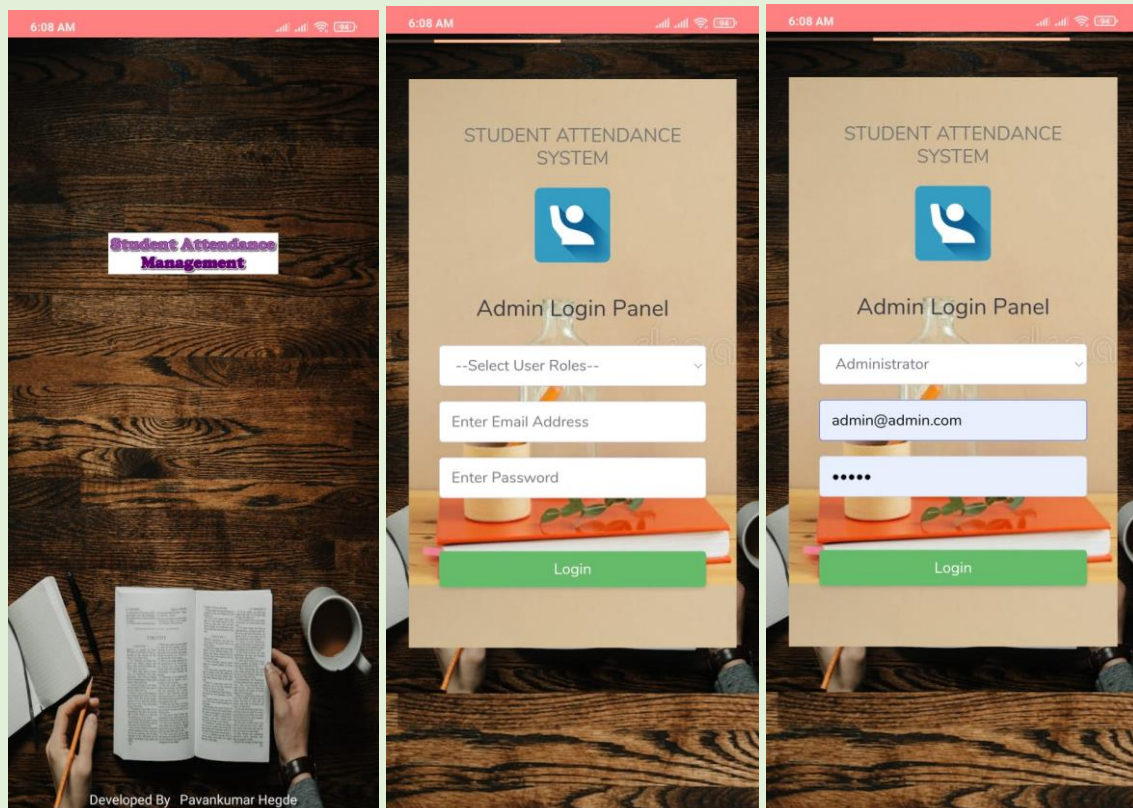
fid	name	username1	password1	phoneno	classid	sectionid
10	Teacher	teacher@teacher.com	8d788385431273d11e8b43bb78f3aa41	1234567890	5	13
8	Samyukta	smyukta@gmail.com	5f4dcc3b5aa765d61d8327deb882cf99	8383773876	6	9
9	Nagesh	nagesh@gmail.com	8dc47d1615068325c0188eab8b6e80	9278367273	5	15
7	Pavankumar	pavankumar@gmail.com	32250170a0dca92d53ec9624f336ca24	8310411389	5	7
11	Sharath	sharath@gmail.com	21232f297a57a5a743894a0e4a801fc3	0987654321	5	11
11	Sharath	sharath@gmail.com	21232f297a57a5a743894a0e4a801fc3	0987654321	5	11
10	Teacher	teacher@teacher.com	8d788385431273d11e8b43bb78f3aa41	1234567890	5	13
8	Samyukta	smyukta@gmail.com	5f4dcc3b5aa765d61d8327deb882cf99	8383773876	6	9
9	Nagesh	nagesh@gmail.com	8dc47d1615068325c0188eab8b6e80	9278367273	5	15
7	Pavankumar	pavankumar@gmail.com	32250170a0dca92d53ec9624f336ca24	8310411389	5	7
11	Sharath	sharath@gmail.com	21232f297a57a5a743894a0e4a801fc3	0987654321	5	11

Developing a Frontend

The frontend should support

1. Addition, Modification and Deletion of records from any chosen table
2. There should be an window to accept and run any SQL statement and display the result

FRONT END ON Android Application Written in Java



6:09 AM

Administrator Dashboard

Home / Dashboard

STUDENTS

28

CLASSES

2

SECTIONS

15

TOTAL STUDENT ATTENDANCE

153

CLASS TEACHERS

5

SESSION & TERMS

6:09 AM

CLASSES

2

SECTIONS

15

TOTAL STUDENT ATTENDANCE

153

CLASS TEACHERS

5

SESSION & TERMS

3

TERMS

3

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6:09 AM

Create Class

Home / Create Class

Create Class

Class Name *

Class Name

Save

All Classes

Show

10

entries

Search:

#	Class Name	Edit	Delete
1	CSE5	Edit	Delete

6:09 AM

Create Class

Home / Create Class

Create Class

Class Name *

CSE5

Update

All Classes

Show

10

entries

Search:

#	Class Name	Edit	Delete
1	CSE5	Edit	Delete

6:10 AM

Create Class Arms

Home / Create Class Arms

Create Class Arms

Select Class *

CSE5

Class Arm Name *

Class Arm Name

Save

All Class Arm

Show

10

entries

Search:

#	Class Name	Class Arm Name	Status
---	------------	----------------	--------

6:10 AM

#	Class Name	Class Arm Name	Status
1	CSE5	G	Assigned
2	CSE5	F	UnAssigned
3	CSE5	A	UnAssigned
4	CSE5	B	Assigned
5	CSE5	C	UnAssigned
6	CSE5	D	Assigned
7	CSE5	E	UnAssigned
8	CSE5	H	Assigned
9	CSE5	I	UnAssigned

6:10 AM

Create Class Arms

Home / Create Class Arms

Create Class Arms

Select Class *

--Select Class--

Class Arm Name *

G

Update

All Class Arm

Show

10

entries

Search:

#	Class Name	Class Arm Name	Status
22	SIDDARTH	KUMAR	
23	Sidharth	M	
24	SIDDHARTH G	SOORA	
25	SIDDHARTH	P	
26	PAVANKUMAR	LAXMIN, H K	
27	R	RAHUL	
28	RAGHUNANDAN	KS	
29	Raghava	N	

Showing 21 to 29 of 29 entries

Previous 1 2 3 Next

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6:11 AM

Create Class Arms

Home / Create Class Arms

Create Class Arms

Select Class *

--Select Class--

CSE5

CSE7

All Class Arm

Show

10

entries

Search:

#	Class Name	Class Arm Name	Status
22	SIDDARTH	KUMAR	
23	Sidharth	M	
24	SIDDHARTH G	SOORA	
25	SIDDHARTH	P	
26	PAVANKUMAR	LAXMIN, H K	
27	R	RAHUL	
28	RAGHUNANDAN	KS	
29	Raghava	N	

Showing 21 to 29 of 29 entries

Previous 1 2 3 Next

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6:12 AM

Create Students

Home / Create Students

Create Students

Firstname *

Raghava

Lastname *

N

Other Name *

Raghav

Admission Number *

PES1UG20CS825

Select Class *

CSE5

Class Arm *

E

Save

6:12 AM

22	SIDDARTH	KUMAR
23	Sidharth	M
24	SIDDHARTH G	SOORA
25	SIDDHARTH	P
26	PAVANKUMAR	LAXMIN, H K
27	R	RAHUL
28	RAGHUNANDAN	KS
29	Raghava	N

Showing 21 to 29 of 29 entries

Previous 1 2 3 Next

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6:13 AM

Create Session and Term

Home / Create Session and Term

Create Session and Term

Session Name *

--Select Term--

10.15AM

8.15AM

9.15AM

All Session and Term

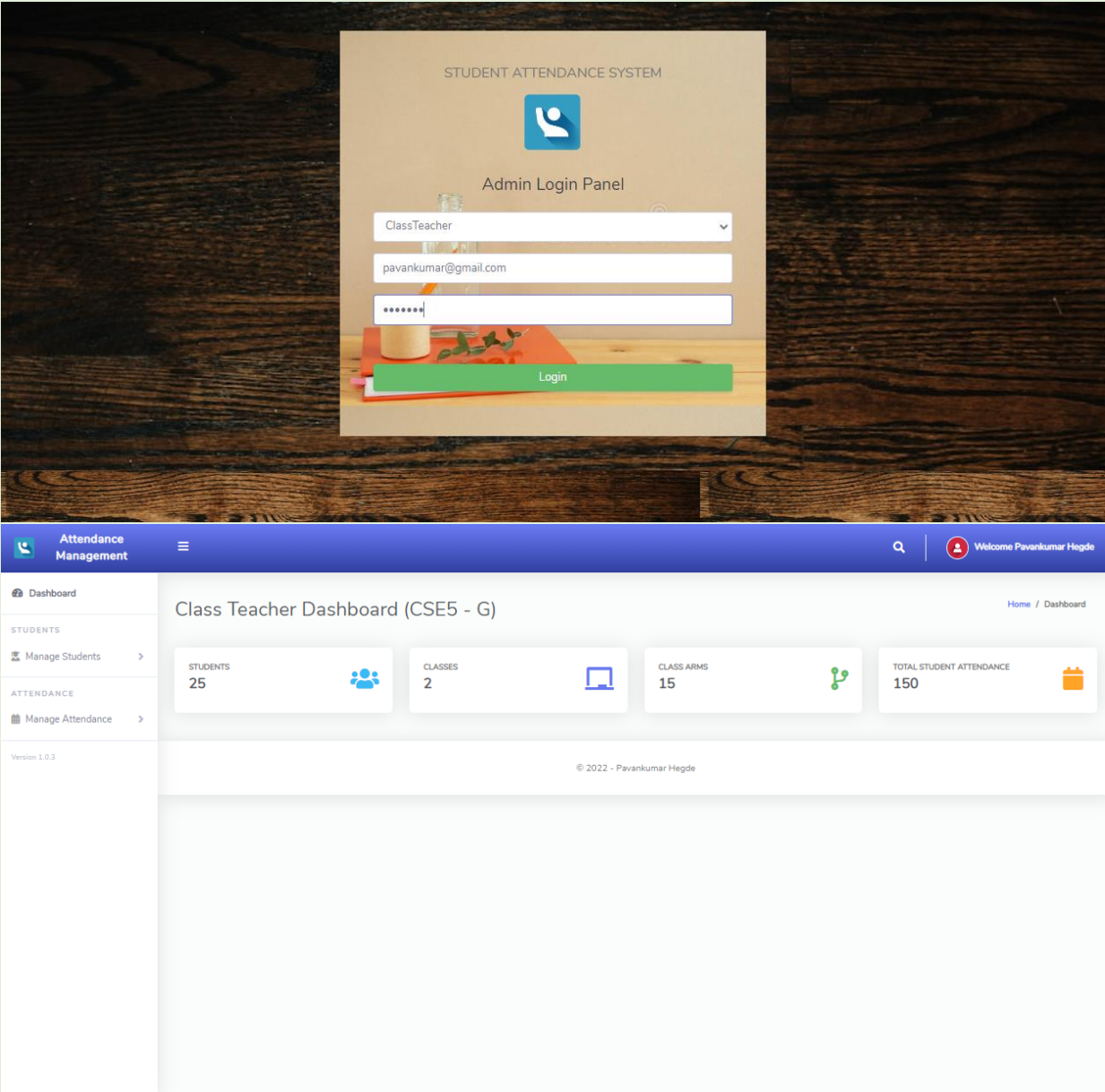
Note: Click on the check symbol besides each to make session and term active!

Show

10

entries

Search:



Dashboard

STUDENTS

Manage Students

ATTENDANCE

Manage Attendance

MANAGE ATTENDANCE

Take Attendance

View Class Attendance

View Student Attendance

Today's Report (xls)

Version 1.0.3

View Student Attendance

Home / View Student Attendance

View Student Attendance

Select Student *
SHUBHAM S

Type *
All

View Attendance

Class Attendance

Show
10
entries

Search:

#	First Name	Last Name	Other Name	Admission No	Class	Class Arm	Session	Term	Status	Date
1	SHUBHAM	S	Shubham	PES1UG20CS420	CSE5	G	10:10AM Machine Intelligence	8.15AM	Present	2022-11-23
2	SHUBHAM	S	Shubham	PES1UG20CS420	CSE5	G	10:10AM Machine Intelligence	8.15AM	Present	2022-11-24

Attendance Management

Home / All Student in Class

Take Attendance (Today's Date : 11-28-2022)

All Student in (CSE5 - G) Class

Note: Click on the checkboxes besides each student to take attendance!

#	First Name	Last Name	Other Name	Admission No	Class	Class Arm	Check
1	NAGARATNA	MANIJUNATH NAIK	Nagaratna	PES1UG21CS821	CSE5	G	<input checked="" type="checkbox"/>
2	SHREYANSH	SRIVASTAVA	SHREYANSH	PES1UG20CS404	CSE5	G	<input type="checkbox"/>
3	SHREYAS	BATULA	SHREYAS	PES1UG20CS405	CSE5	G	<input type="checkbox"/>
4	SHREYAS	HIREMATH	SHREYAS	PES1UG20CS406	CSE5	G	<input type="checkbox"/>
5	SHREYAS	JAISWAL	SHREYAS	PES1UG20CS407	CSE5	G	<input checked="" type="checkbox"/>
6	SHREYAS	S	SHREYAS	PES1UG20CS408	CSE5	G	<input type="checkbox"/>
7	SHREYAS S	KAUNDINYA	SHREYAS	PES1UG20CS409	CSE5	G	<input type="checkbox"/>

6

SHUBHAM

S

Shubham

PES1UG20CS420

CSE5

G

10:10AM
Machine
Intelligence

8.15AM

Absent

2022-11-28

Showing 1 to 6 of 6 entries

Previous

1

Next

PES1UG20CS420

Student Attendance :SHUBHAM

present Attendance: 50.0%

absent present

entries

#	First Name	Last Name	Other Name	Admission No	Class	Class Arm	Session	Term	Status	Date
1	NAGARATNA	MANJUNATH NAIK	Nagaratna	PES1UG21CS821	CSE5	G	10:10AM Machine Intelligence	8.15AM	Present	2022-11-28
2	SHREYANSH	SRIVASTAVA	SHREYANSH	PES1UG20CS404	CSE5	G	10:10AM Machine Intelligence	8.15AM	Present	2022-11-28
3	SHREYAS	BATULA	SHREYAS	PES1UG20CS405	CSE5	G	10:10AM Machine Intelligence	8.15AM	Present	2022-11-28
4	SHREYAS	HIEMATH	SHREYAS	PES1UG20CS406	CSE5	G	10:10AM Machine Intelligence	8.15AM	Absent	2022-11-28
5	SHREYAS	JAISWAL	SHREYAS	PES1UG20CS407	CSE5	G	10:10AM Machine Intelligence	8.15AM	Absent	2022-11-28
6	SHREYAS	S	SHREYAS	PES1UG20CS408	CSE5	G	10:10AM Machine Intelligence	8.15AM	Absent	2022-11-28
7	SHREYAS S	KAUNDINYA	SHREYAS	PES1UG20CS409	CSE5	G	10:10AM Machine Intelligence	8.15AM	Absent	2022-11-28