University Of Management And Technology

PROJECT REPORT 2025

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DataBase (lab)

Section: V_14

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Student Record Management System (SRMS)

Overview

The Student Record Management System (SRMS) is a web-based platform that automates core administrative processes in educational institutions. It centralizes student data, attendance tracking, exam management, scheduling, and communication into a unified system. The solution supports three key roles:

- **Teachers:** Manage attendance, exams, schedules.
- **Administrators:** Oversee student/parent data, classrooms, subjects.
- **Parents/Students**: View notices, results, and schedules.

Key Features

Feature	Functionality
Student Management	Add/edit students, assign classrooms, link to parent records.
Attendance Tracking	Daily logging with "Present/Absent" status; historical reports.
Exam Management	Schedule exams, record results (marks/grades), assign invigilators.
Timetable Scheduling	Create class schedules (subject, teacher, time, classroom).
Notice Board	Broadcast announcements to specific audiences (e.g., parents).

Classroom Control	Define classrooms with capacities/locations.
User Authentication	Role-based login (Teacher/Student/Parent) with password protection.

Database Design

Core Tables:

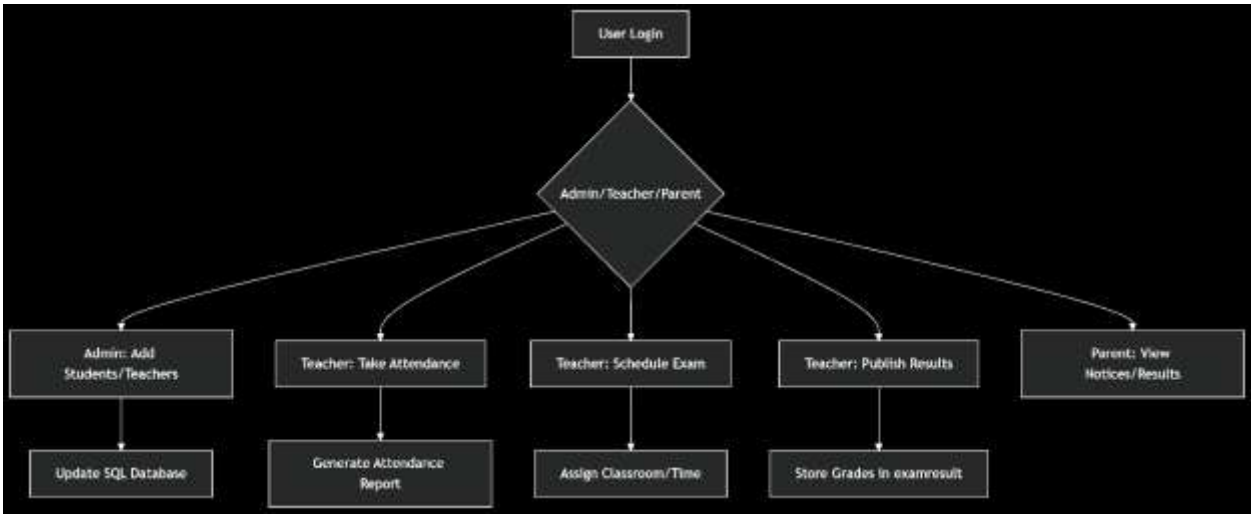
1. **student:**
    - sid (Student ID), fname, lname, classroom, parent (links to parent.pid).
2. **parent:**
    - pid, contact, email, nic (national ID).
3. **attendance + attendancereport:**
    - Logs date and status (Present/Absent) per student.
4. **exam + examresult:**
    - Exam date, stime/etime, marks, grade.
5. **schedule:**
    - Weekly class timetable (subject, day, stime, etime).

Relationships:

- **Student** → Parent (1 student : 1 parent)
- **Student** → Classroom (Many : 1)

- **Teacher** → Subject (1 teacher : Many subjects)

System Workflow



Technology Stack

Layer	Technologies
Frontend	HTML5, CSS3, Bootstrap 5 (responsive UI), JavaScript (form validation)
Backend	PHP (server logic), MySQL (database)
Database	MySQL (tables: student, parent, attendance, exam, etc.)
Security	Password hashing (MD5 - *needs upgrade*), role-based access control

---

Frontend-Backend Integration

- User Login (PHP + MySQL)

```php
$email = $_POST['email'];
$password = md5($_POST['password']);
$query = "SELECT * FROM user WHERE email='$email' AND password='$password'";
```

- Attendance Recording (PHP):

```php
$sql = "INSERT INTO attendance (sid, date) VALUES ('$sid', '$date')";
$sql2 = "INSERT INTO attendancereport (aid, sid, status) VALUES (...)";
```

- Exam Scheduling (JS + PHP):
  - Frontend: Bootstrap form for date/time selection.
  - Backend: PHP inserts into exam table

User Interfaces

Teacher Portal:

- **Dashboard:** Quick access to attendance, exams, schedules.
- **Forms:**
  - Add student: Text inputs + dropdowns (classroom/parent).
  - Schedule exam: Date/time pickers, classroom selector.

- **Tables:** Student lists, attendance reports (filter by date).

Parent/Student Portal:

- **Notice Board:** Card-based notices with filters.
- **Results:** Grade cards with subject-wise performance.

UI Components (Bootstrap):

```
<!-- Student Form -->
<div class="mb-3">
  <label class="form-label">Student ID</label>
  <input type="text" class="form-control" name="sid" required>
</div>
<!-- Classroom Dropdown -->
<select class="form-select" name="classroom">
  <option value="4-B">4-B (Capacity: 50)</option>
</select>
```

Conclusion

Strengths:

- Centralizes critical administrative functions.
- Reduces manual work through automation (attendance/exams).
- Improves data accuracy with relational database design.

Improvements Needed:

1. **Security:** Upgrade MD5 → bcrypt password hashing.
2. **Validation**: Add PHP prepared statements to prevent SQL injection.

3. **UX:** Include calendars for date selection, grade analytics.
4. **Scalability:** Optimize database indexing for large datasets.

Deployment:

- Host on Apache/SQL Xampp server with MySQL.
- Use phpMyAdmin for database management.

DataBase Code (SQL):

Student Management System SQL Code

```
SET SQL_MODE = "NO_AUTO_VALUE_ON_ZERO";

START TRANSACTION;

SET time_zone = "+00:00";


-- Database: `student-management-system`

-- --------------------------------------------------------

-- Table structure for table `attendance`

CREATE TABLE `attendance` (
  `sid` int(10) NOT NULL,
  `date` date NOT NULL,
  `aid` int(10) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4
COLLATE=utf8mb4_general_ci;

--

-- Dumping data for table `attendance`

--
```

```
INSERT INTO `attendance` (`sid`, `date`, `aid`) VALUES
(19, '2025-06-10', 9);
-- --------------------------------------------------------
--
-- Table structure for table `attendancereport`
--
CREATE TABLE `attendancereport` (
  `aid` int(20) NOT NULL,
  `sid` varchar(50) NOT NULL,
  `status` varchar(50) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4
COLLATE=utf8mb4_general_ci;
--
-- Dumping data for table `attendancereport`
--

INSERT INTO `attendancereport` (`aid`, `sid`, `status`) VALUES
(9, ' 770', 'Absent'),
(9, '796', 'Present');
-- --------------------------------------------------------
--
-- Table structure for table `classroom`
--
CREATE TABLE `classroom` (
  `hno` varchar(50) NOT NULL,
  `title` varchar(50) NOT NULL,
  `location` varchar(50) NOT NULL,
  `capacity` int(3) NOT NULL
```

```
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4
COLLATE=utf8mb4_general_ci;

--

-- Dumping data for table `classroom`

--

INSERT INTO `classroom` (`hno`, `title`, `location`, `capacity`)
VALUES

('1', 'STD-316', 'level 3', 50),

('10', 'Sen-401', 'level 4', 80),

('2', 'Cb1-108', 'Basement', 100),

('3', 'CB2-1101', 'level 11', 50),

('4', 'CB1-305', 'Level 3', 60),

('5', 'STD-317', 'Level 3', 50),

('6', 'Cb2-402', 'Level 4', 50),

('7', 'CB1-505', 'Level 5 ', 70),

('8', 'CB2-703', 'level 7', 50),

('9', '1N-10', 'Main', 100);

-- --------------------------------------------------------

--

-- Table structure for table `exam`

--

CREATE TABLE `exam` (

  `id` int(11) NOT NULL,

  `subject` varchar(50) NOT NULL,

  `teacher` varchar(50) NOT NULL,

  `classroom` varchar(50) NOT NULL,

  `date` date NOT NULL,

  `stime` time NOT NULL,
```

```
  `etime` time NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4
COLLATE=utf8mb4_general_ci;
--
-- Dumping data for table `exam`
--
INSERT INTO `exam` (`id`, `subject`, `teacher`, `classroom`,
`date`, `stime`, `etime`) VALUES
(10, '7', '1', '6', '2025-06-24', '02:00:00', '04:45:00'),
(11, '8', ' 7', '7', '2025-06-27', '11:00:00', '01:00:00'),
(12, '4', ' 4', '2', '2025-07-01', '12:30:00', '01:45:00'),
(13, '2', '3', '5', '2025-07-02', '09:30:00', '10:45:00');


-- --------------------------------------------------------
--
-- Table structure for table `examresult`
--
CREATE TABLE `examresult` (
  `exam` int(11) NOT NULL,
  `student` varchar(50) NOT NULL,
  `marks` int(10) NOT NULL,
  `grade` varchar(10) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4
COLLATE=utf8mb4_general_ci;
--
-- Dumping data for table `examresult`
--
INSERT INTO `examresult` (`exam`, `student`, `marks`, `grade`)
VALUES
```

```
(10, ' 752', 70, 'B+'),
(10, ' 770', 80, 'A-'),
(10, '795', 85, 'A'),
(10, '796', 95, 'A+'),
(11, '795', 80, 'A-'),
(11, '796', 80, 'A-');
-- --------------------------------------------------------
--
-- Table structure for table `notice`
--
CREATE TABLE `notice` (
  `id` int(11) NOT NULL,
  `notice` varchar(1500) NOT NULL,
  `odience` varchar(100) NOT NULL,
  `date` datetime NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4
COLLATE=utf8mb4_general_ci;
--
-- Dumping data for table `notice`
--
INSERT INTO `notice` (`id`, `notice`, `odience`, `date`) VALUES
(7, 'Assign 1 Announced plz submit on Time', 'Student', '2025-
06-22 04:24:07'),
(8, 'Sir ap ka bacha sai sa nai pahr raha', 'Parent', '2025-06-
22 04:24:33');
-- --------------------------------------------------------
--
-- Table structure for table `parent`
```

```
--

CREATE TABLE `parent` (
  `pid` int(11) NOT NULL,
  `fname` varchar(50) NOT NULL,
  `lname` varchar(50) NOT NULL,
  `contact` varchar(20) NOT NULL,
  `job` varchar(50) NOT NULL,
  `address` varchar(250) NOT NULL,
  `gender` varchar(25) NOT NULL,
  `nic` varchar(50) NOT NULL,
  `email` varchar(50) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4
COLLATE=utf8mb4_general_ci;

--

-- Dumping data for table `parent`

--


INSERT INTO `parent` (`pid`, `fname`, `lname`, `contact`, `job`,
`address`, `gender`, `nic`, `email`) VALUES
(1, 'Nadeem ', 'Akbar', '03286557992', 'Engineer', 'lahore
lahore hai ', 'Male', '3540400000003', 'Nadeem@gmail.com'),
(2, 'Zahid', 'Mushtaq', '03054776201', 'Electrition', 'muridkey
farooqabad', 'Male', '3540444279083', 'Zahid@gmail.com'),
(3, 'Muhammad', 'tariq', '03244269023', 'vella', 'Chistia
Shareef', 'Male', '3540477901953', 'tariq@gmail.com'),
(4, ' Muhammad', 'Amin', '03286557992', 'Rich People', 'UAE',
'Male', '3540477901953', 'Amin@gmail.com');

-- --------------------------------------------------------

--
```

```
-- Table structure for table `schedule`
--
CREATE TABLE `schedule` (
  `id` int(11) NOT NULL,
  `subject` varchar(50) NOT NULL,
  `teacher` varchar(50) NOT NULL,
  `day` varchar(50) NOT NULL,
  `stime` time NOT NULL,
  `class` varchar(50) NOT NULL,
  `etime` time NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4
COLLATE=utf8mb4_general_ci;
--
-- Dumping data for table `schedule`
--
INSERT INTO `schedule` (`id`, `subject`, `teacher`, `day`,
`stime`, `class`, `etime`) VALUES
(13, '2', '3', 'Monday', '09:30:00', '1', '10:45:00'),
(14, '3', ' 8', 'Monday', '11:00:00', '3', '12:15:00'),
(15, '4', ' 4', 'Monday', '12:30:00', '2', '01:45:00'),
(16, '1', '2', 'Monday', '02:00:00', '8', '03:15:00'),
(17, '5', ' 5', 'Monday', '03:30:00', '8', '04:45:00'),
(18, '6', ' 6', 'Tuesday', '12:30:00', '10', '01:45:00'),
(19, '7', '1', 'Tuesday', '02:00:00', '6', '04:45:00'),
(24, '6', ' 6', 'Wendsday', '12:30:00', '10', '01:45:00'),
(25, '2', '3', 'Thursday', '09:30:00', '1', '10:45:00'),
(26, '3', ' 8', 'Thursday', '11:00:00', '3', '12:15:00'),
(27, '4', ' 4', 'Thursday', '12:30:00', '2', '01:45:00'),
```

```
(28, '5', ' 5', 'Thursday', '03:30:00', '8', '04:45:00'),
(29, '8', ' 7', 'Friday', '11:00:00', '7', '01:00:00'),
(30, '1', '2', 'Friday', '02:00:00', '4', '03:15:00');
-- --------------------------------------------------------
--
-- Table structure for table `student`
--
CREATE TABLE `student` (
  `sid` varchar(25) NOT NULL,
  `fname` varchar(50) NOT NULL,
  `lname` varchar(50) NOT NULL,
  `bday` date NOT NULL,
  `address` varchar(250) NOT NULL,
  `parent` int(10) NOT NULL,
  `gender` varchar(10) NOT NULL,
  `classroom` varchar(25) NOT NULL,
  `email` varchar(50) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4
COLLATE=utf8mb4_general_ci;
--
-- Dumping data for table `student`
--
INSERT INTO `student` (`sid`, `fname`, `lname`, `bday`,
`address`, `parent`, `gender`, `classroom`, `email`) VALUES
(' 752', 'Muhammad ', 'Hassan', '1990-05-27', 'Samnabad Lahore
', 2, 'Male', '7', 'F2023266752@gmail.com'),
(' 770', 'Hunain', 'Amin', '2002-01-01', ' Bahria Houses ka hai
ya ', 4, 'Male', '6', 'F2023266770@gmail.com'),
```

```
(' 782', 'Abdul', 'Wasey', '2003-05-27', ' Multan sa ata asa
log', 0, 'Male', '5', 'F2023266782@gmail.com'),

(' 783', 'Abdullah', 'Hamayun', '1901-01-01', ' DHA ka hai ya ',
0, 'Male', '2', 'F2023266783@gmail.com'),

(' 793', 'Muhammad ', 'Saad', '2001-02-25', ' Chistia Shareef',
3, 'Male', '8', 'F2023266793@gmail.com'),

('795', 'Muhammad', 'Ahmad', '2005-06-10', 'House no 45 street
no 16 Mian Bilal park Daroga Wala', 1, 'Male', '5',
'F2023266795@gmail.com'),

('796', 'Ghulam ', ' Mustafa', '2007-05-27', 'Muridkey
Farooqabad', 2, 'Male', '6', 'F2023266796@gmail.com');

-- --------------------------------------------------------

--

-- Table structure for table `subject`

--

CREATE TABLE `subject` (

  `sid` varchar(50) NOT NULL,

  `title` varchar(200) NOT NULL,

  `description` varchar(500) NOT NULL

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4
COLLATE=utf8mb4_general_ci;

--

-- Dumping data for table `subject`

--

INSERT INTO `subject` (`sid`, `title`, `description`) VALUES

(' 14', 'Assembly Language', 'Fazool Outline'),

(' 9', 'Programming Fundamentals', 'Basics of Coding\r\n'),

('1', 'Computer Networks', 'network frameworks Related'),

('10', 'OOPS', 'oops vala concepts\r\n'),

('11', 'DSA', 'Data Structure'),
```

```
('12', 'DSA (lab)', 'Data Structure ki coding karai ga is ma'),
('13', 'Phycology', 'Ulti seedi Cheeza parhata is ma'),
('2', 'Data Mining', 'Charts And Patterns'),
('3', 'Computer Architecture', 'Computer FrameWorks'),
('4', 'logical Reasoning', 'Uni Elective'),
('5', 'Professional Practices', 'Ethics and Responsibilities'),
('6', 'DataBase (Theory)', 'EERD and Normalization'),
('7', 'DataBase (lab)', 'database and Sql implimentation'),
('8', 'Computer Networks (lab)', 'Cisco Packet tracers');
-- --------------------------------------------------------
--
-- Table structure for table `teacher`
--
CREATE TABLE `teacher` (
  `tid` varchar(50) NOT NULL,
  `fname` varchar(50) NOT NULL,
  `lname` varchar(50) NOT NULL,
  `address` varchar(50) NOT NULL,
  `contact` varchar(50) NOT NULL,
  `bday` date NOT NULL,
  `skill` varchar(500) NOT NULL,
  `gender` varchar(25) NOT NULL,
  `email` varchar(50) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4
COLLATE=utf8mb4_general_ci;
--
-- Dumping data for table `teacher`
--
```

```
INSERT INTO `teacher` (`tid`, `fname`, `lname`, `address`,
`contact`, `bday`, `skill`, `gender`, `email`) VALUES

(' 10', 'Nadeem', 'Akbar', 'Danger Zone', '0300-4545450', '2001-
11-05', 'OOPS Expert', 'Male', 'nadeem.akbar@gmail.com'),

(' 11', 'Mian', 'Arslan', 'Gumnam hai Koi', '030000000', '2001-
02-05', 'Heavy', 'Male', 'mian@gmail.com'),

(' 4', 'Anayat', 'Ali', 'Lahore ', '0300-0000000', '2001-05-27',
'Technical , logical', 'Male', 'anayat.ali@gmail.com'),

(' 5', 'Raheel', 'Butt', 'i dont know', '0322-1214587', '2002-
06-22', 'Ethics and Professional ', 'Male',
'raheel.butt@gmail.com'),

(' 6', 'Khawaja', 'Ubaid-ur-rehman', 'Patoki', '0322-444444444',
'2002-06-22', 'Database manager', 'Male',
'khawaja.ubaid@gmail.com'),

(' 7', 'fahad', 'arshad', 'Permission nai bhai batana ki ',
'0322-444444444', '2002-06-22', '2 Nation Theory', 'Male',
'fahad.arshad@gmail.com'),

(' 8', 'Shumaila', 'Gafoor', 'Architecture Expert', '0300-
4455887', '1990-06-22', 'architecture', 'Female',
'shumaila.gafoor@gmail.com'),

(' 9', 'Faheem', 'Akbar', 'Lahore ', '0300-4545450', '2001-11-
05', 'Programming Fundamental lab Experts', 'Male',
'faheem.akbar@gmail.com'),

('1', 'Iqra ', 'khalil', 'NA', '0300-0000000', '2022-05-19',
'Game Developer , Unity , Database Expert ', 'Female',
'Iqra.khalil@gmail.com'),

('2', 'Iqra', 'Ashraf', 'NA', '0300-0000000', '1978-09-27', 'Web
Dev , Networks Experts', 'Female', 'Iqra.ashraf@gmail.com'),

('3', 'Malik', 'tahir', 'Lahore', '0300-1122334', '2022-05-21',
'Stats , Data Mining patterns', 'Male',
'malik.tahir@gmail.com');

-- --------------------------------------------------------

--

-- Table structure for table `user`
```

```
--

CREATE TABLE `user` (

  `role` varchar(50) NOT NULL,

  `email` varchar(50) NOT NULL,

  `password` varchar(50) NOT NULL

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4
COLLATE=utf8mb4_general_ci;

--

-- Dumping data for table `user`

--

INSERT INTO `user` (`role`, `email`, `password`) VALUES

('Student', 'F2023266752@gmail.com',
'81dc9bdb52d04dc20036dbd8313ed055'),

('Student', 'F2023266795@gmail.com',
'81dc9bdb52d04dc20036dbd8313ed055'),

('Student', 'F2023266796@gmail.com',
'81dc9bdb52d04dc20036dbd8313ed055'),

('Parent', 'Nadeem@gmail.com',
'81dc9bdb52d04dc20036dbd8313ed055'),

('Teacher', 'teacher@gmail.com',
'81dc9bdb52d04dc20036dbd8313ed055'),

('Parent', 'Zahid@gmail.com',
'81dc9bdb52d04dc20036dbd8313ed055');

--

-- Indexes for dumped tables

-- Indexes for table `attendance`

--

ALTER TABLE `attendance`

  ADD PRIMARY KEY (`aid`);

--
```

```
-- Indexes for table `attendancereport`
--
ALTER TABLE `attendancereport`
  ADD PRIMARY KEY (`aid`,`sid`);
--
-- Indexes for table `classroom`
--
ALTER TABLE `classroom`
  ADD PRIMARY KEY (`hno`);
--
-- Indexes for table `exam`
--
ALTER TABLE `exam`
  ADD PRIMARY KEY (`id`);


--
-- Indexes for table `examresult`
--
ALTER TABLE `examresult`
  ADD PRIMARY KEY (`exam`,`student`);
--
-- Indexes for table `notice`
--
ALTER TABLE `notice`
  ADD PRIMARY KEY (`id`);
--
-- Indexes for table `parent`
```

```
--
ALTER TABLE `parent`
  ADD PRIMARY KEY (`pid`),
  ADD UNIQUE KEY `email` (`email`);
--
-- Indexes for table `schedule`
--
ALTER TABLE `schedule`
  ADD PRIMARY KEY (`id`);
--
-- Indexes for table `student`
--
ALTER TABLE `student`
  ADD PRIMARY KEY (`sid`),
  ADD UNIQUE KEY `email` (`email`);
--
-- Indexes for table `subject`
--
ALTER TABLE `subject`
  ADD PRIMARY KEY (`sid`);
--
-- Indexes for table `teacher`
--
ALTER TABLE `teacher`
  ADD PRIMARY KEY (`tid`),
  ADD UNIQUE KEY `email` (`email`);
--
```

```
-- Indexes for table `user`
--
ALTER TABLE `user`
  ADD PRIMARY KEY (`email`);
--
-- AUTO_INCREMENT for dumped tables
-- AUTO_INCREMENT for table `attendance`
--
ALTER TABLE `attendance`
  MODIFY `aid` int(10) NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=10;
--
-- AUTO_INCREMENT for table `exam`
--
ALTER TABLE `exam`
  MODIFY `id` int(11) NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=14;
--
-- AUTO_INCREMENT for table `notice`
--
ALTER TABLE `notice`
  MODIFY `id` int(11) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=9;
--
-- AUTO_INCREMENT for table `parent`
--
ALTER TABLE `parent`
  MODIFY `pid` int(11) NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=5;
```

```
--
-- AUTO_INCREMENT for table `schedule`
--
ALTER TABLE `schedule`
  MODIFY `id` int(11) NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=31;
```
