**Smart Automated Classroom Attendance System - 15 Week Project Tracker**

**Submitted by**

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| **Week #** | **Activity** | **Responsibility** | **Deliverable** |
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| **1** | User Authentication System & Role management Modules | **👤Maryam Rehan:**  ✅ Design Landing Page ✅ Design Login Page ✅ Design Admin dashboard Page after redirecting.  **👤Faiq Ali Siddiqui:**  ✅ Design faculty and student Dashboard Page after redirecting ✅ Design User create delete Pages (Add, View)  **👤Syeda Aliza Ali:**  ✅ **Create User Model**  ✅ **Implement Login Functionality** ✅ **Implement Role-Based Routing (Admin, Faculty, Student Redirects)**  ✅ **Implement Email Notifications when user will be approved.**  **👤Muhammad Ahmed:**  ✅ **Implement Logout Functionality** ✅ **Implement Pagination & Filters for User Listing**  ✅ **Implement Create & Delete User Functionality** ✅ **Implement Data Export Features (Copy, CSV, PDF, Print) in User Listing.** | **✅ Admin can create and delete users (Faculty & Student) with roles.**  **✅ Users can login and logout.**  **✅ Users are redirected based on roles.**  **✅ Approved users receive email notifications upon approval.** |
| **2** | Remaining Functionality of Authentication system, University & Campus Management Modules | 👤 **Faiq Ali Siddiqui:** ✅ Design University and Campus CRUD Pages  ✅ Implement Remaining functionality of authentication.  👤 **Maryam Rehan:**  ✅ Ensure Responsive Layout for University and Campus CRUD Pages ✅ Display Validation Errors  👤 **Muhammad Ahmed:** ✅ Create University, Campus Models & Migrations  ✅ Implement Logic for CRUD Operations  ✅ Handle Form Validations  👤 **Syeda Aliza Ali:**  ✅ Implement University, Campus CRUD Pages (Add, Edit, View, Delete) ✅ Implement Pagination & Filters for University and Campus Listing ✅ Implement Data Export Features (Copy, CSV, PDF, Print) for University & Campus Data. | ✅Remaining functionality of authentication will be completed.  ✅ Admin can perform CRUD operations on universities and campuses. ✅ University, Campus data validation. ✅ Pagination & Filtering for University and Campus listing. ✅ University & Campus data export (CSV, PDF, Print, Copy). |
| 3 | Department & Programs Management Modules | 👤 **Syeda Aliza Ali:** ✅ Design Department and Programs CRUD Pages  👤 **Muhammad Ahmed:** ✅ Ensure Responsive Layout for Department and Program CRUD Pages ✅ Display Validation Errors  👤 **Faiq Ali Siddiqui:** ✅ Create Department and Program Models & Migrations ✅ Implement Logic for CRUD Operations ✅ Handle Form Validations  👤 **Maryam Rehan:** ✅ Implement Department & Programs CRUD Pages (Add, Edit, View, Delete) ✅ Implement Pagination & Filters for Department and Programs Listing ✅ Implement Data Export Features (Copy, CSV, PDF, Print) for Department Data and Programs. | ✅ Admin can perform CRUD operations on departments  and Programs.  ✅ Department and Program data validation.  ✅ Pagination & Filtering for Department and Program listing.  ✅ Department and Program data export (CSV, PDF, Print, Copy). |
| 4 | Course & Semester Management Modules | 👤 **Muhammad Ahmed:** ✅ Design Course & Semester CRUD Pages  👤 **Syeda Aliza Ali:** ✅ Ensure Responsive Layout for Course & Semester CRUD Pages ✅ Display Validation Errors  👤 **Maryam Rehan:** ✅ Create Course & Semester Models & Migrations ✅ Implement Logic for CRUD Operations ✅ Handle Form Validations  👤 **Faiq Ali Siddiqui:** ✅ Implement Course & Semester CRUD Pages (Add, Edit, View, Delete) ✅ Implement Pagination & Filters for Course & Semester Listing ✅ Implement Data Export Features (Copy, CSV, PDF, Print) for Course & Semester Data | ✅ Admin can perform CRUD operations on courses and semester. ✅ Course & Semester data validation. ✅ Pagination & Filtering for Course & Semester listing. ✅ Course & Semester data export (CSV, PDF, Print, Copy). |
| 5 | Student & Faculty Management Modules | 👤 **Maryam Rehan:** ✅ Design Student & Faculty CRUD Pages  👤 **Faiq Ali Siddiqui:** ✅ Ensure Responsive Layout for Student & Faculty CRUD Pages ✅ Display Validation Errors (Including Image Upload Errors)  👤 **Syeda Aliza Ali:** ✅ Create Student & Faculty Models & Migrations ✅ Implement Logic for CRUD Operations ✅ Handle Form Validations (Unique Student ID, Required Fields) ✅ Ensure Student Must Upload 15 Images  ✅ Validate Image Dimensions  ✅ Save Student Images & Store in a Separate Folder Using Name & ID  👤 **Muhammad Ahmed:** ✅ Implement Student & Faculty CRUD Pages (Add, Edit, View, Delete) ✅ Implement Pagination & Filters for Student & Faculty Listing ✅ Implement Data Export Features (Copy, CSV, PDF, Print) for Student & Faculty Data ✅ Ensure Student’s Images & Folder Are Deleted Upon Student Removal | ✅ Admin can perform CRUD operations on students and semesters. ✅ Student & Faculty data validation (Unique Student ID, Required Fields, Course & Program Mapping). ✅ Pagination & Filtering for Student & Faculty listing. ✅ Student & Faculty data export (CSV, PDF, Print, Copy).  **✅ Each student must upload 15 images (validated before saving). ✅ Images must be 640x480 pixels (checked before processing). ✅ Each student’s images are stored in a separate folder (Student Name (Student ID)). ✅ If a student is deleted, their folder & images are also removed.** |
| 6 | Semester-Course & Faculty-Course Assignment Modules | 👤 **Faiq Ali Siddiqui:** ✅ Design Semester-Course & Faculty-Course Assignment CRUD Pages  👤 **Maryam Rehan:** ✅ Ensure Responsive Layout for Semester-Course & Faculty-Course Assignment CRUD Pages ✅ Display Validation Errors  👤 **Muhammad Ahmed:** **✅** Create Models & Migrations for **Semester-Course & Faculty-Course Assignments ✅** Implement Logic for **Semester-Course & Faculty-Course Assignment CRUD Operations ✅** Handle Form Validations  👤 **Syeda Aliza Ali:** ✅ Implement Semester-Course & Faculty-Course Assignment CRUD Pages  ✅ Implement Pagination & Filters for Assigned Courses Listing ✅ Implement Data Export Features (Copy, CSV, PDF, Print) for Assigned Courses | ✅ Admin can assign courses to semesters & faculty. ✅ Semester-Course & Faculty-Course Assignment validation. ✅ Pagination & Filtering for assigned courses to semesters & faculty. ✅ Assigned courses to semesters & faculty data export (CSV, PDF, Print, Copy). |
| 7 | Student Enrollment & Attendance Management Modules | 👤 **Syeda Aliza Ali:** ✅ Design Enrollment & Attendance Management Pages  👤 **Muhammad Ahmed:** ✅ Ensure Responsive Layout for Enrollment & Attendance Pages ✅ Display Validation Errors  👤 **Faiq Ali Siddiqui:** ✅ Create Models & Migrations for Student Enrollment & Attendance ✅ Implement Logic for Enrollment & Attendance CRUD Operations ✅ Handle Form Validations (Unique Enrollment, Required Fields) **✅ Ensure Student's Enrollment Creates a Course Folder in ‘enrollments’ Directory ✅ Ensure Student's Images Are Copied to the Respective Course Folder Upon Enrollment.**  👤 **Maryam Rehan:** ✅ Implement Enrollment & Attendance CRUD Pages (Add, Edit, View, Delete) ✅ Implement Pagination & Filters for Enrolled Students & Attendance Records ✅ Implement Data Export Features (Copy, CSV, PDF, Print) for Enrollment & Attendance Data | ✅ Admin can enroll students in courses & manage attendance records. ✅ Enrollment & Attendance validation (Unique Enrollment, Required Fields, Course Mapping). ✅ Pagination & Filtering for Enrollment & Attendance records. ✅ Enrollment & Attendance data export (CSV, PDF, Print, Copy).  **✅ When a student enrolls, their images are copied to the course-specific folder. ✅ Each course has a separate folder inside ‘enrollments’, and students’ images are stored accordingly. ✅ If a student’s enrollment is removed, their images will be deleted from the course folder (but not from their main folder).** |
| 8 | Deep Learning Model Implementation & Training | 👤 **Muhammad Ahmed:** ✅ Design & Implement Modal for Training Status & Accuracy Display ✅ Ensure Toast Notifications for Success/Error Messages  👤 **Maryam Rehan:** ✅ Ensure Training Status & Accuracy Results are Properly Displayed in UI ✅ Handle Frontend Validation for Model Training (Disable Buttons, Show Loaders) ✅ Implement AJAX Request to Initiate Model Training via Django Backend  👤 **Syeda Aliza Ali:** ✅ Develop YOLO-based Face Detection & Cropping Functionality for Enrollment Images ✅ Implement Dataset Splitting (9 Train, 3 Val, 3 Test) ✅ Implement Image Augmentation to Improve Model Generalization **✅ Ensure Enrollment Images Are Dynamically Processed and Properly Organized for Training**  👤 **Faiq Ali Siddiqui:** ✅ Implement Deep Learning Model (ResNet152V2) for Face Recognition ✅ Train Model Using Enrolled Students’ Data from the Processed Dataset ✅ Implement Model Evaluation & Accuracy Calculation (Train, Val, Test Accuracy)  **✅ Ensure Validation & Testing Images Are Used for Model Evaluation and Predictions** | **✅ Face detection &** Cropping **using YOLO ✅ Dataset preparation & augmentation for better training ✅ Model training for student recognition using deep learning ✅ Training, validation, & test accuracy calculation shown in UI. ✅ Proper UI feedback (Loading spinner, status messages, accuracy results, toast notifications).** |
| 9 | Model Retraining, Accuracy Evaluation & Optimization | 👤 **Muhammad Ahmed And Faiq Ali Siddiqui**  **Optimize Dataset Preprocessing & Splitting for Better Training ✅ Check if image splitting (Train: 9, Val: 3, Test: 3) needs adjustments. ✅ Ensure training, validation, and test data are balanced properly. ✅ Optimize dataset handling to improve training speed.**  👤 **Syeda Aliza Ali And Maryam Rehan**  **Validate Model Predictions, Evaluate Accuracy & Save Trained Model ✅ Test model performance using training, validation, and test data. ✅ Check if the model is overfitting or underperforming. ✅ Ensure that the trained model is saved for future use.** | **✅ Dataset splitting is reviewed & adjusted if necessary. ✅ Model accuracy is validated and improved and exported.** |
| 10 | Faculty Dashboard & Manual Attendance Management Modules | 👤 **Faiq Ali Siddiqui:** ✅ Implement Faculty Dashboard with Assigned Courses & Attendance Buttons ✅ Ensure UI for Attendance Actions (Take Attendance, Attendance Log, Manual Entry) ✅ Ensure Responsive Layout for Faculty Dashboard & Attendance Pages  👤 **Muhammad Ahmed:** ✅ Create Models & Migrations for Attendance Tracking ✅ Implement Backend Logic for Attendance CRUD Operations (Save, Update, Fetch) ✅ Ensure Attendance Data is Properly Mapped to Students & Courses  👤 **Maryam Rehan:** ✅ Design Attendance Management Page (Take Attendance, Log, Manual Entry) ✅ Ensure "Mark All Present" & Attendance Status Buttons (P/A) Are Interactive ✅ Implement Pagination & Filters for Attendance Logs  👤 **Syeda Aliza Ali:** ✅ Implement AJAX for Attendance Submission & Status Updates ✅ Implement Data Export Features (Copy, CSV, PDF, Print) for Attendance Records ✅ Ensure Attendance Data is Stored & Retrieved Efficiently | ✅ Faculty can view assigned courses dynamically on the dashboard. ✅ Faculty can manage attendance using Take Attendance, Attendance Log, and Manual Entry options. ✅ Attendance is marked with present/absent status using interactive buttons. ✅ "Mark All Present" feature enables quick attendance marking. ✅ Attendance logs and manual entry options are available. ✅ Attendance records are saved in the database and updated dynamically. ✅ Faculty can export attendance records in multiple formats (CSV, PDF, Print). |
| 11 | Camera-Based Attendance Module | 👤 **Muhammad Ahmed:** ✅ Implement Face Detection Using YOLO When Capturing an Image ✅ Crop Detected Faces & Save in a Temporary Folder for Recognition ✅ Ensure Recognized Faces Are Mapped to Enrolled Students Dynamically  👤 **Syeda Aliza Ali:** ✅ Use Trained Deep Learning Model to Recognize Students from Cropped Faces ✅ Compare Recognized Students with Enrollment Data to Update Attendance Status ✅ Ensure Attendance Data Is Stored & Can Be Retrieved for Logs & Export  👤 **Faiq Ali Siddiqui:** ✅ Implement Camera Feed & Canvas for Live Capture ✅ Ensure UI Displays List of Enrolled Students Alongside Camera Feed ✅ Update UI Dynamically with Attendance Status (P for Present, A for Absent)  👤 **Maryam Rehan:** ✅ Design & Style Camera-Based Attendance Interface ✅ Ensure Proper UI Feedback (Loading Indicators, Alerts, Status Updates) ✅ Implement Button Actions for Capture & Attendance Submission | **✅ Camera-based attendance system integrated with YOLO for face detection. ✅ Cropped faces dynamically recognized using a trained deep learning model. ✅ Enrolled students displayed alongside the camera feed. ✅ Captured frame used for real-time attendance marking. ✅ Attendance data stored in the database & updated dynamically. ✅ UI feedback with present/absent status displayed next to student names.** |
| 12 | Implement Attendance Log & Faculty Profile Management Module | 👤 **Faiq Ali Siddiqui:** ✅ Implement Backend Logic for Attendance Log (Retrieve, Filter, Paginate Data) ✅ Develop Export Functionality (CSV, PDF, Print) for Attendance Records  👤 **Maryam Rehan:** ✅ Create Faculty Profile Model & Migrations  ✅ Implement Profile Update Functionality  ✅ Ensure Proper Validation & Security for Profile Updates  👤 **Muhammad Ahmed:** ✅ Design & Implement Attendance Log Page (Table UI, Filters, Pagination) ✅ Ensure User-Friendly Interface for Viewing & Managing Attendance Records  👤 **Syeda Aliza Ali:** ✅ Design Faculty Profile Page  ✅ Ensure Responsive UI & Styling for Profile & Attendance Log Pages |  |
| 13 | Implement Student Profile & Dashboard Management Module | 👤 **Maryam Rehan:** ✅ Implement Backend Logic for Fetching Student Profile Data & Enrolled Courses ✅ Handle Student Profile Updates & Image Upload Securely  👤 **Muhammad Ahmed:** ✅ Create Student Profile Model & Migrations  ✅ Implement Profile Update Functionality  👤 **Faiq Ali Siddiqui:** ✅ Design Student Dashboard UI  ✅ Ensure Responsive Layout & Better UI for Student Navigation  👤 **Syeda Aliza Ali:** ✅ Design Student Profile Page  ✅ Ensure User-Friendly Design with Proper Styling & UI Enhancements | **✅ Students can view their profile with all relevant details. ✅ Students can update their basic profile information securely. ✅ Profile picture upload functionality is implemented. ✅ Student Dashboard shows all enrolled courses dynamically. ✅ The dashboard has a clean, responsive, and user-friendly UI.** |
| 14 | Implement Student Attendance Log in Student Dashboard | 👤 **Maryam Rehan:** ✅ Implement Backend Logic to Retrieve Attendance Data for Students ✅ Optimize Database Queries to Fetch Attendance Records Efficiently  👤 **Muhammad Ahmed:** ✅ Ensure Attendance Data Is Properly Mapped to Students & Courses ✅ Add Filters for Course Selection & Date Range in Backend Queries ✅ Implement Security Measures to Ensure Students Only See Their Own Attendance  👤 **Syeda Aliza Ali:** ✅ Design & Implement Student Attendance Log UI (Table, Filters, Pagination) ✅ Ensure a User-Friendly Layout for Viewing & Managing Attendance Data ✅ Use AJAX for Faster Loading of Attendance Records  👤 **Faiq Ali Siddiqui:** ✅ Design the UI for Attendance Log Page (Responsive & Well-Styled Layout) ✅ Ensure Proper Formatting for Date-Wise Attendance Display ✅ Implement UI Enhancements for Export Options (Buttons for CSV, PDF, Print) | **✅ Students can view attendance logs for each enrolled course. ✅ Attendance records are displayed in a clear, date-wise format. ✅ Filters for course selection & date range are implemented. ✅ Pagination & search make navigation easy. ✅ The UI is responsive, clean, and user-friendly.** |
| 15 | Monitor and check performance | 👤 **Maryam Rehan, Faiq Ali Siddiqui, Muhammad Ahmed, Syeda Aliza Ali**  Monitor the system | **✅ Successfully system stable.** |