

CAPSTONE PROJECT REGISTER

Class: Duration time: from 06/05/2024 To 31/08/2024

(\*) Profession: <Software Engineer> Specialty: <SE>  <IS>  <JS>  (\*) Kinds of person make registers: Lecturer  Students 

1. **Register information for supervisor:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Full name** | **Phone** | **E-Mail** | **Title** |
| **Supervisor** | Lâm Hữu Khánh Phương | 0915353001 | [phuonglhk@fe.edu.vn](mailto:phuonglhk@fe.edu.vn) |  |

1. **Register information for students:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Full name** | **Student code** | **Phone** | **E-mail** | **Role in Group** |
| 1 | Nguyễn Đình Thành | SE161007 | 0845858466 | Thanhndse161007@fpt.edu.vn | Leader |
| 2 | Trần Quang Vinh | SE161455 | 0334487271 | Vinhtqse161455@fpt.edu.vn | Member |
| 3 | Trương Đình Thành | SE160921 | 0828522344 | Thanhtdse160921@fpt.edu.vn | Member |
| 4 | Huỳnh Võ Tấn Phước | SE160419 | 0935919488 | Phuochvtse160419@fpt.edu.vn | Member |

1. **Register content of Capstone Project:**

(\*) **3.1. Capstone Project name**:

* + Student Supervisor: School Rules Compliance Support Application for high school.
  + Vietnamese: Ứng dụng hỗ trợ tuân thủ nội quy học sinh tại trường trung học phổ thông (SaoDo).
  + Abbreviation: SR CSA

# Context:

The process of monitoring, reporting, and supporting compliance with school regulations in high schools involves coordination among various departments: School Administration, Examination Department, Homeroom Teachers, and Student Supervisor (a position held by selected students responsible for daily inspections of each class for rule violations). This activity is crucial alongside the imparting of knowledge in schools.

# Proposed Solutions:

We aim to provide a comprehensive solution through the Student Supervisor application to facilitate the monitoring and enforcement of school regulations:

* SaoDo will serve as a centralized platform for administrators, school management, teachers, and Student Supervisor to ensure compliance with school rules and regulations.
* The application will streamline processes related to attendance monitoring, disciplinary actions, academic performance tracking, and communication among stakeholders.
* Different roles will have specific functionalities to manage their responsibilities effectively, ensuring a smooth operation of school compliance activities.

**Admin can**:

* + - Manage overall system settings and user permissions.
    - Monitor and generate reports on school compliance metrics.
    - Establish and enforce school rules and regulations within the application.
    - Perform administrative tasks such as data management and system maintenance.

**School Principal (Ban Giam Hieu) can:**

* + - Monitor the enforcement of school regulations.
    - Review and approve disciplinary actions taken by teachers.
    - Access reports on school compliance and performance indicators.

**Examination Department (Giam Thi) can:**

* Manage notifications and disciplinary actions for homeroom teachers of classes with students violating regulations.
* Review and approve proposed disciplinary measures.
* Access reports on compliance and performance metrics of the school.

**Homeroom Teachers (GVCN) can:**

* + - Take attendance and record violation events
    - Communicate with parents/students and send notifications.
    - Receive notifications and provide necessary information to Student Supervisor regarding disciplinary measures.

**Student Supervisor (Sao Do) can:**

* + - Conduct daily inspections to detect violations.
    - Record and report violations to Examination Department.
    - Receive guidance and support from Homeroom Teachers regarding disciplinary measures.

# Functional requirement:

# Web Application:

* Administrator role:
  + Manage system settings and user roles.
  + Generate reports on school compliance metrics.
  + Set and enforce school rules and regulations.
* School Principal Role:
* Review and approve disciplinary actions.
* Monitor compliance and performance metrics of the school.
* Examination Department Role:
  + Manage notifications and disciplinary actions for homeroom teachers.
  + Review and approve proposed disciplinary measures.
  + Access reports on compliance and performance metrics of the school.
* Homeroom Teachers Role:
  + Take attendance and record violation events.
  + Communicate with parents/guardians.
  + Receive notifications and provide necessary information to Student Supervisor.
* Student Supervisor Role:
  + Conduct daily inspections of classrooms for rule violations.
  + Record and report violations to Homeroom Teachers.

# Non-functional requirement:

* The system should be secured and protect the privacy and sensitive information of users.
* GUI must be simple, friendly, and easy to use.
* The platform should have high availability, ensuring that it is accessible to users most of the time.
* The language used in the application is Vietnamese.
* Web applications send requests to the server through HTTPS protocol.

# (\*) 3.2. Main proposal content:

1. **Theory and practice (document):**
   * Students will apply software development methodologies and UML modeling techniques in the design and development process.
   * Documents will include User Requirements, Software Requirement Specification, Architecture Design, Detail Design, System Implementation and Testing Document, Installation Guide, source code, and deployable software packages.
   * Server-side technologies:
     + Server: ASP.NET
     + Database System: Microsoft SQL Server
   * Client-side technologies:
     + Web Client: Reactjs
     + Desktop app: Flutter
   * Third-party Services:
     + Firebase

# Products:

* RESTful API for System.
* Web Admin for Administration
* Application (SaoDo) for monitoring and enforcing school compliance.
* Web interface for Homeroom Teachers for managing disciplinary actions and student-related tasks.
* Client-Server Model.

# Proposed Tasks for Students:

* Task package 1: Design ERD and Database
* Task package 2: Develop the APIs for the system.
* Task package 3: Develop the Web Application.
* Task package 4: Develop a mobile app for monitoring school compliance.
* Task package 5: Build – Deploy and Test the system.
* Task package 6: Prepare all the required documents: System analysis and design, test plan, installation manual, and user manual.
* Each work group may have many students participating but there will be 1 member responsible for the primary responsibility.

*Notice: all students are required to understand the reference documents thoroughly and may need to explain them to the viva committee*.