| | **HANOI UNIVERSITY** | A picture containing text, sign, vector graphics  Description automatically generated | | --- | --- | | **Faculty of Information Technology** |   **SYSTEM ANALYSIS AND DESIGN**  **FINAL REPORT**   | **Faculty:** | **Information Technology** | | --- | --- | | **Module Name:** | **System Analysis and Design** | | **Year:** | **Fall 2021** | | **Topic:** | **HANU Training Management System** | | **Group members:** | **Nguyễn Thị Thu Hiền (1901040072)** | |  | **Nguyễn Diệu Hương Ly (1901060030)** | |  | **Lại Hạnh Vân (1901060057)** | |  | **Nguyễn Ngọc Huyền (1901060019)** | | **Class:** | **A02** | |
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# ABSTRACT

Each university has its own management system. The requirements for the system to be able to meet the needs of many students are very high. Therefore, the purpose of our project is to analyze the functions of the HANU Training Management System from the perspective of a student at Hanoi University. Our project is based on MVC architecture, all use cases mentioned are represented as a series of views. These are views on an underlying Unified Modeling Language (UML) model developed using Visual Paradigm and Drawio. The results of our work include Use Case Specification, Use Case Realization, Supplementary Specification and Software Architecture.

# GROUP ROLES

| **Members** | **Roles** |
| --- | --- |
| Nguyễn Thị Thu Hiền (1901040072) | Use Case: Course Registration, View Grade, View Schedule  Supplementary Specification  Software Architecture Document |
| Nguyễn Ngọc Huyền (1901060019) | Use Case: Change Email, Dormitory Registration, Student Comments  Supplementary Specification  Software Architecture Document |
| Nguyễn Diệu Hương Ly (1901060030) | Use Case: Certification Registration, View Digital Invoice, View Prerequisite Courses  Supplementary Specification  Software Architecture Document |
| Lại Hạnh Vân (1901060057) | Use Case: Upload Announcement, View Tuition Fee, Dormitory Payment  Supplementary Specification  Software Architecture Document |

Since this project is the final project of this SAD course which is an important and quite challenging project for the members, the whole group has cooperated in most of the processes especially in Supplementary Specification and Software Architecture Document. The members helped each other to give suggestions, edits, and fixes for all problems that each member caught by to get the final version of this project as complete as possible.

# Use case Specification & Usecase Realization (Group)

For objective reasons such as student access accounts only need to be authorized to use student-related features, all use cases that the group chooses to write documents are use cases related to Student actors.

Although the selected use cases are different, the research and documentation process of the members is quite similar. First, about the use case specification documentary, during the writing of these documents, the members capture the interaction between the agent and the system by logging into their individual student accounts. That is, members have figured out how users interact with the system and how the system responds to user actions in specific use cases. After capturing the necessary information, the members summarize and rewrite in the form of documents in a systematic and logical way.

After finishing writing the use case specification documentary, the members continued their work by writing the use case realization documentary. Members continue to study the use case from the user's point of view and from the system's point of view to capture the behaviors and responses that occur in the use case. This process helps members have an overview of the design of the flow of events. Then, the members redraw the diagrams in the flow of events which include sequence diagrams and class diagrams with supporting software, applications and websites such as Visual Paradigm and Draw.io. In addition, non-functional requirements or other requirements not included in the design model of each use case are also mentioned by members in this document.

## Course Registration, View Grade, View Schedule (Nguyen Thi Thu Hien)

## [Change Email, Dormitory Registration, Student Comments (NguyenNgoc Huyen)](#_heading=h.3j2qqm3)

## Certificate Registration, View Digital Invoice, View Prerequisite Course (Nguyen Dieu Huong Ly)

## Upload Announcement, View Tuition Fee, Dormitory Payment (Lai Hanh Van)

# Supplementary Specification (Group)

Based on the knowledge learned in the SAD tutorials, we have learned the characteristics and requirements of the HANU Training Management System. In the process of finalizing the supplementary specification, we encountered quite a lot of difficulties when we got to deeply understand the system to provide an objective and easy-to-understand view for special subjects such as: software engineers, developers, users and other stakeholders that have some relation to the system. We have also consulted a number of related documents online so that we can capture more necessary information. In addition, the team members are also very active in learning and discussing to reach the final result. Because we created this document from the perspective of a student, there will be many shortcomings, but we will try to do better in the future.

# Software Architecture Document (Group)

This document is a real challenge for us. In addition to referencing the sample documents provided during the tutorial class, we also review the lectures and tutorial's exercises to be able to do better. Additionally, we also built on the Use Case documents we worked on to create this Software Architecture Document. Since the authority is limited to students, we have provided the most general views based on the student's perspective and the constraints of the system. We reworked this document quite a few times to come up with the final result.

# Conclusion

Based on the knowledge gained from this course, we analyzed the functions of the HANU Training Management System from the perspective of a student at Hanoi University. Furthermore, we analyzed the system based on Model-View-Controller models as the foundation. We have somewhat seen the points that need to be improved in the system. Due to our limited knowledge base and lack of experience in the field of System Analysis & Design and Information Technology in general, there are some things that we still make mistakes. Therefore, we will continue to improve our knowledge to be able to do better in the future.