



**TRƯỜNG ĐẠI HỌC FPT**

# **CAPSTONE PROJECT REPORT**

**Report 1 – Project Introduction**

Hanoi, May 11, 2023

<b>Definition and Acronyms:</b>	2
<b>I. Project Report</b>	3
1. Status Report:	3
2. Team Involvements:	3
3. Issues/Suggestions	3
<b>II. Project Introduction</b>	4
1. Overview	4
1.1 Project Information	4
1.2 Project Team	4
a. Supervisor	4
b. Team Members	4
2. Product Background	5
2.1. Reasons to develop this project	5
2.2. What is Learning Online?	6
3. Existing Systems	6
3.1. F8	6
3.2. Hocmai	7
4. Business Opportunity	8
5. Software Product Vision	9
6. Project Scope & Limitations	9
6.1 Major Features	9
6.2 Limitations & Exclusions	10

## Definition and Acronyms:

Acronym	Definition
API	Application Program Interface
BA	Business Analysis
BR	Business Rule
CRUD	Create, Read, Update, Delete
DB	Database
DBMS	Database Management System
EC2	Elastic Compute Cloud
ERD	Entity Relationship Diagram
FK	Foreign Key
IDE	Integrated Development Environment
IT	Information Technology
JS	Javascript
PK	Primary Key
PM	Project Manager
QA	Quality Assurance
RDS	Relational Database Service
S3	Simple Storage Service
SRS	Software Requirement Specification
UAT	User Acceptance Test
UC	Use Case
UI	User Interface
UML	Unified Modeling Language
UX	User Experience

# I. Project Report

## 1. Status Report:

	Work Item	Status	Notes
1	Overview	Completed	
2	Product Background	Completed	
3	Existing System	Completed	
4	Business Opportunity	Completed	
5	Software Product Vision	Completed	
6	Project Scope & Limitations	Completed	

## 2. Team Involvements:

	Task	Member	Notes
1	Overview	All	
2	Product Background	DungNM	
3	Existing System	NguyenTK	
4	Business Opportunity	ThaiLA	
5	Software Product Vision	HungNM	
6	Project Scope & Limitations	KhaNM	

## 3. Issues/Suggestions

	Issue	Status	Notes
1		Pending	
2		In Progress	
3		Completed	

## II. Project Introduction

### 1. Overview

#### 1.1 Project Information

- Project name: **Online Learning**.
- Project code: **ONVID**.
- Group name: **SWP391\_ONVID**.
- Software type: **Website**.
- Timeline: **May 12<sup>th</sup> 2023 - July 2023**.

#### 1.2 Project Team

##### a. Supervisor

Full Name	Email	Mobile	Title
Pham Ngoc Ha	hapn10@fe.edu.vn	0988623000	Lecturer

##### b. Team Members

Full Name	Email	Mobile	Role
Nguyễn Minh Dũng	dungnmhe164046@fpt.edu.vn	0354046455	Leader
Lê An Thái	thailahe161592@fpt.edu.vn	0966132094	Member
Nguyễn Minh Kha	khanmhe161498@fpt.edu.vn	0868636668	Member
Trần Khôi Nguyên	nguyenhe160855@fpt.edu.vn	0969819319	Member
Nguyễn Minh Hưng	hungnmhe160427@fpt.edu.vn	0378952002	Member

## 2. Product Background

### 2.1. Reasons to develop this project

In the current 4.0 era, there are many things that have been simplified from manual to intellectual work... Realizing this development, our team has embarked on the project "**Online Learning**".

A website for online learning is necessary for many reasons, including:

- **Convenience:** An online learning website allows students to learn anytime and anywhere, as long as they have an Internet connection. This is very convenient for busy people or those who cannot go to a physical school.
- **Time-saving:** Students do not have to commute to school to learn, which saves time on transportation and allows them to focus more on learning.
- **Access to various courses:** An online learning website allows students to access many different courses from various instructors. They can search and choose courses that fit their interests, needs, and goals.
- **Diverse content:** Online learning websites provide a variety of learning content, from videos, lectures to exercises, tests, feedback, and discussions. This helps students have a complete and diverse learning experience.
- **Cost-saving:** Students do not have to pay for transportation, food, or accommodation when studying at a physical school. Therefore, online learning helps reduce costs and save money.
- **Student support:** An online learning website provides support for students by answering questions, providing guidance, and providing feedback on their exercises and tests.
- **Updating the latest knowledge:** An online learning website always updates the latest knowledge and the most advanced teaching methods to meet the needs of students and help them have the best learning experience.

## 2.2. What is Learning Online?

- Online learning is a form of education that is carried out via the internet, allowing learners to access online resources and courses to study from a distance. Online learning provides learners with flexibility in terms of time and location, allowing them to manage their own learning and choose courses that fit their learning goals. Online learning activities may include watching lecture videos, reading materials, participating in online discussions, completing assignments, and taking online tests. Online learning has become a popular learning medium in the digital age and is widely used in many academic and professional training fields.

## 3. Existing Systems

### 3.1. F8

The website [F8](#) is the website of a Fullstack programming training center in Vietnam. Below are some features of this website:

- Simple, user-friendly interface: The website has a user-friendly interface and simple design, making it easy for users to find the necessary information.
- Diverse and rich content: The website provides users with a lot of information about Fullstack programming courses, as well as articles about programming and technology.
- Search and filter function: The website has a search and filter function based on various criteria, making it easy for users to search and select information that is suitable for their needs.
- Online registration and payment: The website provides online registration and payment features, allowing users to register and pay for courses quickly and conveniently.
- Interaction with users: The website has a contact channel for users to send questions and feedback, ensuring that interaction with customers is quick and effective.

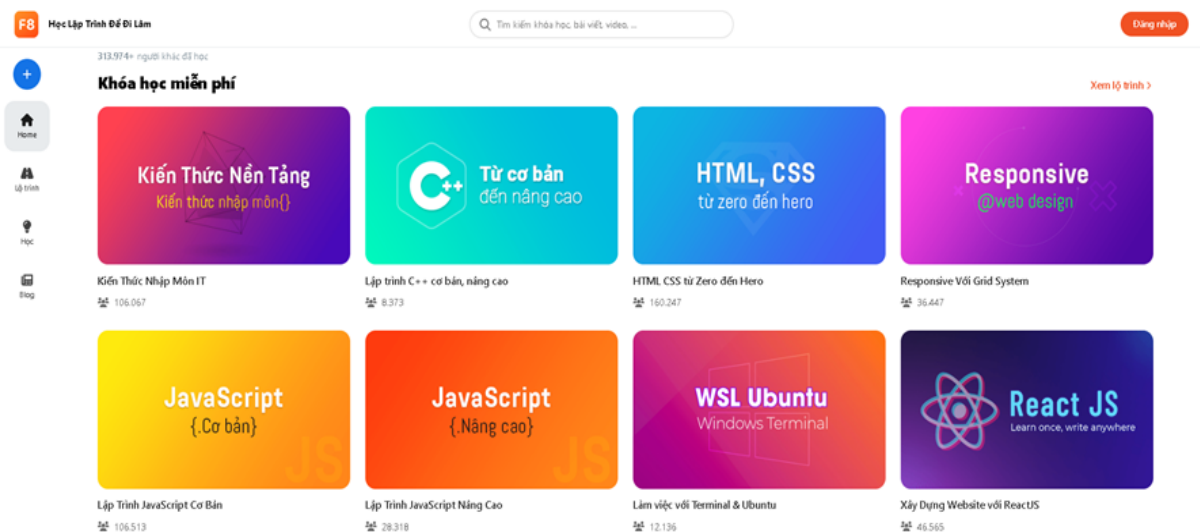


Figure - Website F8 System

- Summary of the advantages and disadvantages of F8:

Pros	Cons
<ul style="list-style-type: none"> <li>• Simple and easy-to-use interface: The website's simple and intuitive design helps users easily find information and use its features.</li> <li>• Diverse and rich content: The website provides users with a lot of information and resources about programming and technology, helping users learn and enhance their knowledge.</li> <li>• Search and filter functions: The search and filter functions help users easily find and choose courses that suit their needs.</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of information about instructors and teaching quality: The website does not provide complete information about instructors and teaching quality for the courses, which may make it difficult for users to decide which course to choose.</li> <li>• Lack of discussion and knowledge-sharing features: The website does not provide discussion and knowledge-sharing features among students, which may reduce user interaction and experience.</li> </ul>

### 3.2. Hocmai

Established in 2007, [Hocmai.vn](https://hocmai.vn) is one of the leading reputable learning websites in Vietnam with a team of more than 200 good, reputable and responsible teachers. The system has more than 4 million students participating in learning. Reasonable tuition fees, easy-to-follow interface.

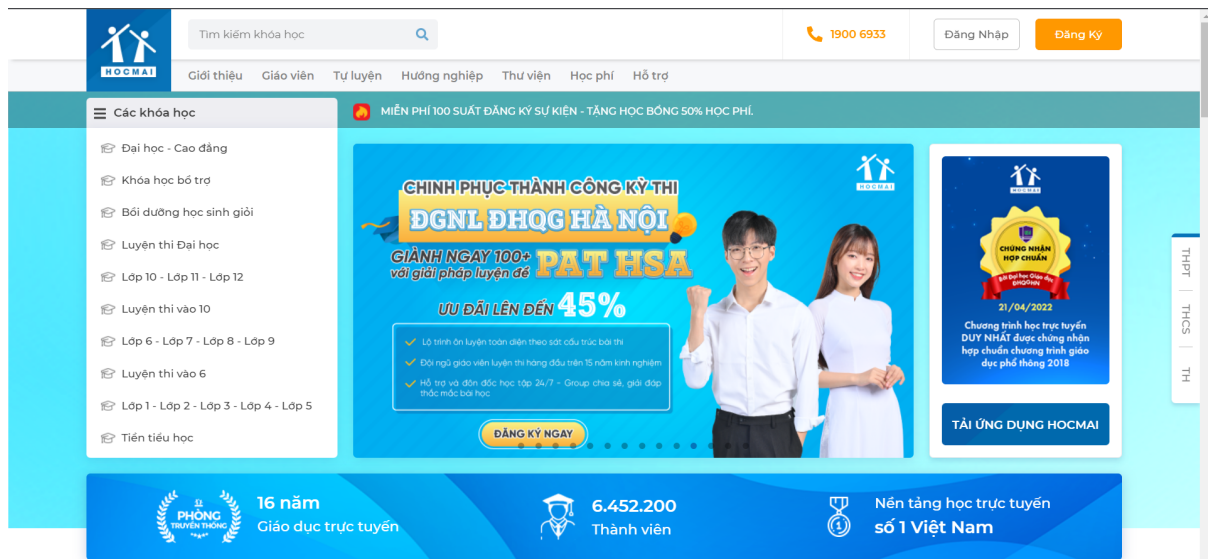


Figure - Website hocmai System



The website provides reputable quality courses with a sufficient amount of knowledge to meet students from grades 1-12, prepare for the transfer exam and prepare for university and college exams. In addition, it also meets the need to expand knowledge for students who want to learn more. Abundant amount of exercises and exam questions compiled by teachers according to standard knowledge and standard structure. Courses are always filmed completely new, always updated according to the latest educational program.

- Summary of the advantages and disadvantages of Hocmai:

Pros	Cons
<ul style="list-style-type: none"> <li>• Technology integration: Hocmai.vn uses technology to enhance the learning process, combining audio, images and video to help learners understand visually and vividly.</li> <li>• Learning Community: Hocmai.vn creates an online learning community, allowing learners to exchange, share experiences and support each other in the learning process.</li> </ul>	<ul style="list-style-type: none"> <li>• Limitations in assessment method: Hocmai.vn mainly focuses on providing exercises and exam questions to test knowledge. However, the assessment of learners in the process has not been done well</li> </ul>

#### 4. Business Opportunity

- According to a report from eLearning Industry, in 2020, the global online learning market reached a value of over \$250 billion USD and is expected to continue growing in the future. Several other sources have also noted a significant increase in the number of people engaging in online learning in recent years.
- Prominent online learning platforms such as Coursera, edX, Udemy, and Khan Academy have attracted millions of learners worldwide. Furthermore, many reputable universities and educational organizations have expanded their presence in the online learning domain and offer online training programs.
- Importantly, the awareness of the value and benefits of online learning has increased, particularly in the context of the COVID-19 pandemic, where many individuals have had to continue their education remotely.

#### 5. Software Product Vision

- We are creating an online learning website with the goal of providing people worldwide with flexible and convenient learning opportunities. Our website will offer a high-quality online learning platform that is diverse in content and extends to various fields for all ages.

## 6. Project Scope & Limitations

### 6.1 Major Features

No.	Feature	Description
1	Common Feature	Shared features accessible to all users, such as login, search, and account settings
2	Public Feature	Features available to guests, such as browsing course catalog and registering for an account
3	Customer Feature	Features available to registered customers, such as viewing course materials and taking quizzes
4	Marketing Feature	Features available to marketing members, such as managing promotions and analyzing customer data
5	Course Content	Features for managing course content, including creating and editing subjects, price packages, and lessons
6	Testing Content	Features for creating and managing quizzes, including importing questions and generating quiz reports
7	Sales Feature	Features for managing registrations and tracking sales, including adding and editing registration details
8	Admin Feature	Features for managing users, system settings, and site content, accessible only to system administrators

### 6.2 Limitations & Exclusions

The scope of this project is limited to the development of the online learning system with the major features mentioned above. The following limitations and exclusions apply:

- The system does not support live teaching or real-time communication between learners and instructors.
- The system does not include features for social learning or collaboration among learners.
- The system does not support the creation or management of offline courses or learning events.
- The system does not provide integration with external learning management systems or e-learning standards.
- The system does not include features for gamification or rewards for learning achievements.
- The system does not provide support for mobile devices or native mobile applications.