CAPSTONE PROJECT REGISTER

Class: **Duration time**: from ..……../20…. To ..…….../20…..

(*) Profession: <Software Engineer>   **Specialty**: <ES> ☐   <IS> ☒   <JS> ☐

(*) Kinds of person make registers: Lecturer ☒   Students

1. **Register information for supervisor (if have)**

No.	Fullname	Phone	**E-Mail**	**Title**
Supervisor	Mr. Phạm Thanh Trí	0937359396	tript9@fe.edu.vn	Mr.

2. **Register information for students (if have)**

	Full name	**Student code**	**Phone**	**E-mail**	**Role in Group**
1	Nguyễn Quang Huy	SE160391	0335412500	huynqse160391@fpt.edu.vn	Leader
2	Bùi Minh Quang	SE171655	0353110527	quangbmse171655@fpt.edu.vn	Member
3	Trần Anh Kiệt	SE171131	0937271795	kiettase171131@fpt.edu.vn	Member
4	Chu Công Danh	SE172215	0783225830	danhccse172215@fpt.edu.vn	Member

3. **Register content of Capstone Project**

   3.1. **Capstone Project name:**

   o English: Tay Ninh Day Tour Introduction and Booking System

- o Vietnamese: Hệ thống giới thiệu và đặt tour du lịch trong ngày cho tỉnh Tây Ninh
- o Abbreviation: TNDT - Tay Ninh Day Tour

A. Context:

Tay Ninh, a vibrant tourist destination in Vietnam, is renowned for landmarks like Ba Den Mountain, Tay Ninh Holy See, Duong Minh Chau Lake, and traditional craft villages. Despite its appeal, the region lacks a centralized platform for booking day tours, making it challenging for tourists to explore efficiently. The TNDT system addresses this gap by offering a comprehensive platform that enables tourists to search, book, and manage day tours while connecting stakeholders such as tour operators, guides, attractions, and specialty shops.

Objectives:

- o Develop a user-friendly platform for day tour bookings in Tay Ninh.
- o Facilitate seamless connections between tourists and local tourism stakeholders.
- o Enhance user experience with features like multilingual AI chatbots, online payments, and itinerary management.
- o Promote local culture and attractions through integrated content.

B. Proposed Solutions

The TNDT system is a multi-platform solution that integrates web and mobile applications to cater to diverse stakeholders. Key features include:

- **Centralized Booking Platform**: Enables tourists to browse, book, and manage day tours.

- **Stakeholder Connectivity**: Links tour operators, guides, tourist sites, and specialty shops with customers.

- **AI Chatbot**: Provides multilingual support for real-time customer queries.

- **Payment Integration**: Supports secure online payments and e-ticketing.

- **Content Hub**: Allows collaborators to share cultural and historical content about Tay Ninh.

Limitation Clause: For the purpose of this project, Tay Ninh refers to the administrative boundaries of Tay Ninh Province as they existed prior to any mergers or divisions in 2025. Students may choose to expand the scope to include the updated boundaries of Tay Ninh Province, but this is not mandatory.

Functional requirements

1. **Tour management company**

   a. **Tour management**

   - Create, edit, and delete tours.

   - Design itineraries (locations, timings, activities).

   - Set fares, maximum participants, and tour types (group or private).

   - Assign suitable guides.

   b. **Booking management**

   - Confirm payments and process cancellations.

   - Send email notifications to customers.

   c. **Financial Management**

   - Track payments and refunds.

   - Generate financial reports.

2. **Tourist site owner/employee**

   a. **Location Management**

   - Register and update site details (description, images, ticket prices)

   b. **Ticket Management**

   - Scan QR code-based e-tickets.

   - Validate tickets and track visitor numbers.

3. **Specialty shop/Agricultural production workshop**

   a. **Store Management**

   - Register to sell products on the platform.

   - Update product catalogs and pricing.

- Manage customer orders

  b. **Tour integration**

- Offer factory or workshop tours.

- Track visitor interactions.

4. **Freelance tour guide**

   a. **Profile Management**

- Create and update profiles, including language proficiency

   b. **Get tour**

- Receive and accept/decline tour notifications

   c. **Payment Management**

- Receive payments from tour companies.

- View earnings history

5. **Customer**

   a. **Book tour**

- Browse and filter tours by date, type, or preferences.

- Select tours, specify guest numbers, and pay online.

- Receive QR code e-tickets.

   b. **Manage reservations**

- View booking history and cancel tours (per policy).

   c. **Tour experience**

- Receive itinerary updates via email.

- Rate tours and guides post-trip.

6. **Collaborator**

   a. **Provide content**

- Publish articles, photos, and videos about Tay Ninh's culture and attractions.

   b. **Content Management**

- Edit and update published content.

7. **Admin**

   a. **System Management**

- Approve registrations from stakeholders.

- Manage tour and destination categories.

- Define cancellation and refund policies.

   b. Financial Management

- Processing payments between related parties

- Manage system e-wallet

   c. User Management

- Handle customer support and complaints.

- Suspend or reinstate accounts as needed.

- **Non-functional requirement**

   ○ **System performance**

      ▪ Ensure page load times and booking processes complete within 3 seconds.

      ▪ Support concurrent user sessions without latency or crashes.

   ○ **Scalability**

      ▪ Support expanding the number of users and tours on demand.

   ○ **Stability**

      ▪ Guaranteed 99.9% uptime.

      ▪ Recovery mechanism after error within 5 minutes.

   ○ **User Experience**

      ▪ Intuitive, mobile-friendly interface.

   ○ **System integration**

      ▪ Connect to electronic payment gateway.

      ▪ API support for integration with third-party services like Google Maps, Mail.

   ○ **Log management and monitoring**

      ▪ Keep system logs for at least 1 year.

      ▪ Real-time error alerts to admin.

   ○ **Security**

- Ensure necessary security measures including firewalls, SSL/TLS encryption, and regular security updates during low traffic intervals.

- The server will be accessible via a static IP address or a dynamic DNS service

- JWT, OAuth 2.0, data encryption

3.2. Main proposal content (including result and product)

3.2.1. Theory and practice (document)

- Students should apply the software development process and UML 2.0 in the modelling system.

- The documents include User Requirement, Software Requirement Specification, Architecture Design, Detail Design, System Implementation, and Testing Document, Installation Guide, sources code, and deployable software packages.

- Server-side technologies:
  - Server: .NET, Windows Azure, NextJs Server-Side
  - Database Design: SQL Server.

- Client-side technologies:
  - Web Client: HTML5, CSS3, Javascript, ReactJS, NextJs
  - Mobile App: React Native.

3.2.2. Products

- Mobile App for Customer
- Mobile App for Tourist Site Owners/Employees
- Web API for System.
- Web page for Admin.
- Web page for related artists.

3.2.3. Proposed Tasks

- Task package 1: Develop the Web application of the Customer
- Task package 2: Develop a Cabinet app

- Task package 3: Develop a mobile app for Student (Android or IOS).

- Task package 4: Build – Deploy and Test the system.

- Task package 5: Prepare all the required documents: System analysis and Design, Test plan, Installation manual, User manual.

4. **Other comments (propose all relative things if have)**

	HCM, date …… ……….. /20 …
Supervisor (If have) *(Sign and full name)*	**On behalf of Registers** *(Sign and full name)*