

# CS300 - CSC13002 - Introduction to Software Engineering

## Project Assignment 0 (PA0)

### Group 10

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### I. Overview

Kryxa is an application created to help users manage an internet cafe. Vietnam is a country with a huge need for cybercafe/internet-cafe and it ranks first in South-East Asia with more than 45.000 i-Cafes, even more than Thailand, Indonesia and Philippines combined<sup>1</sup>. Therefore, we think it's essential that a management system for internet cafes is developed to help users monitor their cafes better. Our application takes inspiration from similar apps such as Gcafe or Senet, the latter is a LAN center software for managing PCs and consoles.

Our app is a locally hosted server with web frontend intended for Windows user. There are 2 main actors/users:

- Admin/Monitor: Owners or staffs that need to manage their internet cafes
- Device users: users who need to use laptops or PCs to get access to the internet for multiple purposes (studying, gaming,...)

### II. Key features:

#### A. Admin/monitor

1. Assign PCs for user
  - Create/remove PCs from the system.
  - Admin chooses PCs from GUI to open a session for users.
  - Sessions have a time limit and can be extended or terminated.
2. Manage items, billing for customers
  - When a session is over or terminated, generate a bill for the customers.
  - Add/remove/edit multiple items (session packet, food, drinks)
3. View sales, history, statistics:
  - View sales for the whole cafe, for each PC, each item
  - Time usage per PCs
  - Graphs, visualization (potential feature)
4. Report issues, bugs:
  - Create bug report
5. Create tournament for different PCs (potential feature)

#### B. Device user

1. Buy items:
  - Food, drinks,...
  - Extend sessions by buying new session packets

2. View timer for session
3. View the bill in detail
4. Report issues
  - Technical issues
  - Service issues

### III. Tech stack

- A. Frontend: (Lead: An (layout), Khiem (logic))
  - HTML/CSS: use TailwindCSS for CSS framework
  - Svelte: front-end framework
- B. Backend: (Lead: Triet)
  - Python / FastApi
  - SQLite
  - Swagger docs (for api documentation)
- C. UI/UX design: (Lead: Bao)
  - Figma
- D. Test: (Lead: Minh)
  - API test: Postman, curl
  - Frontend: rice based system

### IV. Future planning:

- A. 13/10/2023 - 20/10/2023:
  - Complete PA0
  - Setup tools
- B. 13/10/2023 - 27/10/2023:
  - Design data schema
  - General interaction with data
  - Self training
  - Seminar for code training:
    - + 17/10/2023: Backend intro (Python, FastAPI, HTTP requests)
    - + 20/10/2023: Frontend intro (HTML, CSS, JS, Svelte, Tailwind)

### V. References:

(1):“Tiết lộ: Việt Nam có tới hơn 45.000 quán net, thiên hạ vô địch ở Đông Nam Á.” *GameK*, 23 October 2018,<https://gamek.vn/tiet-lo-viet-nam-co-toi-hon-45000-quan-net-thien-ha-vo-dich-o-dong-nam-a-20181023223107918.chn>. Accessed 17 October 2023.