



Wong Shen Kai, Year 3
Engineering, Summer Internship

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PROJECT OVERVIEW

Background

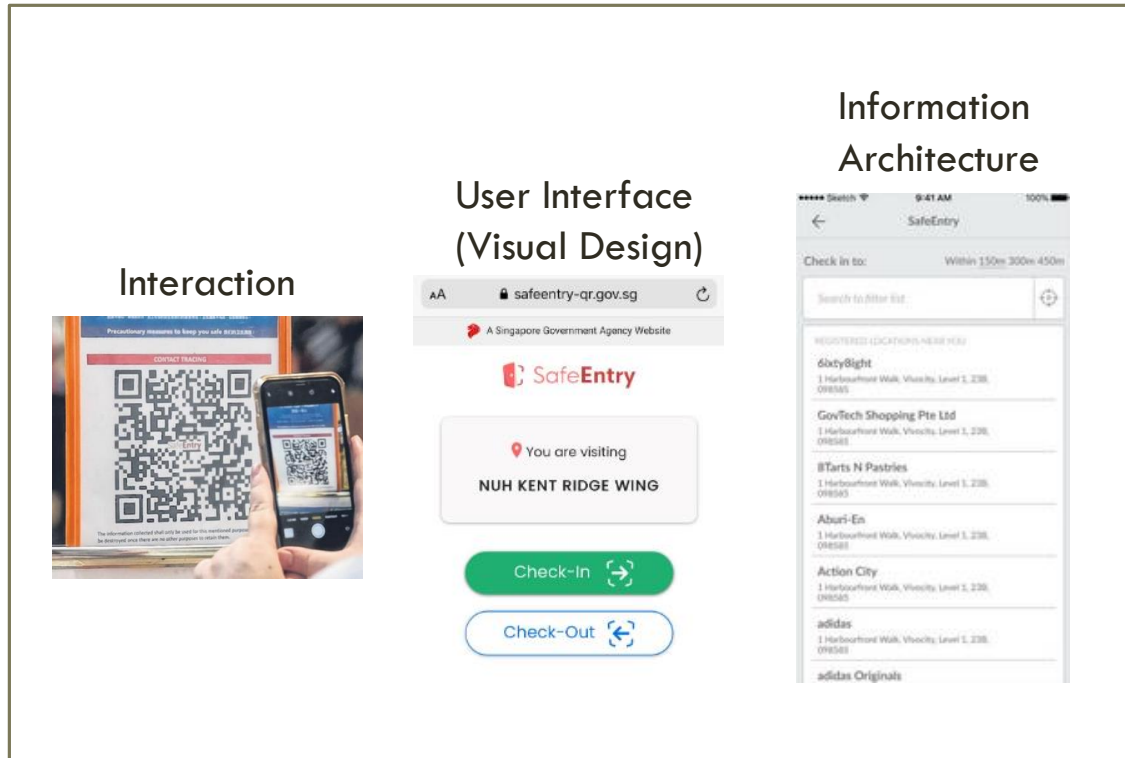
- Users desire applications with good User Experience (UX)
- Application Developers have different understanding of UX

Outcome

- Develop UX Framework for NUS IT
- Improved UX for NUS IT applications

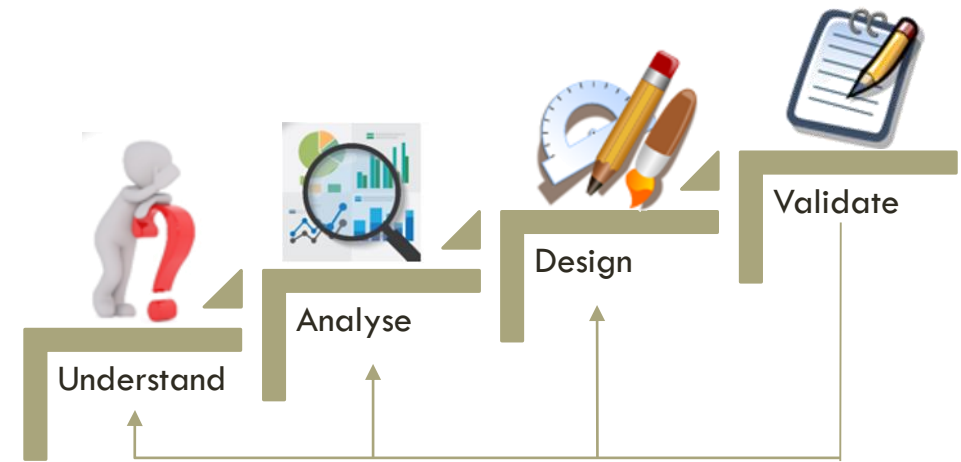
USER EXPERIENCE DESIGN PROCESS

User Experience



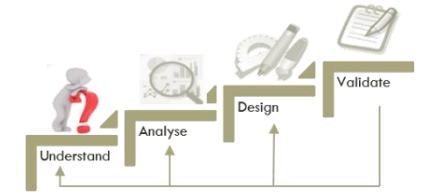
UX Design Process

Design adds value faster than it adds costs – Thomas C. Gale



STEP 1: UNDERSTAND USER

Identify users' needs, behavior, experiences and motivation



Conduct Interviews or Surveys




Prepare questions to find targeted responses

- How much time would you spend doing this task?
- What might keep people from using this app?

Industrial Analysis

Evaluate features of similar apps in the industry

- Consider using good features
- Avoid “mistakes”

Comparison			
Good Features	Good usability and browsing friendly Can save delivery location, such as workplace, to speed up the process	Can search and filter the type of dining outlets in the area, based on the type of food user want	Provides many deals Provides estimated and accurate delivery time
Bad Features	Very costly delivery fees	Not enough delivery personnel	Poor illustration of menu No feature to contact the delivery personnel

STEP 2: ANALYSE INFORMATION

Develop insights from information gathered

Organise Information

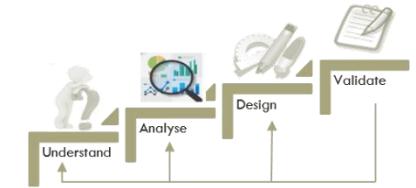
- Group and label by trend or pattern

Create Personas

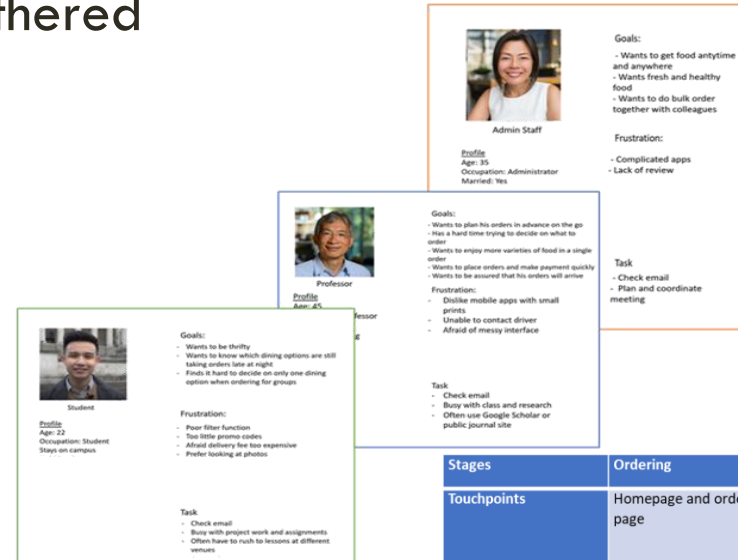
- User behavior, needs, motivation

Create Customer Journey Map

- Touchpoints, goal, action, thinking



Personas

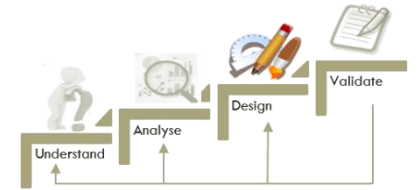


Customer Journey Map

Stages	Ordering	Waiting	Receiving	Consuming and Rating
Touchpoints	Homepage and order page	Food delivery status page	Collect order from the food delivery personnel	-Enjoy food -Share experience with others -Rate application
User Goal	Quickly choose the food. Make payment for the order.	Be informed of how long the food takes to arrive.	Receive the food on time and in good condition.	Give review and feedback for the whole experience.
User Action	Browse menu and place order	Receive notifications on delivery updates	Collect order from the food delivery personnel	Enjoy food, share experience with others and rate food delivery experience
User Thinking	The application should feature dining options of varying cost and cuisine.	I want the food delivered as quickly as possible.	The food should arrive well-packed and served hot.	Including utensils and sauce packets are appreciated. The entire experience is so simple, cheap and convenient
User Emotion	Excited, decisive	Anticipatory, concerned	Happy, hungry	Satisfied, relaxed
Possible improvements	Easy-to-use filter function Good pictures to represent the food. E-wallet feature	GPS tracking system of delivery. Timer feature	Food kept in thermal insulator or cooler box	Short and concise feedback form after every food delivery.
Rank importance	1	4	2	NUS RESTRICTED

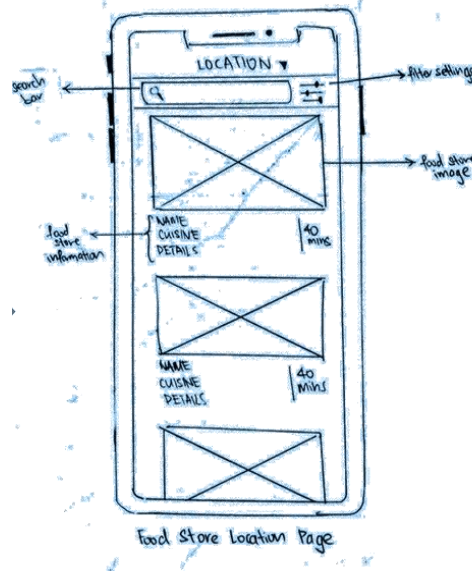
STEP 3: DESIGN FOR USER

Develop mock-ups with key UX elements



Sketching

- User interface to communicate navigation flow, layout, content and functionality



Prototyping

Low-fidelity

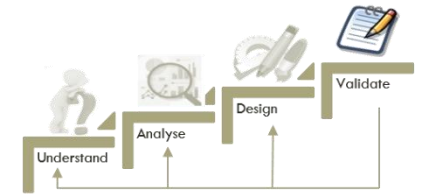
- Simple and low-tech way to convert ideas into artifacts to test functionality and collect feedback
- Paper, Clickable Wireframe (eg: PowerPoint)

High-fidelity

- Highly functional and interactive mock-ups very close to final product to test usability and identify issues in app
- Digital prototype tools, Development environment (sandbox)

STEP 4: VALIDATE DESIGN

Conduct test to get feedback for improvement



Usability Test

- Eliminate problems unforeseen in design phase
- Use prototype to get real users to try to complete goals set in various scenarios
- Conducted by app developers to get direct feedback from users
- Participated by observers who watch, listen and take notes
- Build confidence for app development



STEP4: VALIDATE DESIGN

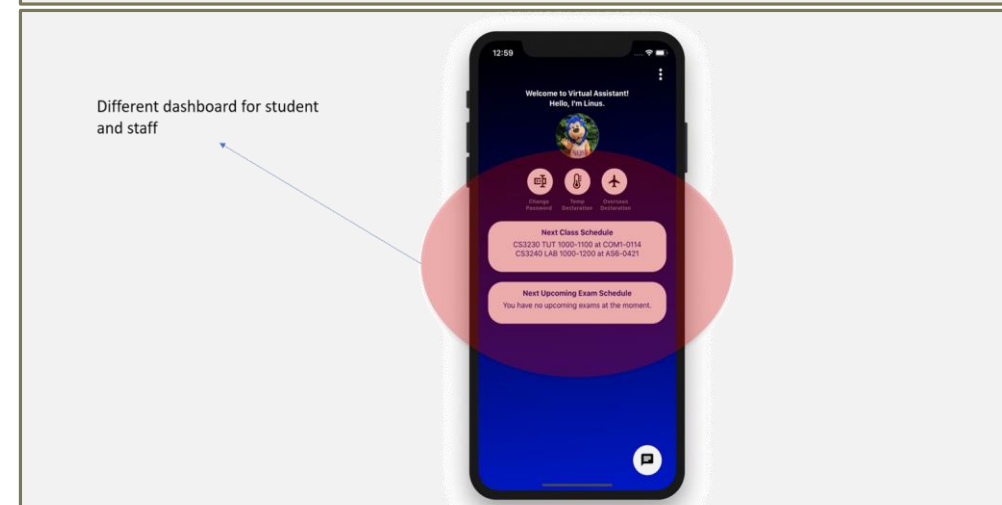
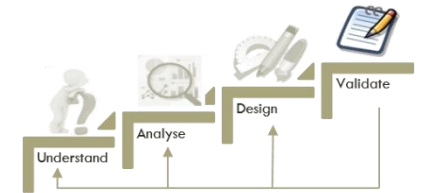
Collaborated with two internship teams to run through this step:

Project: IoT Connection Automation

- Early stage: Adobe XD
- Later stage: Dev environment (Usability Test)

Project: Staff and Student Virtual Assistants

- Later stage: Dev environment



FURTHER IMPROVEMENT

- Simplify to make design process easier for use
- Adapt for applications with different level of customization
- Perform UX Design review with selected application to fine-tune process

LEARNING JOURNEY

Challenges Faced

- Understanding the background and clarity
- Communicating complex design concepts clearly and persuasively across varying roles

Lessons Learnt

- Understanding the difference between User Experience and User Interface

Knowledge Gained and Skills Honed

- Technical: User Research, Wireframe, Information Architecture, Interaction Design
- Soft Skills: Problem-solving, Time management, Collaboration, Project management

THANK YOU