ngee ann
school of infocomm
technology

Sample
Problem Statements

Software Engineering Project (SEP)

Diploma in Full Stack Development

Objectives

- To undertake a real-life IT project or a competition-based project.

- The project should ideally include problem definition, requirements gathering, analysis and design, development and testing and the subsequent deliverable of artefacts that are suitable for their personal portfolios.

- Provide opportunities to work on full stack development

ngee ann
school of infocomm technology

Diploma in FSD
SEP AY25/26

Last update: 13/01/2026

Lecture 0
Slide 2

HR Onboarding Application

NP is committed to providing an exceptional onboarding experience for new hires. While they have successfully streamlined and automated their pre-onboarding workflows, they wonder how they can recreate the onboarding experience to be the best it can be, right from the first day of work.

- How would you develop a user-friendly mobile application that guides new employees through their training, document signing, equipment allocation, and other essential onboarding steps? Your app should streamline communication, eliminate paperwork, and ensure new hires are well-prepared and engaged from the start.

ngee ann school of infocomm technology

Diploma in FSD
SEP AY25/26

Last update: 13/01/2026

Lecture 0
Slide 3

Digital Services Accessible for Everyone

As the capabilities of our digital channels grow to meet the needs of the consumers, most banking transactions can be carried out anytime, anywhere. However, for some people, there may be barriers in their way. For example, a visually impaired person may not be able to see what is on the screen. A stroke recoveree may not have full use of their limbs. A senior may not be digitally savvy to understand the interface.

- What can we do to let our digital channels be easily accessible by everyone?

ngee ann
school of infocomm technology

Diploma in FSD
SEP AY25/26

Last update: 13/01/2026

Lecture 0
Slide 4

ATM Services for Now and Beyond

ATMs allow customers to access their bank accounts for cash deposits and withdrawals. Originally, ATMs eliminated the need to visit branches during business hours. Over time, additional innovations were introduced, such as cash recycling, money transfers, and ez-link top-ups. OCBC Bank has implemented further advancements, including QR code withdrawals, cheque encashment, and CPF withdrawals using facial recognition.

- Which aspects of ATMs can be improved or redesigned to ensure their continued relevance?

- relevance

ngee ann
school of infocomm
technology

Diploma in FSD
SEP AY25/26

Last update: 13/01/2026

Lecture 0
Slide 5

What to include in the submission?

A working prototype of the solution (i.e. web app, mobile app, database design, etc), including all relevant workflows.

A presentation detailing your solution's key features, benefits, and potential impact.

Any relevant documentation or code that supports your solution

ngee ann
school of infocomm
technology

Diploma in FSD
SEP AY25/26

Last update: 13/01/2026

Lecture 0
Slide 6