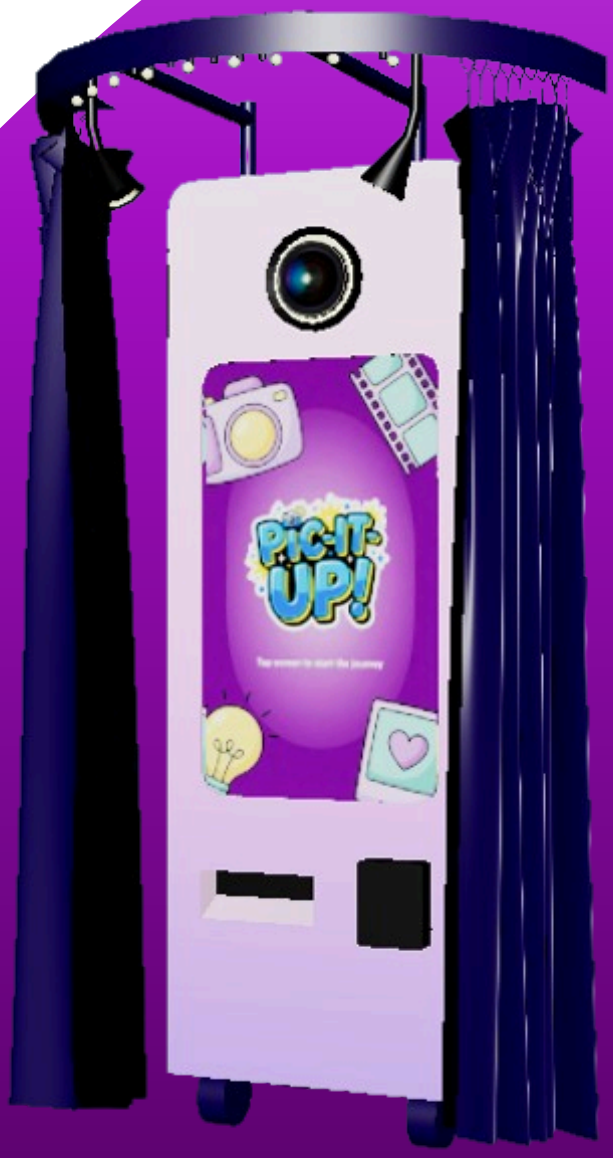
IM01

INTERACTIVE
KIOSK PROPOSAL

By Toh Rui Min & Geng Bai Hui



PIC-IT-UP!

EXD ASSIGNMENT 2

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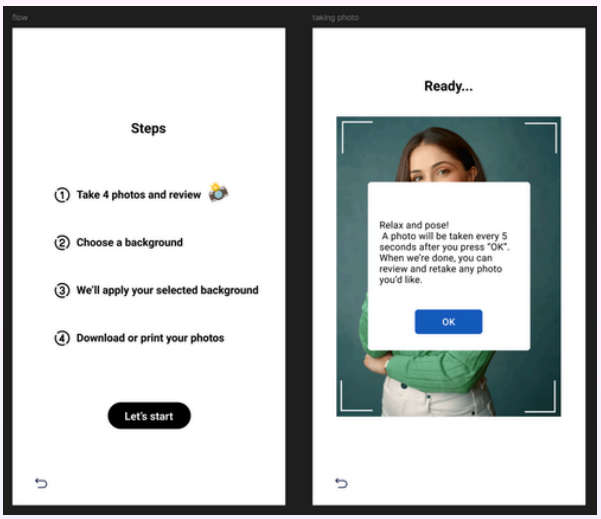
1. PROJECT CONCEPT AND OVERVIEW

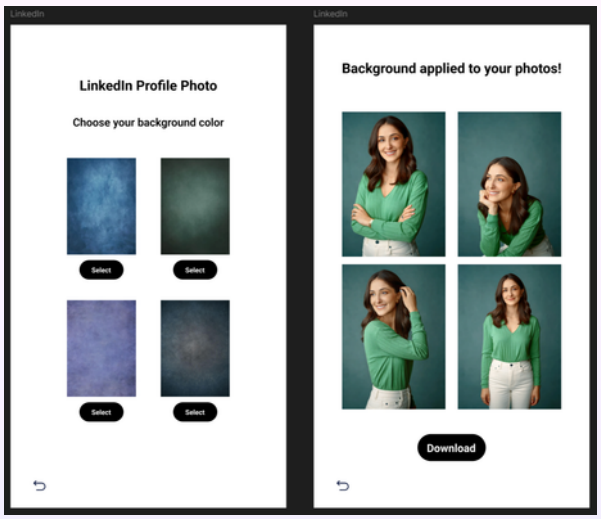
Pic-It-Up is an interactive photobooth kiosk designed for the ICT campus environment, catering to **students, lecturers, and visitors** who want both fun, expressive photos and professional, practical images in one convenient space.

The core concept of Pic-It-Up is to bridge the gap between playful creativity and real-world needs. On one hand, students enjoy taking casual photos, memes, and group shots that reflect campus life and ICT culture. On the other hand, there is a growing need for polished profile photos for platforms such as LinkedIn, portfolios, and professional communication. Pic-It-Up combines both use cases into a single kiosk experience, allowing users to switch seamlessly between different photo-taking modes.

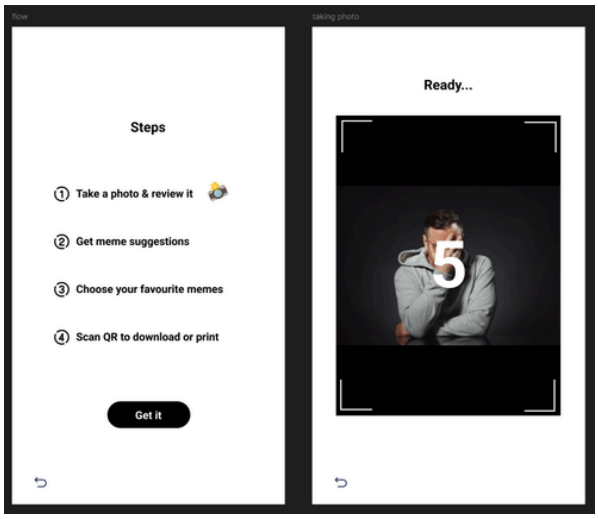
The kiosk features three main experiences:

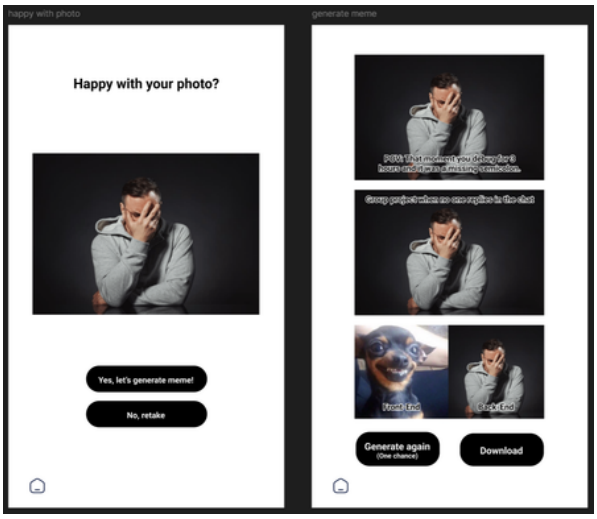
1. **LinkedIn Profile Photo Mode**: provides a more private and focused setup for users to take clean, professional headshots with selectable backgrounds.



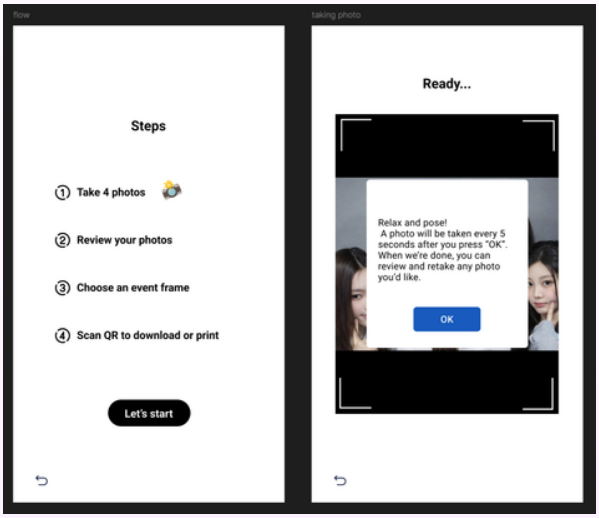


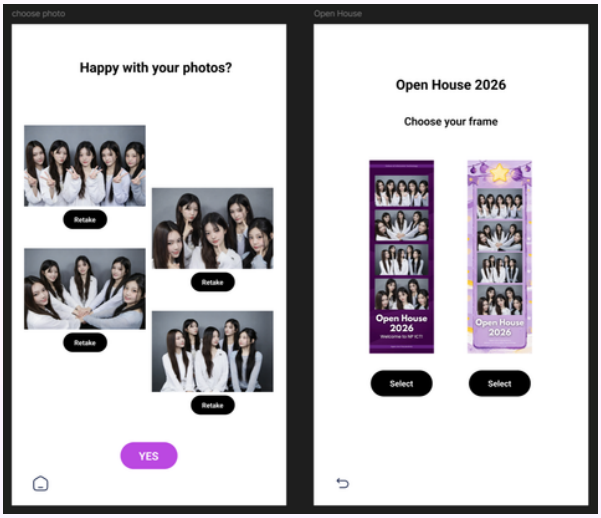
2. **ICT Meme Generator Mode**: users can take a selfie and receive AI-suggested meme captions inspired by common ICT student experiences, encouraging humour and self-expression.



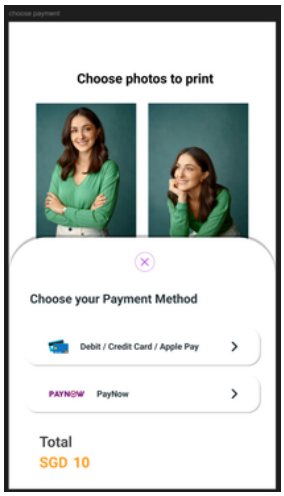


3. **Event Mode**: designed for campus events such as RED Camp and open houses, allowing users to take themed photos with custom frames and branding.





After taking photos, users can choose to **download their images instantly via QR code FOR FREE** or **print physical copies through a simple cashless payment flow**. This dual output approach ensures flexibility, supporting both digital-first users and those who value tangible keepsakes.



The kiosk is designed with user comfort and accessibility in mind. Features such as a semi-private curtain area for professional photos help reduce awkwardness and pressure, allowing users to feel more relaxed and confident in front of the camera. At the same time, playful features like meme generation encourage creativity and social interaction, making the kiosk suitable for both individual and group use.

The name **Pic-It-Up** combines “Pic” (pictures) with a playful call to action, encouraging users to take, collect, and keep their photos. The upbeat and friendly tone reflects the kiosk’s role as a welcoming campus touchpoint rather than a rigid or intimidating machine.

Overall, Pic-It-Up is designed to be accessible, intuitive, and engaging, creating a low-pressure photo experience that fits naturally into campus life while supporting both social interaction and professional development.

2. DESIGN RATIONALE

The design of **Pic-It-Up** focuses on creating a photo-taking experience that is comfortable, intuitive, and adaptable to different user needs, ranging from casual campus moments to more formal LinkedIn profile photography. The kiosk's form and interaction design were refined through iterative improvements to better support these use cases.

Overall Form & Accessibility

The kiosk adopts a tall, vertical form factor to naturally frame users at eye level, making it suitable for both individual and group photos. The rounded edges and soft pastel colour palette reflect a friendly, student-oriented identity while maintaining a clean and professional appearance that aligns with the ICT school environment. The compact footprint allows the kiosk to be placed in high-traffic campus areas without obstructing movement.

Colour & Visual Identity

The kiosk features a **soft pink-to-purple gradient**, chosen intentionally to reflect the **ICT School's representative colour palette**. Purple is strongly associated with ICT, by incorporating this colour into the kiosk's exterior and interface visuals, Pic-It-Up maintains strong visual alignment with the school's identity.

The lighter pink tones help soften the overall appearance, preventing the kiosk from feeling overly technical or intimidating. This balance ensures that the kiosk appeals not only to ICT students, but also to lecturers and campus visitors who may be less familiar with technology-focused environments.

Design Iteration: Old vs New Kiosk

This is the initial design (first iteration), it explored the basic structure of a photobooth with an integrated screen, camera, and curtain system to provide privacy. However, during evaluation, two main usability issues were identified:

1. **Insufficient lighting for professional photos**, especially for LinkedIn headshots.
2. **Curtain positioning obstructed the camera's field of view**, particularly during group photo sessions.

In response, the kiosk was redesigned and improved (second iteration).

Integrated Lighting for LinkedIn Photos

To support professional photo-taking, overhead lighting was added above the camera in the new design. This lighting is specifically linked to the LinkedIn photo feature:

- When users select LinkedIn Profile Photo, the lights automatically turn on.
- The lights turn off once the photo-taking process is completed.

This automation reduces cognitive load for users, as they do not need to manually adjust lighting settings, while ensuring consistent and flattering illumination for formal headshots.

Improved Curtain Structure

In the improved design, the curtain rod was repositioned outward and above the kiosk, rather than being directly aligned with the kiosk's front surface. This adjustment serves two key purposes:

- It maintains a sense of privacy for users who prefer a more enclosed space, especially for professional photos.
- **It prevents the curtains from blocking the camera's view**, making the kiosk more suitable for group photos and open, casual use cases.

This design decision balances privacy and openness, allowing Pic-It-Up to function as both a semi-private "photo corner" and a social photobooth.

Design Intent

Overall, the design rationale emphasises **flexibility and context-aware interaction**. By integrating lighting that responds to photo type selection and refining the curtain structure to improve visibility, the final kiosk design supports multiple photo scenarios without requiring additional user effort. These improvements ensure that Pic-It-Up! feels approachable, efficient, and well-suited to the everyday needs of ICT students, lecturers, and campus visitors.

Content Design Rationale

The content offered by Pic-It-Up! was designed to balance playfulness, professionalism, and campus engagement, reflecting the diverse needs of ICT students, lecturers, and visitors.

The **LinkedIn Profile Photo feature** addresses a practical need commonly faced by ICT students, who often require professional headshots for internships, portfolios, and job applications. By providing controlled lighting, background selection, and a semi-private curtain setup, the kiosk supports users in presenting themselves confidently and professionally.

The **ICT Meme Generator** caters to students' everyday culture by allowing them to create relatable, technology-themed memes. This encourages casual interaction with the kiosk, lowers the barrier to use, and transforms the photobooth into a social and expressive space rather than a purely functional machine.

Lastly, the **Event Filter feature** is designed for open houses and campus events, allowing visitors to take themed photos that serve as digital or printed souvenirs. This helps strengthen institutional branding while creating memorable takeaways from school events.

Together, these three content modes ensure that Pic-It-Up remains relevant across different contexts, offering both functional value and enjoyable experiences within the ICT campus environment.

3. TARGET USER PROFILE

To ensure that Pic It Up! meets the real needs of ICT students and visitors, We identified **three core objectives** from the perspective of casual users engaging with event-based kiosks.

These goals show a desire for **quick, fun, and meaningful photo** experiences, whether for LinkedIn headshots, memes with friends, or school event filters.

By understanding user needs, Pic It Up! was designed as an intuitive and playful campus kiosk that **balances convenience** and **creativity, supporting both private and social photo experiences.**

1. "I need a **high-quality, professional-looking headshot** for my LinkedIn profile and internship applications without the high cost of a professional studio"

2. "I want a **fun, interactive way to capture memories** of my student life using 'insider' ICT memes and event-specific filters (like Open House) to share with my peers"

3. "I want a **private space to take my photos comfortably,** ensuring that my digital data is handled securely via a seamless QR-code retrieval system"

3. TARGET USER PROFILE

After interviewing three students with different personalities and photo-taking habits, I developed **three user personas** to represent the target audience. These personas revealed **key needs and motivations for capturing campus memories,** from meme creation to professional headshots and event photos. The insights guided the design of Pic It Up! as an intuitive photobooth kiosk that balances practicality and creativity, **supporting both formal and casual photo moments while remaining engaging and relevant to the school community.**

[Visme Persona Link]

PROFILE

GERMAINE LOH

- Age: 18 years old
- Gender: Female
- Profession: Year 2 Data Science Student, Ngee Ann Polytechnic

BACKGROUND

Germaine is highly organized and tech-savvy. She spends most of her time in the ICT labs working with code and datasets. While she isn't as "artsy", she loves ICT school culture and wants to capture memories of her final year with her project mates.

NEEDS

- Wants the "Export to QR" feature to work every time so she can instantly save the photo to her cloud storage
- Enjoys the "ICT Meme Generator" because it features inside jokes that students would understand.
- Needs the kiosk to accommodate her and her 3 teammates for a group photo after their big project presentation.

TECHNICAL SKILLS

Data Literacy

System Efficiency

Automation Knowledge

FRUSTRATIONS

- Gets annoyed if the QR code fails to scan or if the payment screen hangs
- she wants the themed "Event Filters" (like Open House or RED Camp) to feel relevant to her diploma.

PLATFORMS

- Instagram
- Telegram
- TikTok
- Discord

GERMAINE LOH 1

Persona 1

3_ TARGET USER PROFILE

[Visme Persona Link]

PROFILE

LAU JIA QI

- Age: 18 years old
- Gender: Female
- Profession: Year 2 Cybersecurity Student, Ngee Ann Polytechnic

BACKGROUND

Jia Qi is hyper-aware of digital privacy and data footprints. She is cautious about where her photos are stored and who has access to them. She loves the "ICT Meme" culture but often hesitates to use public kiosks if she feels the data handling isn't secure.

NEEDS

- Wants an explicit "Delete after printing" option or an assurance that her face data isn't being stored on the kiosk permanently.
- The semicircle privacy curtain is a "must-have" for her, not just for "angles," but to ensure no one is "shoulder-surfing" while she enters details.

TECHNICAL SKILLS

Cyber Security Awareness

Digital Troubleshooting

Network Literacy

FRUSTRATIONS

- Dislikes UIs that force her to "Share to Social Media" before she can download her own photo.

PLATFORMS

- Instagram
- Telegram
- WhatsApp
- TikTok

LAU JIA QI

2

Persona 2

3_ TARGET USER PROFILE

[Visme Persona Link]

PROFILE

KIMBERLY LING

- Age: 18 years old
- Gender: Female
- Profession: Year 2 Design Student, Ngee Ann Polytechnic

BACKGROUND

Kimberly spends most of her time in the Design block but often walks over to the ICT block for food or to meet friends. She is highly aesthetic-conscious and feels that most campus ID photos look "ugly." She wants a professional headshot for her portfolio that actually looks good.

NEEDS

- Wants a photo that doesn't look like a typical "passport" photo.
- Since she's just passing through ICT, the process must be fast, e.g. under 3 minutes.
- Interested in the "LinkedIn" or "Event Filters" if they are designed with good typography and graphics.

TECHNICAL SKILLS

3D Modelling

Creative Storytelling

Basic Computing

FRUSTRATIONS

- Bad Lighting
- Lack of Privacy

PLATFORMS

- Instagram
- Telegram
- WhatsApp
- TikTok

KIMBERLY LING 3

Persona 3

3. EMPATHY MAP

After deciding on my final persona, I invited **Kimberly Ling** to interact with the Pic It Up! kiosk prototype.

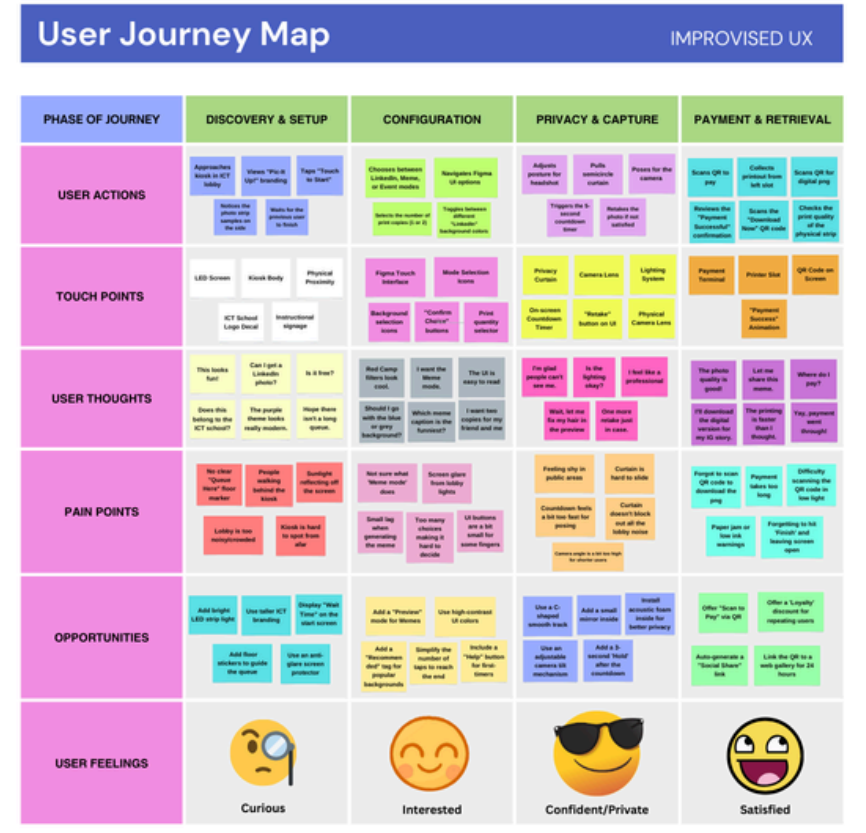
This gave me direct insights into how real students **think and feel** when using the kiosk to capture both fun and professional photos.

The empathy map below reflects Kimberly's emotional journey and responses, which guided how I refined the kiosk experience. Her feedback helped me make the **meme captions more relatable**, ensuring the **QR download process felt seamless**, and **design the privacy curtain feature** so formal photo-taking would feel **less intimidating and more comfortable.**

[Empathy Map Canva Link]

4. USER JOURNEY MAP

[User Journey Map Link](#)

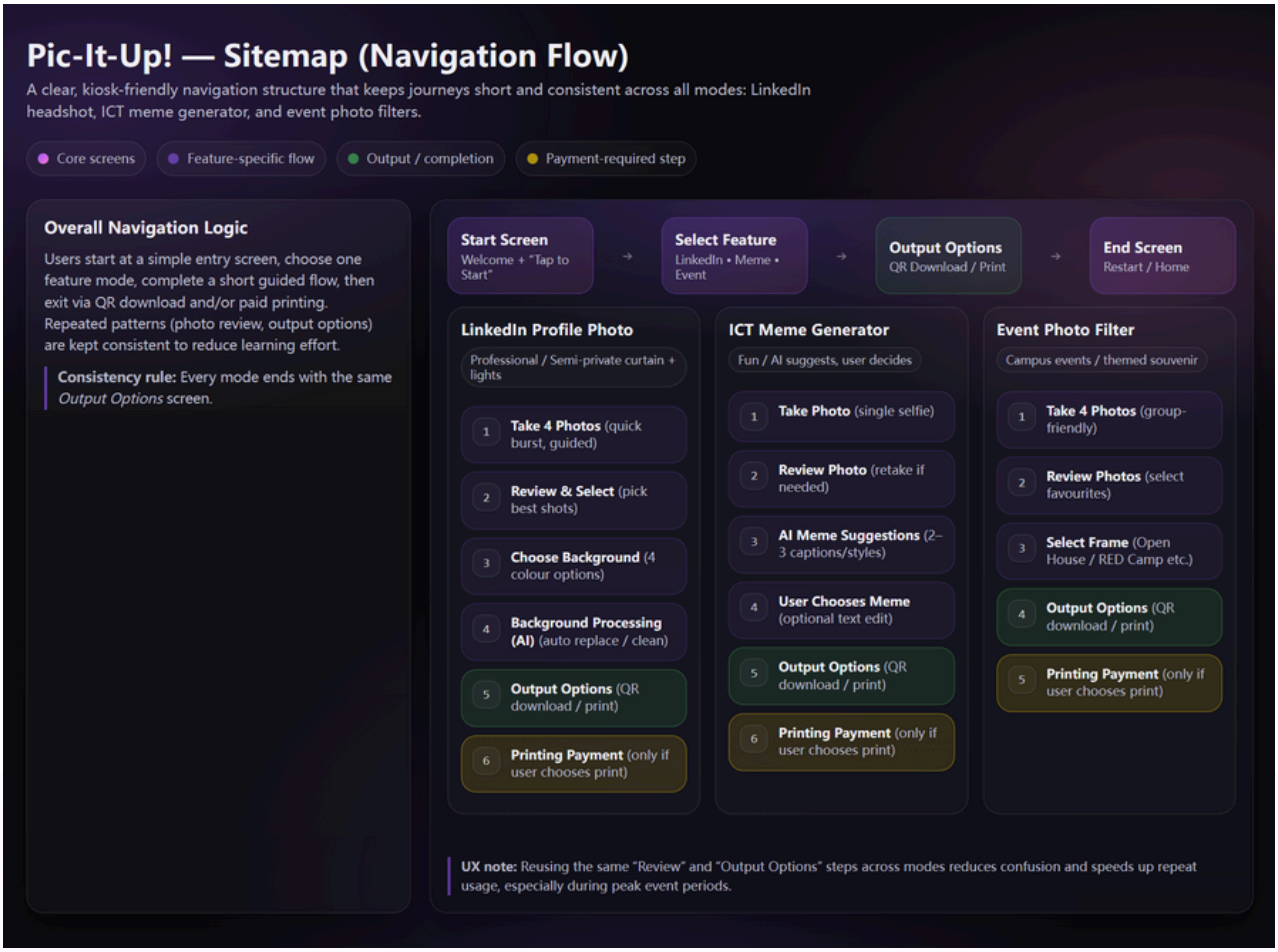


This user journey maps **Kimberly's experience** from discovering Pic It Up!

This process highlights opportunities to make the **experience smoother, more intuitive, and comfortable**, while informing features like ICT-themed meme captions, privacy options for formal shots, and a seamless download flow.

Overall, the journey ensures Pic It Up! supports both **playful** and **professional photo moments** in a way that **feels natural and enjoyable for users.**

5_ SITEMAP



The sitemap shows a clear and linear navigation structure designed for easy first-time use. All users begin at a shared start screen before entering one of three feature-specific flows, which follow consistent steps such as photo review and output selection. Optional payment steps are only triggered when printing is selected, ensuring the overall experience remains simple and intuitive.

6. HARDWARE COMPONENTS RESEARCH

[Research Link]

The design of Pic It Up! was **inspired** by research into real-world photo kiosk systems such as the Pho-Print series.

These references helped us understand how to integrate cameras, touchscreen interfaces, and QR-based sharing into a compact, user-friendly structure.

We a**dapted key features, like privacy curtains, intuitive UI layouts, and fast thermal printing.** To suit the needs of our students, ensuring the kiosk supports both playful and professional photo moments.

Our final dimensions and hardware choices reflect best practices in kiosk ergonomics and event usability, while maintaining a student-focused aesthetic.

6. HARDWARE COMPONENTS RESEARCH

[Research Link]

Traditional ID photo booths are designed for standardized document photos, offering enclosed spaces and physical printouts.

However, they often **suffer from poor lighting, rigid framing, and lack of digital sharing options.** These booths feel outdated and unappealing to our users.

Pic It Up! improves on this by integrating professional ring lighting, customizable backgrounds, and QR-based downloads, making formal photos **feel polished, fast, and user-friendly.**

6. HARDWARE COMPONENTS RESEARCH

To understand how Pic It Up! stands out, we compared **three existing photo-taking solutions**. This analysis helped identify gaps in **user experience, technical limitations, and opportunities** to innovate for ICT students.

Kiosk Type	Strengths	Weaknesses	Opportunities for Pic-It-Up!
PhoPrint Series (Direct Competitor)	Reliable hardware; supports DSLR; familiar to many users.	Often generic in design, lacks deep NP campus specific software features.	Create ICT-specific "Meme Modes" and "Event Filters" that a generic booth doesn't have.
Traditional ID Booth (Functional Competitor)	Offers privacy; physical prints; standardized for documents.	poor lighting, no digital sharing to social media.	Use professional ring lighting (Nissin) to make "Professional LinkedIn" photos look high-end, not "passport-style."
Mobile AR Apps (Instagram/TikTok)	Highly creativity, free and instant filters. Users are already comfortable with them.	Low resolution, no physical print, requires a tripod for good results.	Combine the fun of AR filters with the quality of a Nikon D750 DSLR and the "tangible" reward of a physical print.

6. HARDWARE COMPONENTS RESEARCH

[Research Link]

BK5 Series

Highly Dependable and Compatible

The BK5-31 is a compact and durable 3-inch (80 mm) thermal kiosk printer designed for integration into kiosk hardwares. Supporting media thickness up to 0.20 mm is ideal for tickets, labels, and wristbands. A side open frame and both sides of the power switch and reset buttons make it ideal for small spaces and enables easy mounting. It features fast speeds up to 150 mm/sec at

Printer

- **Purpose:** Prints **photo strips and digital receipts** for users who choose physical copies of their pictures.
- **Justification**: Provides a takeaway that **enhances the photo experience** and gives users the option to keep or gift their photos. It also reinforces the kiosk's dual-mode flexibility, digital and physical, making it inclusive and memorable.

6. HARDWARE COMPONENTS RESEARCH

Research Link

Curtains for Privacy

- **Purpose:** Offers visual and emotional **privacy** during photo-taking.
- **Justification:** Helps users **feel more comfortable**, especially when taking formal shots. Jia Qi values this feature for avoiding “shoulder-surfing” and Kimberly appreciates the reduced public exposure while posing.

6. HARDWARE COMPONENTS RESEARCH

Research Link

DSLR Camera

- **Purpose:** Captures **high-resolution images** suitable for both professional and casual use.
- **Justification**: Delivers studio-quality photos that meet Kimberly's portfolio standards and Germaine's group photo needs. The DSLR setup also supports AR filters and meme overlays without compromising clarity.

6. HARDWARE COMPONENTS RESEARCH

[Research Link]

Ring Light

- **Purpose:** Offers **direct, even illumination** for the user's face during photo capture.
- **Justification:** Ensures **flattering lighting** for headshots and selfies, reducing harsh shadows. This supports Kimberly's desire for aesthetic photos and helps Germaine get clear group shots with her teammates.

6. HARDWARE COMPONENTS RESEARCH

Research Link

C-Shaped Rod

- **Purpose:** Supports the curtain track and lighting system while maintaining a sleek, open booth structure.
- **Justification:** Provides **a semi-enclosed space** that feels **private** without being claustrophobic. The curved design makes the booth visually inviting and helps reduce awkwardness for users like Kimberly who feel shy posing in public.

6. HARDWARE COMPONENTS RESEARCH

[Research Link]

LED Lights

- **Purpose:** Provides accent lighting around the kiosk roof.
- **Justification:** Enhances visibility and draws attention to the kiosk during events like Open House. It also **improves the overall user experience** by making the interface easier to read under varying lighting conditions.

6. HARDWARE COMPONENTS RESEARCH

Research Link

Ambient Light

- **Purpose:** Adds soft background lighting to **enhance the booth's atmosphere.**
- **Justification:** Creates a **warm, welcoming vibe** that makes the kiosk feel less clinical. It also improves visibility for users adjusting their pose or navigating the UI, especially in low-light areas of the ICT block.

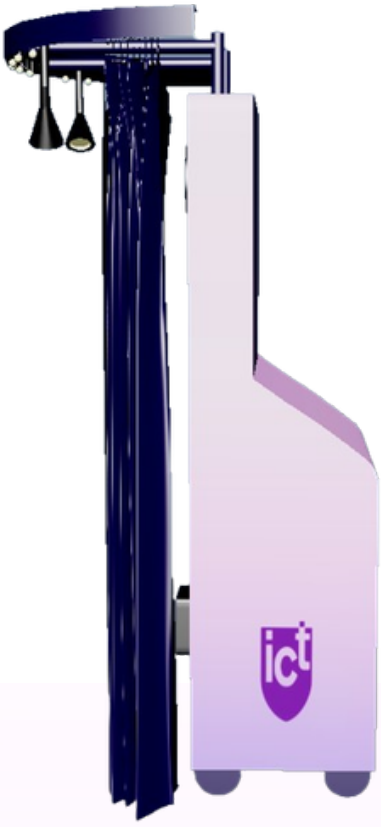
6. HARDWARE COMPONENTS RESEARCH

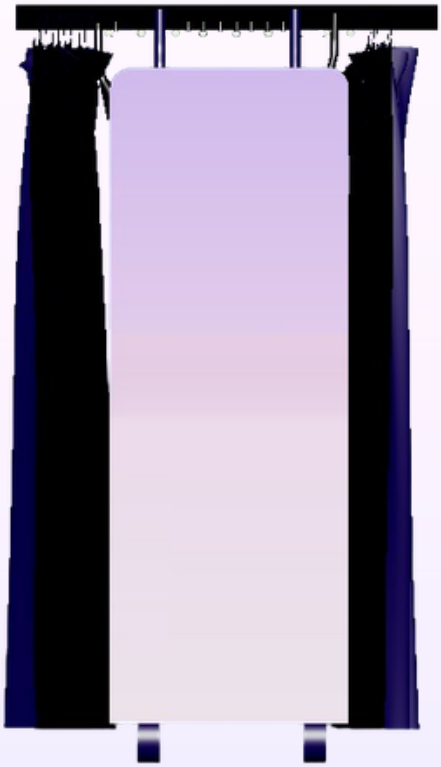
Research Link

Credit Card Reader

- **Purpose:** Facilitates **cashless payments** for physical photo prints using international cards, e-wallets, and local CEPAS cards (EZ-Link/NETS).
- **Justification:** Enables **fast, secure transactions** for users who prefer digital payment methods, especially during high-traffic events like Open House. **It supports accessibility for visitors** without school-linked accounts and ensures a smooth, low-pressure experience by removing the need for cash handling or manual input.

7. SUPPORTING VISUALS





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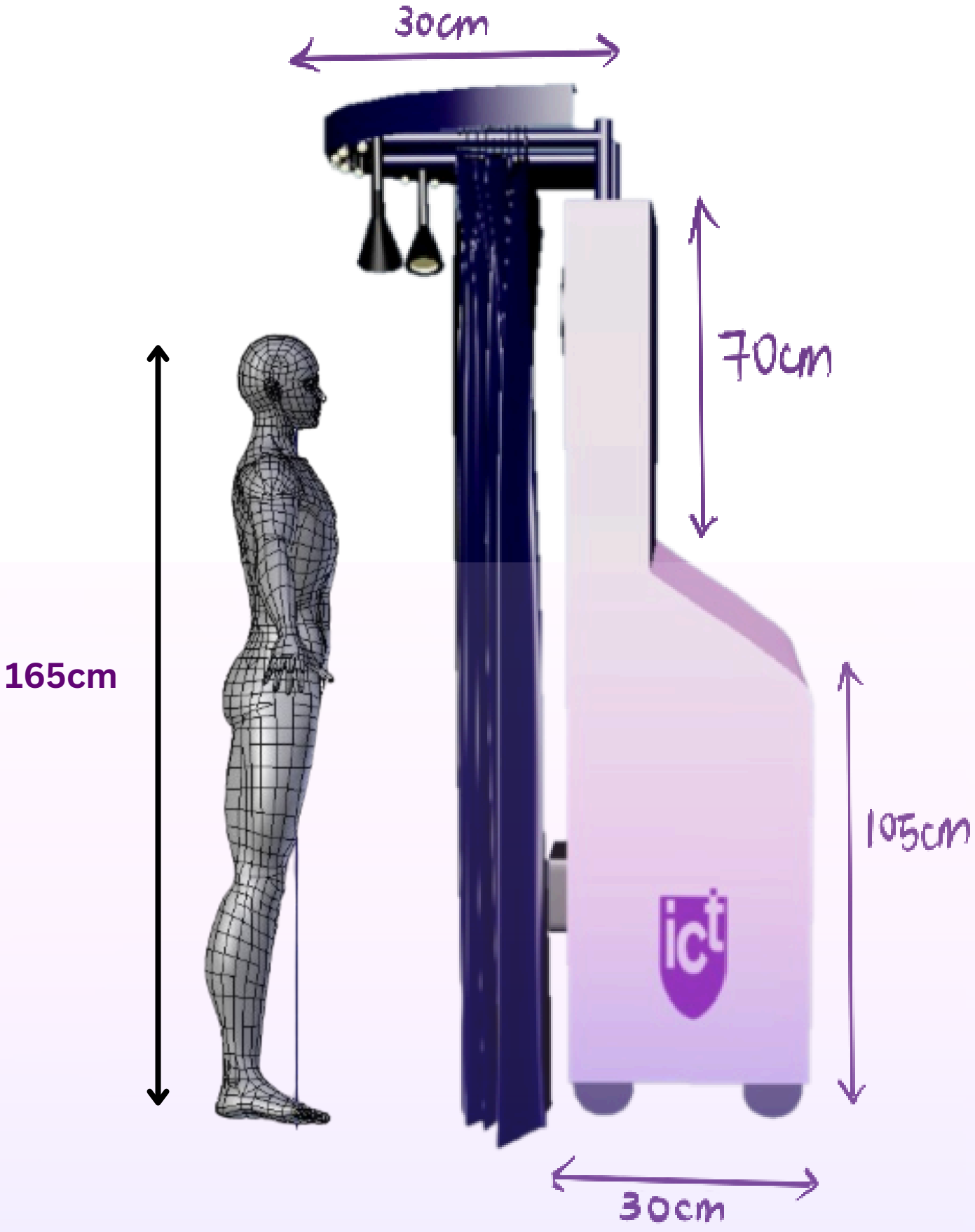

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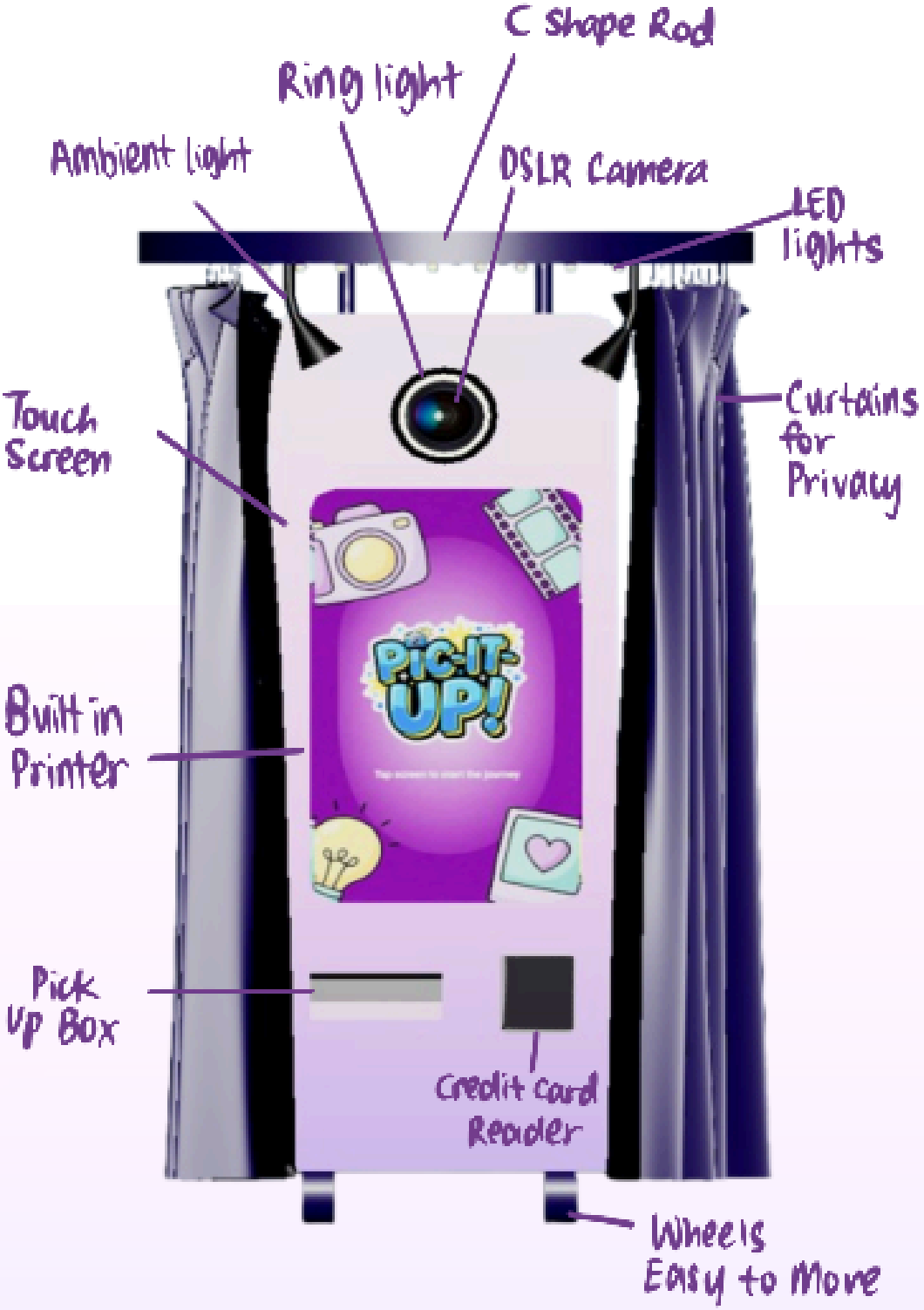
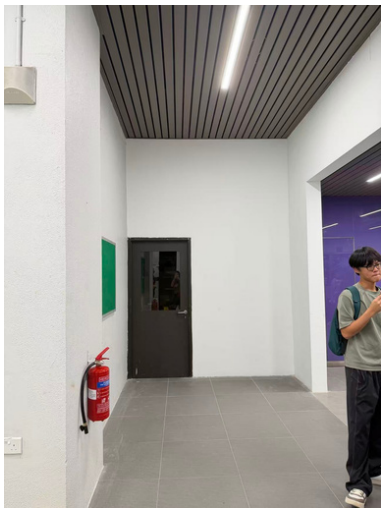
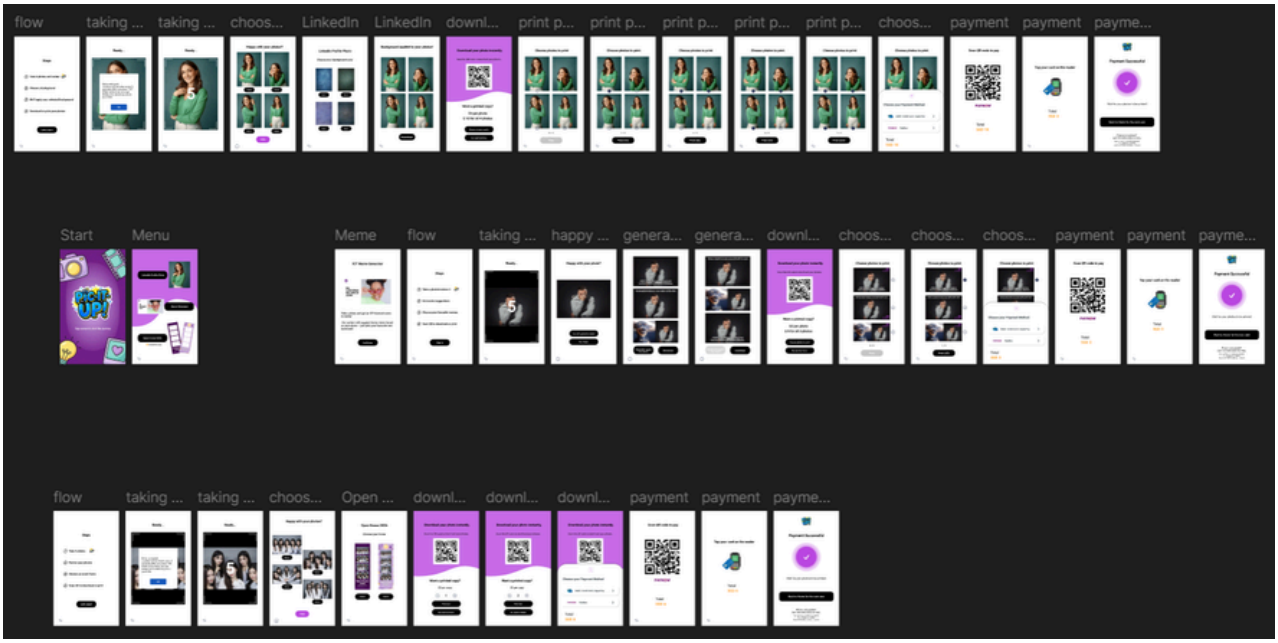


7. LOCATION OF KIOSK



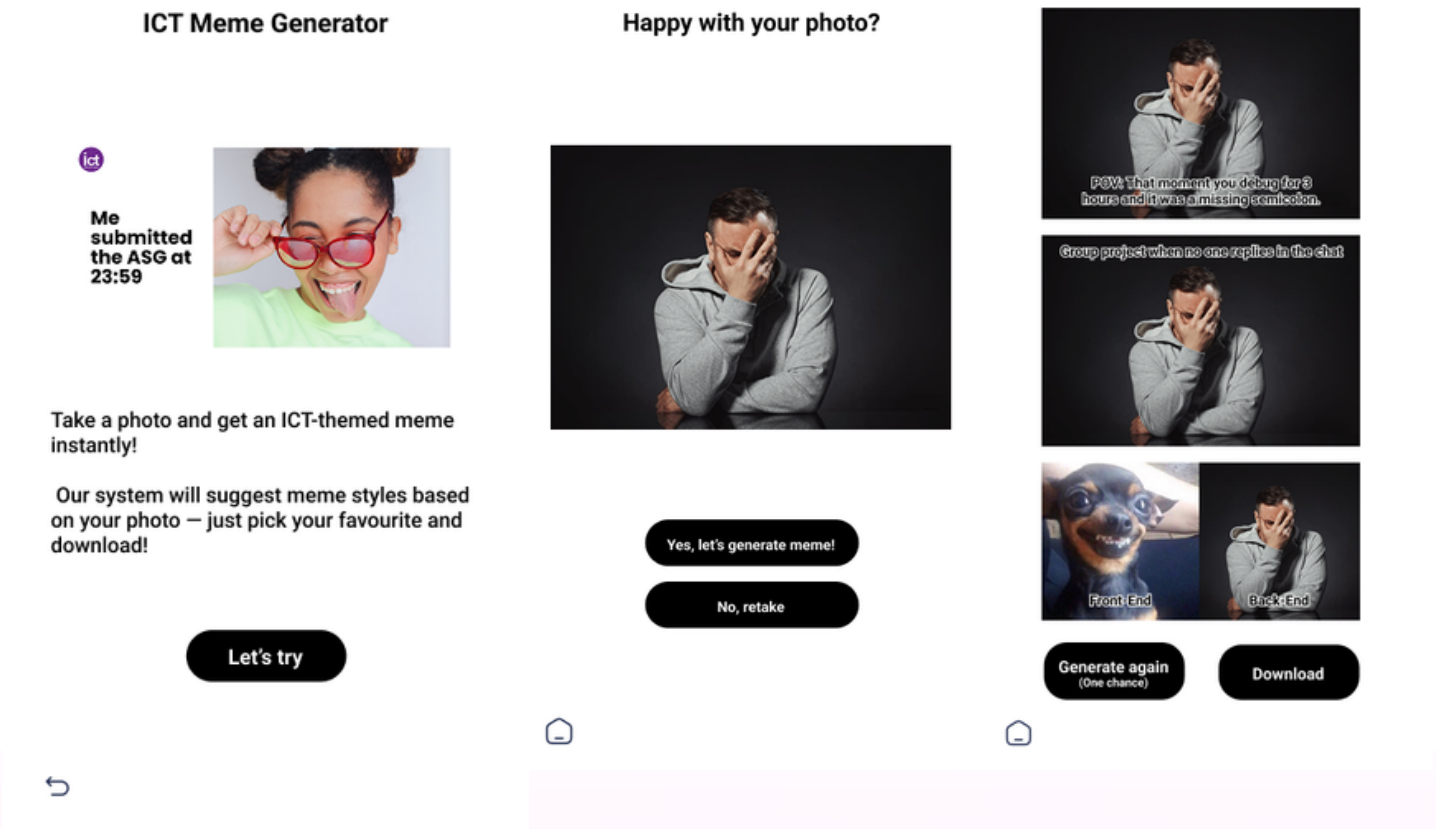
8. FIGMA PROTOTYPE



Link to figma:
https://www.figma.com/design/xk3p6xOjWlsKsiOyvxzigd/EXD?node-id=0-1&t=ogCMWzKrEzkY6TdW-1

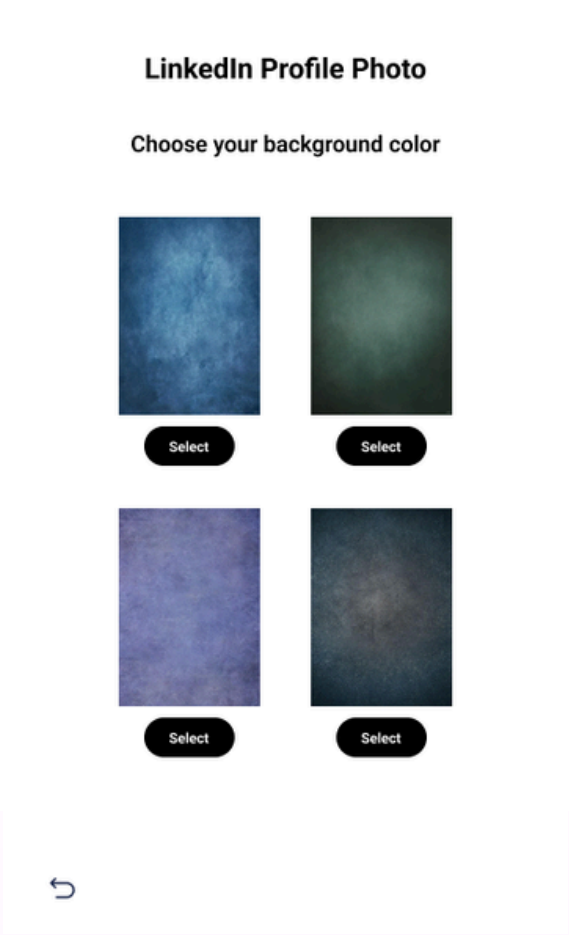
Link to prototype demo video:
https://youtube.com/shorts/Z46cbWwGitI?si=5ziti87JbTD05wyn

8. ICT MEME GENERATOR



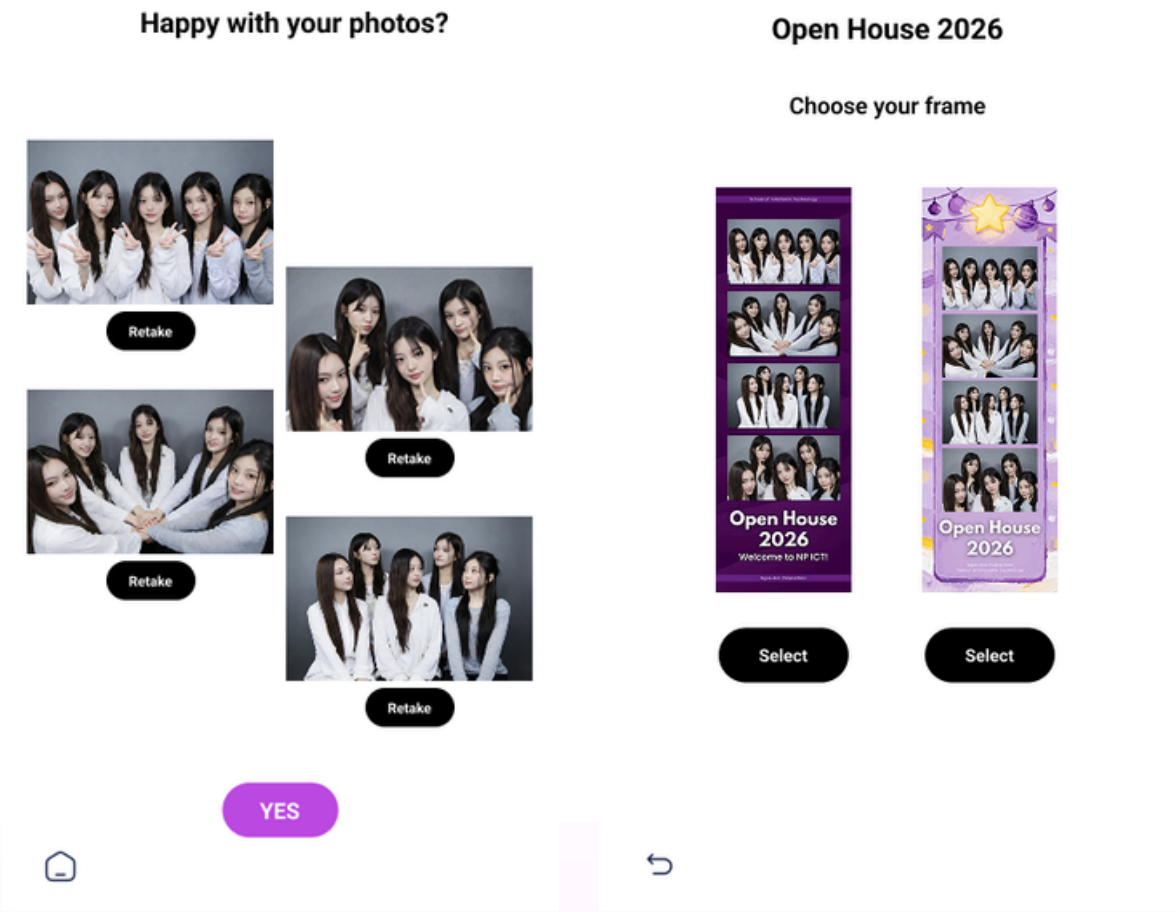
The ICT Meme Generator is a fun feature in the Pic It Up! kiosk that **turns selfies into ICT-themed memes.** After taking a photo, users preview it, choose from **relatable student-inspired captions, and download the final meme** via QR code. The flow, shown in the Figma slides, highlights a seamless, humorous experience that encourages self-expression, social sharing, and ICT identity.

8. LINKED IN PHOTO



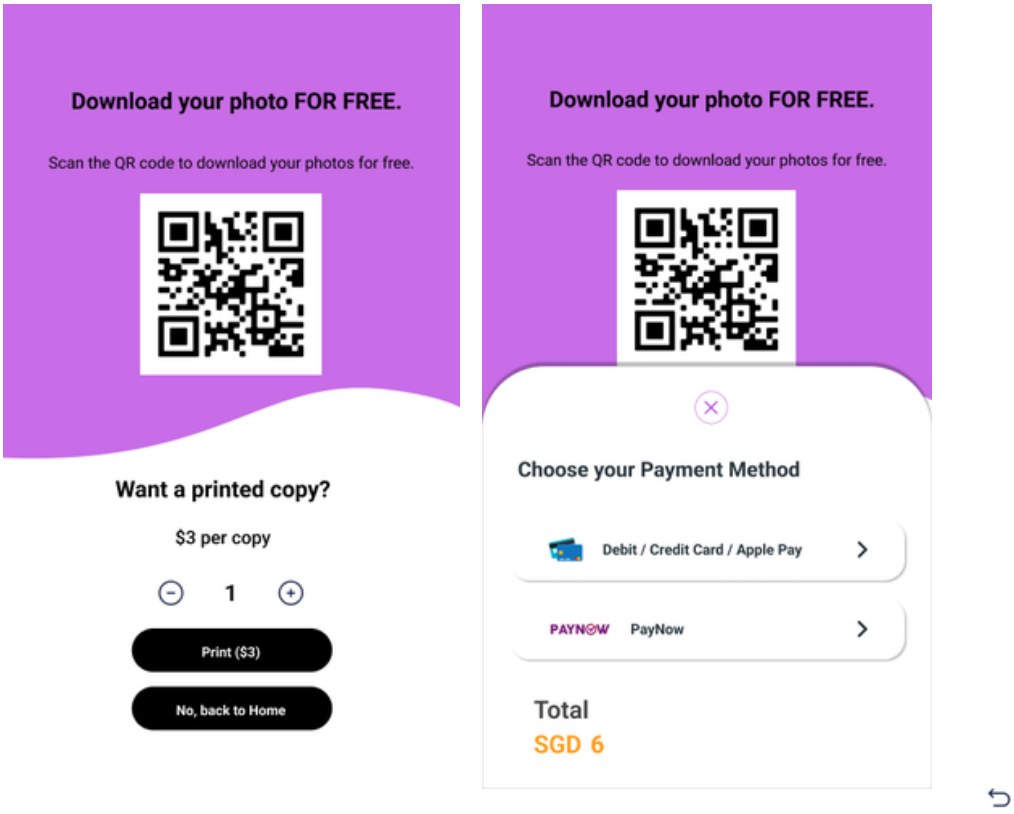
The LinkedIn Profile Photo feature helps users **take polished headshots with clean, diploma-appropriate backgrounds.** Users can choose from professional color background options through generative AI, preview their photos across different poses, and download with confidence. This feature supports quick, natural-looking headshots while reinforcing career readiness.

8. OPEN HOUSE PHOTOS



Designed for **campus events** like Open House 2026, this mode lets users **take group photos and add themed frames.** Users can review, retake, or delete photos before choosing event-branded frames, creating festive, shareable memories that promote social interaction and school spirit.

8. PAYMENT



The payment interface lets users either **download their photo for free via QR code** or **print it for a small fee.** With fast, secure payment options like PayNow, cards, and Credit Card, the flow stays intuitive and inclusive while supporting both digital-first and print users.

9. BUDGET BREAKDOWN

Item	Estimated Cost (SGD)	Rationale
Core Hardware	$ 4,500	Includes a high-performance PC, DSLR Camera (Nikon D750) for studio-quality images, and a high-resolution Touchscreen Display.
Kiosk Construction (Frame & Curtain Track)	$ 1,800	Custom-built frame designed for durability and portability (with wheels), including the C-Shaped Rod for the curtain track
Lighting & Privacy	$450	Includes a Nissin Ring Light for flattering portraits, Govee RGB LED strips, and heavy-duty Privacy Curtains
Software & Licensing	$ 500	Payment API integration and necessary OS licensing.
Branding & Aesthetics	$ 300	Custom high-quality Decals and Stickers featuring "Pic-It-Up!" and ICT branding for a professional finish.
Total	$ 7,550	Within Budget of $ 8,000

This budget reflects a **balance between functionality, user comfort, and event flexibility.** Each component was selected to support both casual and professional photo experiences, while staying within the school's funding constraints.

10. LINKS & REFERENCES

Pictures - Google
Persona - Visme
Empathy Map, User Journey - Canva
Inspiration, Sitemap - ChatGPT
Kiosk - Maya

IM01

THANK YOU FOR READING!

By Toh Rui Min & Geng Bai Hui

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