

Sprint Retrospective for Sprint 3



Vic Health - Virtual Reality

ITECH 7415 | MASTERS PROJECT
Federation University Australia

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Team Members

Name	Student ID	Role in the Project	Estimated Work Time
Tamim Hasan	30432576	Scrum Master 3D Modeler & Developer	200 Hours

Project Information

Project ID & Title	Business Process Automation
Project Client	<p>Client organisation – Federation University</p> <p>ABN - 51 818 692 256</p> <p>Address – University Drive, Mt Helen VIC 3350, PO Box 663, BALLARAT VIC 3353</p> <p>Website - federation.edu.au</p> <p>Contact details - carol.quinn@federation.edu.au</p> <p>Client engagement preferences (e.g. e-mail, face-to-face, on-line collaboration tool) and client confidentiality requirements. - Online</p> <p>Tools to be provided by the client should also be noted (e.g. access to in-house software) – Meta Quest 3</p>

User Stories in the Sprint Backlog

- As a young adult, I want to understand the harmful ingredients in vapes so that I can make informed decisions about vaping.
- As a member of the wellbeing team, I want the player to explore a VR experience that simulates the process of creating their own vape to raise awareness of the harmful, unregulated toxins present in vaping products that people unknowingly inhale.
- As a young adult, I want to see the physical changes vaping causes in my body so that I can understand its impact on my health.
- As a young adult, I want to visually explore the effects of vaping on my respiratory system so that I can see how vaping causes immediate and long-term damage.
- As a young adult, I want to understand how nicotine affects my heart and blood vessels so that I can be aware of the cardiovascular risks of vaping.
- As a young adult, I want to see how addiction affects my central nervous system so that I can understand the changes in mood, behaviour, and the potential for withdrawal symptoms.
- As a young adult, I want to understand the benefits of quitting vaping so that I can be motivated to seek help and improve my health.

Evidence of Work Done

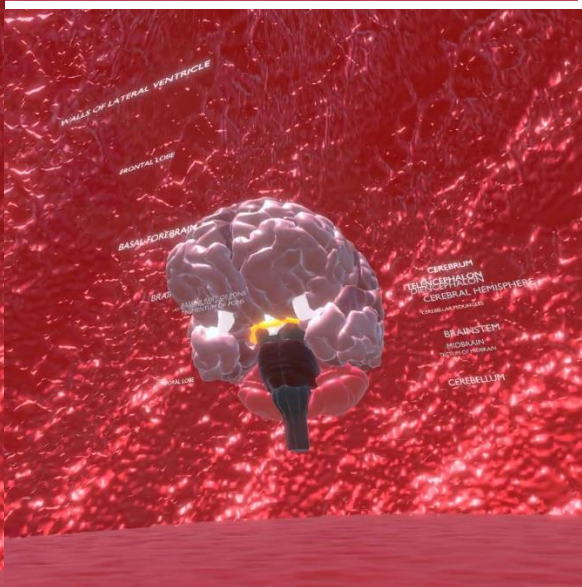
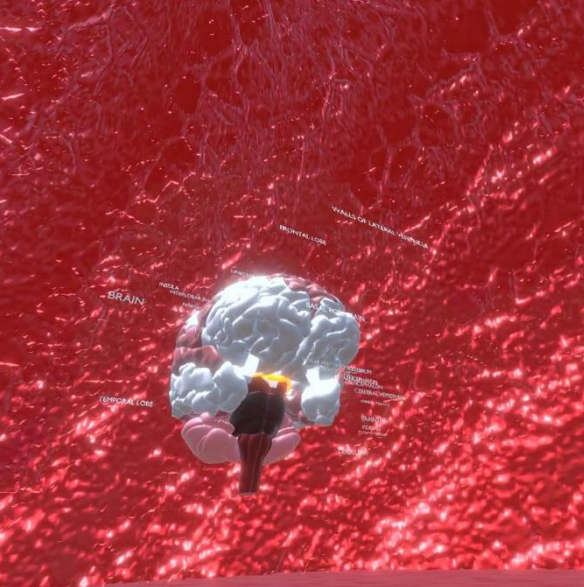
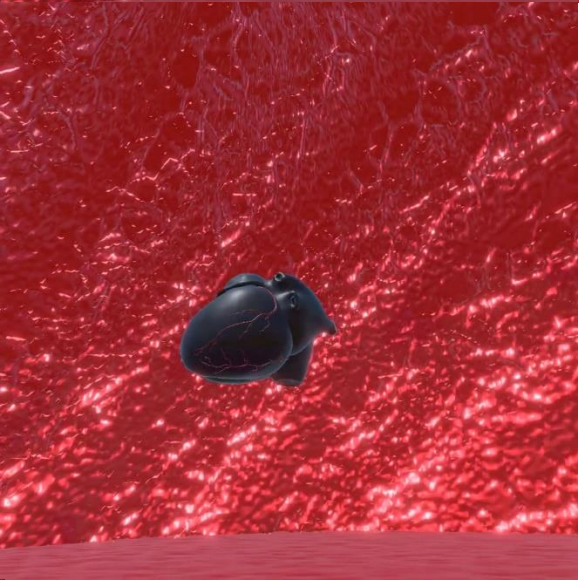
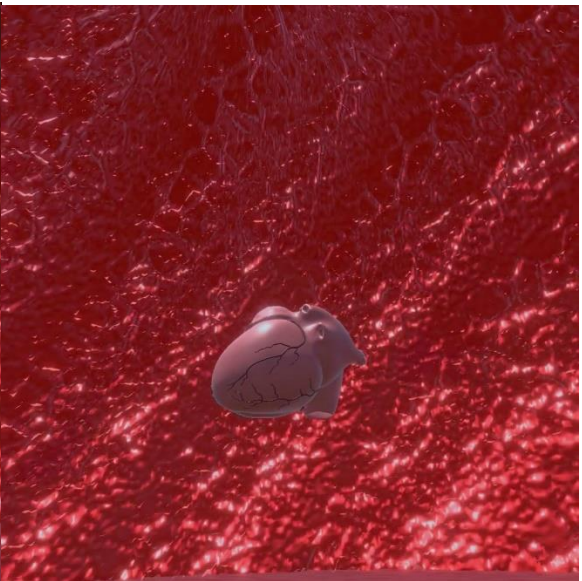
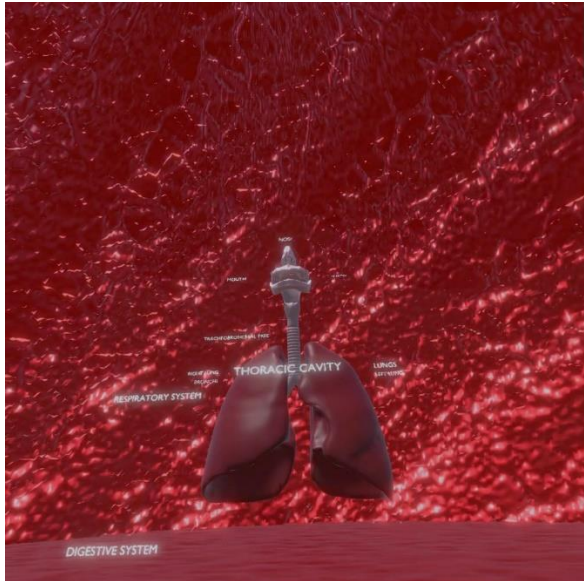
- **OneDrive:** [https://federationuniversity-my.sharepoint.com/:u:/r/personal/thasan_students_federation_edu_au/Documents/RRR1\(VicHealthAntiVapingVRProject-by%20Tamim%20Hasan\).zip?csf=1&web=1&e=5WGmMZ](https://federationuniversity-my.sharepoint.com/:u:/r/personal/thasan_students_federation_edu_au/Documents/RRR1(VicHealthAntiVapingVRProject-by%20Tamim%20Hasan).zip?csf=1&web=1&e=5WGmMZ)
- **YouTube:**

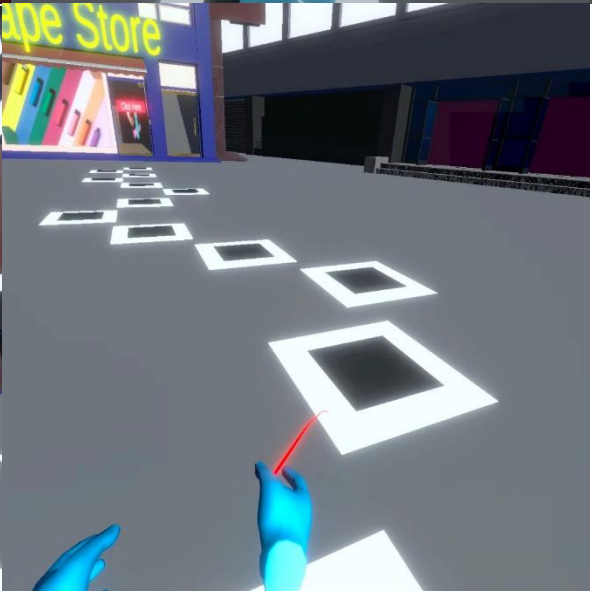
Promo: https://www.youtube.com/watch?v=mlp7_Q9nT24

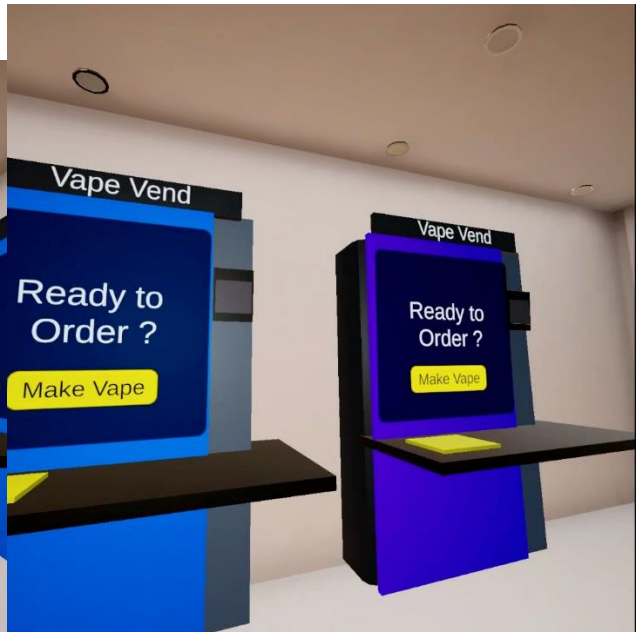
Demonstration: <https://www.youtube.com/watch?v=-jYi65Qn5Gc>

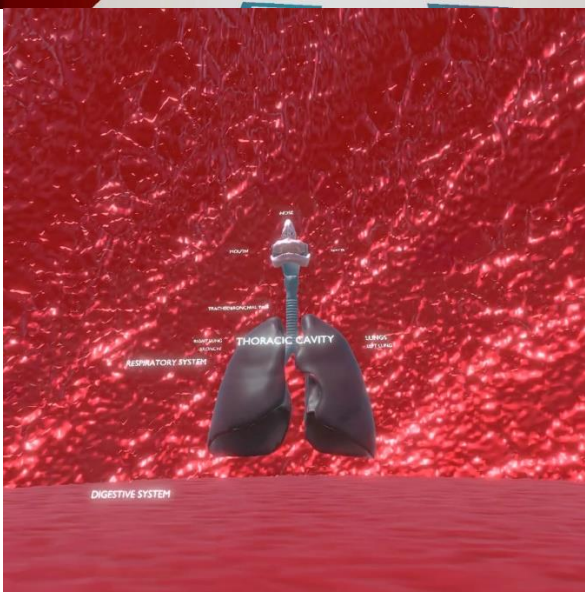
Images

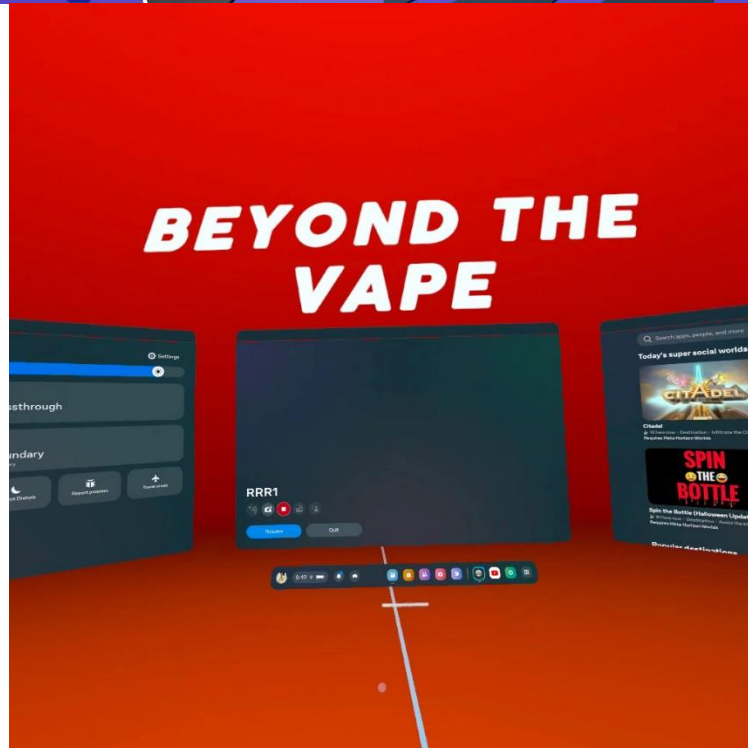












Client and Supervisor Feedback

The feedback I received from both my client and supervisor after presenting the completed app was highly positive and encouraging. The client was genuinely impressed with the level of detail and thoroughness in my work, noting that everything I had promised was delivered effectively. She especially appreciated the VR "Vape World" experience, the interactive vending machines, and the integration of background music and voice narration, which she felt significantly enhanced the application's immersive quality. One of her most gratifying comments was that I should feel proud of the work completed in such a short timeframe, especially since much of it was done single-handedly. She also highlighted her enjoyment of the promotional video, which added to the overall impact of the app presentation.

My supervisor, Mr. Evan Dekker, provided equally valuable feedback, expressing his appreciation for the thoughtful execution and creativity in the app. He specifically praised the walking experience within the vape store and the immersive scenes representing the lungs and brain, which he felt were particularly effective in conveying the health impacts of vaping. Mr. Dekker did, however, suggest a few adjustments to further improve the user experience. He recommended removing the up-and-down animation from the brain scene, as it could potentially cause motion sickness. Additionally, he suggested adjusting the proximity of the lungs in the corresponding scene, noting that they appeared too close to the viewer. Overall, both the client and supervisor were very pleased with the app's progress, which served as a motivating boost for the next stages of development.

Changes to be Carried Forward into the Next Sprint

In the future, if clients wish to expand this project for upcoming students, there are several areas to consider for the next phase. For a more immersive experience, additional scenes could be incorporated to enhance the storyline. For example, a scene could be incorporated at the end to show the impact of vaping on the user's body. This scene could transition to one where the user sees a vape, and a voice narration encourages them to throw it in the trash to experience how a beautiful life awaits them. Additionally, another scene could be added that focuses on meditation. Furthermore, improving graphics quality is another valuable area for development, especially as there are numerous high-quality assets available on the Meta app store that could replace the current free assets.

Animations are another key area that could be refined. Adding more animations, particularly smoother transitions and carefully designed movements, would help minimize any motion sickness experienced by users. Adjusting some of the existing animations will also enhance comfort and immersion, making the overall experience more enjoyable and user-friendly.

Calculation of Hours Worked (Sprint 3)

As the Scrum Master and Developer for my VR project, I dedicated intensive hours to complete all the remaining scenes and functionalities. This sprint required particularly focused effort since it involved finalizing seven main scenes, including environments like the Vape World and Vape Store, as well as unique scenes like a dome with textures that simulate the interior of the human body, highlighting vaping's effects on the lungs, brain, and heart. Additional work included creating an ending scene and designing a user-friendly menu screen. I started on October 16th and completed the work by October 28th, working an average of 15 hours per day to finish the software on time.

Throughout this sprint, I invested time in sourcing accurate human anatomy models from Z-Anatomy, modifying them in Blender, and creating animations in both Blender and Unity. I also finalized the functionality of interactive vending machines and thoroughly tested the app with FedUni students and staff members to ensure a smooth and engaging user experience. Below is a breakdown of my time allocation by task:

A. Scene Creation and Enhancement

- Developed seven immersive scenes, adding textures, animations, and environmental effects for each.
- Estimated Total: 75 hours.

B. 3D Model Modification and Animation

- Sourced and customized human anatomy models, creating animations to depict vaping's impact on the body.
- Estimated Total: 40 hours.

C. VR User Interface Design (Menu Screen)

- Designed and implemented a functional menu screen, facilitating easy navigation for users.
- Estimated Total: 15 hours.

D. Testing and User Feedback Implementation

- Conducted user testing with students and staff, incorporating feedback for improved functionality and usability.
- Estimated Total: 25 hours.

E. Troubleshooting and Final Adjustments

- Addressed final bugs and optimized performance for a seamless VR experience.
- Estimated Total: 20 hours.

Total Hours Worked: 195 hours (approx.)

Despite the challenges of completing the project solo, I remained committed to delivering a polished and impactful VR experience. This final sprint required relentless focus on scene development, model customization, and user testing to bring the VR project to completion.

Individual Component

What did I accomplish in the past sprint?

In Sprint 3,

- I finalized the VR project's core scenes, including immersive environments like the Vape World and Vape Store.
- I created a dome scene simulating the effects of vaping on organs, with textures representing the lungs, brain, and heart, and developed both an ending scene and a menu screen for easy navigation.
- I customized human anatomy models from Z-Anatomy in Blender, creating realistic animations to highlight the health impacts of vaping.
- Additionally, I refined the interactive vending machines and conducted user testing with FedUni students who lives in Res and staff, gathering feedback to improve usability.
- Despite technical challenges, I optimized animations and transitions, achieving a polished, high-performing VR-experience.

How did I apply stream-specific knowledge to my project?

In Sprint 3, I applied my stream-specific knowledge extensively to bring the VR project to completion. My background in computer science and programming was essential, especially when handling complex Unity animations and refining the user interface to enhance the immersive experience.

Additionally, my recent experience with Unity's VR tools allowed me to integrate animations, soundscapes, and realistic transitions between scenes smoothly.

Working independently, I relied heavily on my project management skills to structure my workload, prioritize tasks, and maintain momentum. To produce anatomically accurate models, I leveraged my growing expertise in Blender, modifying and animating complex 3D assets to depict the effects of vaping. This blend of technical knowledge and project management enabled me to deliver a polished, impactful experience that aligns with the project's educational goals.

What did I learn from the past sprint?

In Sprint 3, I learned the importance of balancing creativity with technical precision to deliver a fully immersive VR experience. Customizing 3D models and creating animations in Blender and Unity taught me valuable skills in optimizing assets for performance while maintaining visual quality. I also gained deeper insights into user-centered design through testing with students and staff, learning how crucial it is to iterate based on feedback. The technical challenges I faced, such as refining scene transitions and troubleshooting VR integration, strengthened my problem-solving abilities and deepened my understanding of Unity's capabilities. Overall, this sprint reinforced the significance of thorough planning, continuous learning, and adaptability in delivering a successful project.

What could have gone better in the sprint?

In Sprint 3, while I successfully completed the core tasks, there were areas where things could have gone better. Time management was a challenge, especially as I worked solo to finalize all scenes and features, which sometimes led to delays in testing and adjustments. While the user testing provided valuable feedback, having more time to refine the app based on this feedback would have improved the final product. Additionally, the complexity of some animations and scene transitions led to unforeseen technical issues that took more time to resolve than expected. More preparation and earlier testing could have helped mitigate these challenges, ensuring smoother execution in the final stages. Overall, while the sprint was successful, better time allocation for troubleshooting and refinement would have enhanced the experience even further.