# ITECH 7415 – MTECH PROJECT

# Assessment Task 1 - Project Storyboard

**Project Storyboard**

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| **PROJECT ID & TITLE: VIC Health – Virtual Reality**  *Release date and update author: 13/08/2024 Yash Raja, Tamim Hasan & Xinyu Zhang* | | | | | | | |
| **PROJECT CLIENT**:  **Client organisation** – Federation University  **ABN** - 51 818 692 256  **Address** – University Drive, Mt Helen VIC 3350, PO Box 663, BALLARAT VIC 3353  **Website** - federation.edu.au  **Contact details** - carol.quinn@federation.edu.au  **Client engagement preferences (e.g. e-mail, face-to-face, on-line collaboration tool) and client confidentiality requirements**. - Online  **Tools to be provided by the client should also** **be noted** (e.g. access to in-house software) – Meta Quest 3 | | | | | | | |
| **PROJECT OUTLINE**:  Vaping has increasingly become a health concern, particularly among young adults aged 18 to 25, as it is heavily marketed towards this demographic. To address this issue, our project aims to raise awareness about the dangers of vaping and educate young people on the physical changes it causes to the body.  We are developing an interactive VR experience designed to inform and engage this age group. This experience will be showcased during open days and, if successful, implemented at Ballarat Community Health. Through this immersive approach, we hope to minimize exposure to vaping by highlighting its harmful effects and promoting healthier choices. | | | | | | | |
| **PROJECT START DATE: 30/07/2024** | | | | | **PROJECT FINISH DATE: 08/11/2024** | | |
|  | | | | **PROJECT PRODUCT:**  ***Interactive VR Software Application****: This application delivers an immersive experience through interactive VR simulations, designed to engage users effectively.*  ***Educational Content Package****:*  *Includes comprehensive educational content aimed at teaching students effectively within the VR environment.*  ***Instruction Manual****: The application features an in-game instruction manual to assist users with no prior experience in operating VR devices. OR a physical written manual.*  **USER STORIES**:   * *As a young adult, I want to understand the harmful ingredients in vapes so that I can make informed decisions about vaping.* * *As a wellbeing team member, I want the player to explore a VR experience that simulates the process of creating their own vape to make them aware 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.* | | | |
| **PROJECT COMMUNICATION PLAN**:  *The client wishes to meet online from* ***1:00 PM*** *to* ***1:30 PM*** *on* ***Tuesdays.*** | | | | **PROJECT SCOPE**:***Inclusions:***  **Virtual Reality Experience Development:**  *Creation of a VR simulation that immerses users in the effects of vaping on various bodily systems.*   * *Choose ingredients to simulate the creation of a vape, emphasizing the presence of harmful substances.* * *Visually explore the respiratory system, highlighting the impact of vaping on airways and lung tissue.* * *Observe the cardiovascular effects, such as increased heart rate and blood vessel constriction.* * *Understand the central nervous system's response to nicotine addiction, including the brain's mood and behavior changes.* * *Option to compare healthy vs. damaged bodily tissues (e.g., normal vs. inflamed airways, normal vs. constricted blood vessels).*   **Educational Content Integration:**   * *Inclusion of short, informative narratives explaining the effects of each harmful ingredient in vapes.* * *Visual cues and explanations for each physiological impact observed during the simulations.* * *A final recap summarizing the physical changes caused by vaping, and the benefits of quitting*.   **Control Manual:**   * *In game or physical manual to help the players from non-gaming backgrounds understand controls for easier navigation and seamless VR experience*   ***Exclusions***   * *Medical advice* * *Treatment plan* * *Purchase of any assets* | | | |
| **COLLABORATION:**   * *The two members of the team,* ***Scrum Master*** *(SM)* ***Tamim Hasan*** *and* ***Xinyu Zhang****, live in the same vicinity with only a short distance between them. They can meet as needed.* ***Product Owner*** *(PO)* ***Yash Raja*** *lives farther away but can still come via public transport to meet.* * ***Jira*** *is the project management collaboration tool chosen for now. Communication is based on the* ***Microsoft Teams*** *shared channel, and for urgent communication, telecommunication is used. Bitbucket will be used to ensure that the team works on a unified version of software.* | | | |
| **SUCCESS/ACCEPTANCE CRITERIA:**   * *The user is required to pick the ingredients to move forward.* * *A visual representation shows the concoction with a brief explanation of each harmful substance.* * *The user receives a message emphasizing that these harmful substances are present in unregulated vape products.* * *The simulation should show the normal airway and contrast it with an inflamed airway.* * *The user can toggle between views of healthy and damaged lung tissue, seeing the effects such as lung inflammation, mucus production, and potential damage like bronchiolitis obliterans.* * *A summary at the end highlights the impact on the respiratory system.* * *The simulation provides a side-by-side comparison of a normal blood vessel and a constricted one.* * *The user can interact with the visual representation to see the difference in blood flow and potential health impacts.* * *The simulation highlights areas of the brain affected by addiction.* * *The user can select and apply different withdrawal symptoms (e.g., irritability, stress) to see how they affect mood and behavior.* * *The experience ends with a summary of how vaping affects the brain.* * *The final screen shows improvements in health, more money saved, and reduced stress in a healthier environment.* * *The user is given the option to talk to a clinician about quitting and is provided with a link to www.quit.org.au.* * *The experience concludes with a positive message encouraging the user to quit vaping.* | | | **PROJECT APPROACH**:  *The project approach will be based on agile methodology, with Jira used as the project management platform and Bitbucket used for managing the unified version of the app being created.*  *We understand that the requirements may be unclear at the start; therefore, an iterative approach has been adopted. In every weekly meeting, progress will be demonstrated, and feedback will be solicited from both the client and the supervisor. Based on the feedback provided, changes will be accommodated. Miss Carol will be treated not only as a client but also as a subject matter expert due to her medical profession and extensive knowledge about the potential harm of vaping. Product Owner Yash Raja will ensure that the product being built provides value, and tasks will be prioritized based on the highest value. Functionality will be prioritized over graphics. Scrum Master Tamim Hasan will ensure that scrum meetings are conducted efficiently and that any blockages are addressed.*  *The most experienced team member in game development, Xinyu Zhang, will provide technical support and guidance to the team. Supervisor Evan Dekker will be consulted for guidance whenever the team encounters technical challenges.* | | | | |
| **Constraints/Assumptions/Risks/Dependencies**  **Constraints**:   * ***Limited VR Expertise****: The project team consists of three members with little to no prior experience in working with VR technology, which may impact the learning curve and development speed.* * ***Limited VR Headset Availability****: The team has access to only one VR headset, which needs to be returned by August 25th. This limitation may affect the team's ability to simultaneously test and develop the VR application.* * ***Time Constraints****: The first version of the VR product must be delivered by August 25th for deployment on eight VR headsets. This tight deadline requires efficient project management and timely execution of tasks.* * ***Cost Limitations****: The project has a restricted budget, which may limit the ability to acquire additional resources or tools necessary for development.* * ***Health-Related Absence****: One team member, Tamim, will undergo knee surgery and will be on bed rest for three weeks, potentially impacting the availability of team resources and productivity during that period.* * ***Hardware Limitations****: The team members' laptops have technical constraints:* * *Tamim’s laptop lacks an integrated graphics card, which may affect VR development and testing capabilities.* * *Yash’s laptop is restricted to 8 GB of RAM, which could limit its performance for resource-intensive tasks associated with VR development.* * *These constraints will need to be managed carefully to ensure the project's successful completion within the specified* timeframe and under the given limitations.   **Assumptions**   * ***Operational VR Headsets****: The VR headset provided for the project will remain operational and available for use until the 25th of August 2024, ensuring that the development and testing phases for Phase 1 can proceed without equipment issues.* * ***Fixed Open Day Date****: The open day event is scheduled for the 25th of August 2024 and will not be rescheduled to another date. This ensures that all project deliverables and milestones are aligned with this fixed event date.* * ***Knowledge and Time Availability****: The project team will acquire sufficient knowledge and allocate adequate time to develop and complete the VR software within the project timeline. This includes understanding VR development tools, creating the necessary content, and performing rigorous testing.* * ***Clear Understanding of the Task****: The project team has a comprehensive understanding of the project requirements and objectives. This includes familiarity with the VR experience goals, stakeholder expectations, and technical requirements needed to successfully develop and implement the VR simulations.*   **Risk**   * ***Technical Issues with VR Equipment:*** *Compatibility issues or malfunctions with Meta Quest 3 headsets could delay development.* * ***Software Development Delays****: Delays in developing the VR simulations due to unforeseen technical challenges or team constraints.* * ***Client Availability****: Limited availability of key stakeholders for feedback or decision-making could impact project timelines.* * ***Limited access of hardware:*** *Only 1 VR available among 3 people working in different locations which can limit the productivity and add delays.* * ***Scope Creep:*** *Changes or additions to project scope could lead to delays and increased workload.* * ***Integration Issues****: Difficulties integrating VR software with the Meta Quest 3 headset or other required platforms.* * ***Budget Constraints****: Unexpected costs may arise, impacting the project budget.* * ***Team Coordination****: Coordination challenges among team members due to distances or varying schedules.* * ***Content Quality****: The quality of VR content may not meet the required standards or expectations.* * ***User Acceptance****: Target users may not engage with or find value in the VR experience.*   **Dependencies**   * **Hardware Dependencies**: * ***Meta Quest 3 VR Headsets****: Essential for testing and deploying the VR simulations. Availability and functionality must be ensured for both development and end-user interactions.* * ***Development Workstations****: Computers with sufficient processing power and VR capabilities to run Unity and other development tools.* * **Software Dependencies**: * ***Unity****: The primary development platform for creating and implementing the VR simulations. Ensure compatibility with Meta Quest 3 and other integrated tools.* * ***VR Development Tools and SDKs****: Necessary for creating and integrating VR content into Unity. Includes Meta Quest SDK and any other tools required for VR development*. * **Human Resources**: * ***Development Team****: Team members must be proficient in Unity and VR development.* * ***Client Engagement****: Ongoing input and feedback from stakeholders, including the wellbeing team, to ensure the project meets the intended health promotion goals.* * **Project Management Tools**: * ***Jira****: Used for tracking project tasks, issues, and progress. Essential for coordinating efforts and ensuring timely completion of deliverables.* * ***Microsoft Teams****: For communication and collaboration among team members and with the client.* * **Client and Sponsor Support**: * ***Timely Feedback****: Regular input from the client and supervisor to guide the development process and make necessary adjustments.* * ***Resource Availability****: Access to client resources, including VR headsets and any other tools or environments required for testing.* * **Testing and Deployment**: * ***Testing Facilities****: Access to environments where the VR simulations can be tested thoroughly.* * ***Deployment Infrastructure****: Infrastructure for deploying the VR simulations to Meta Quest 3 headsets and ensuring they are available for end-users*. | | | | | | | |
| **Approval Signatures** | | | | | | |
| **Student Name** | **Student Number** | **Role/Justification of role in line with personal skills** | | | | **Signature** |
| Yash Raja | 30416705 | **Product owner & developer** / My experience in management, graphic design, and sales enables us to collaborate effectively as a team. I am committed to ensuring that at the end of each project, everyone involved feels like a winner and is satisfied with the outcome. My goal is to ensure that all team members achieve their objectives to the fullest extent possible, resulting in a successful and fulfilling experience for everyone. | | | |  |
| Tamim Hasan | 30432576 | **Scrum Master & Developer** / My background in Computer Science Engineering provides the technical and project management skills needed to effectively lead the development process and ensure successful project outcomes. | | | | **A close up of a writing** |
| Xinyu Zhang | 30385231 | **3D Modeler & UI Developer** / My experience in 3D model development and game development helps me provide the technical skills needed for projects to be successful and contribute to the team. | | | |  |
| **Client Name** | | | | | | **Signature** |
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**MARKING GUIDE**

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| **Criteria** | **Marking Scale** ***Poor Excellent*** *0……….. max* |
| * Objectives/justification for project (1 Mark)      * Product(s) and User Stories (1 Mark) * Success criteria for the project (0.5 Marks) * Project scope (0.75 Mark) * Communication/Collaboration plan (0.75 Mark) * Constraints/Assumptions/Risks/Dependencies (1 Mark) |  |
| **Total Mark**  **[5 marks]** |  |
| **Total Worth [5%]** |  |