TouriaVR:
"Connecting Worlds Through Interactive Tourism"

Hiram Miranda-Pomales, Gabriel A. Pedraza-Mendoza2
hmiranda22@email.uagm.edu, gpedraza7@email.uagm.edu
Mentor: Prof. Alcides Alvear

ABSTRACT

TouriaVR is an innovative virtual reality (VR) tourism application that addresses the limitations of traditional travel by offering immersive and accessible experiences. This project leverages VR technology, with a strong foundation in Unreal Engine, to provide users with the opportunity to explore diverse destinations, all from the comfort of their VR headsets. By capturing high-quality 360-degree content and offering interactive features, TouriaVR empowers users to embark on virtual journeys enriched with historical and cultural insights. Drawing insights from recent research, TouriaVR aims to revolutionize the tourism industry, offering a cost-effective and engaging solution for users seeking to overcome barriers.

METHODOLOGY

Figure 1: Structural Diagram

Figure 2: Use Case Diagram

Figure 3: Spectator Interface Sketch

RESULTS

Project Design

o Engaging startup sequence with captivating logo

o User-friendly main menu for easy navigation and tour selection

o Various customizable tour options for different destinations

o Voice-over guide for historical and cultural information

o Spectating feature for exploration

o Utilizes Unreal Engine 5 for immersive 360-degree videos, precise interaction, audio management, and real-time rendering

o Intuitive menu structure with language selection, subtitles, and mute options

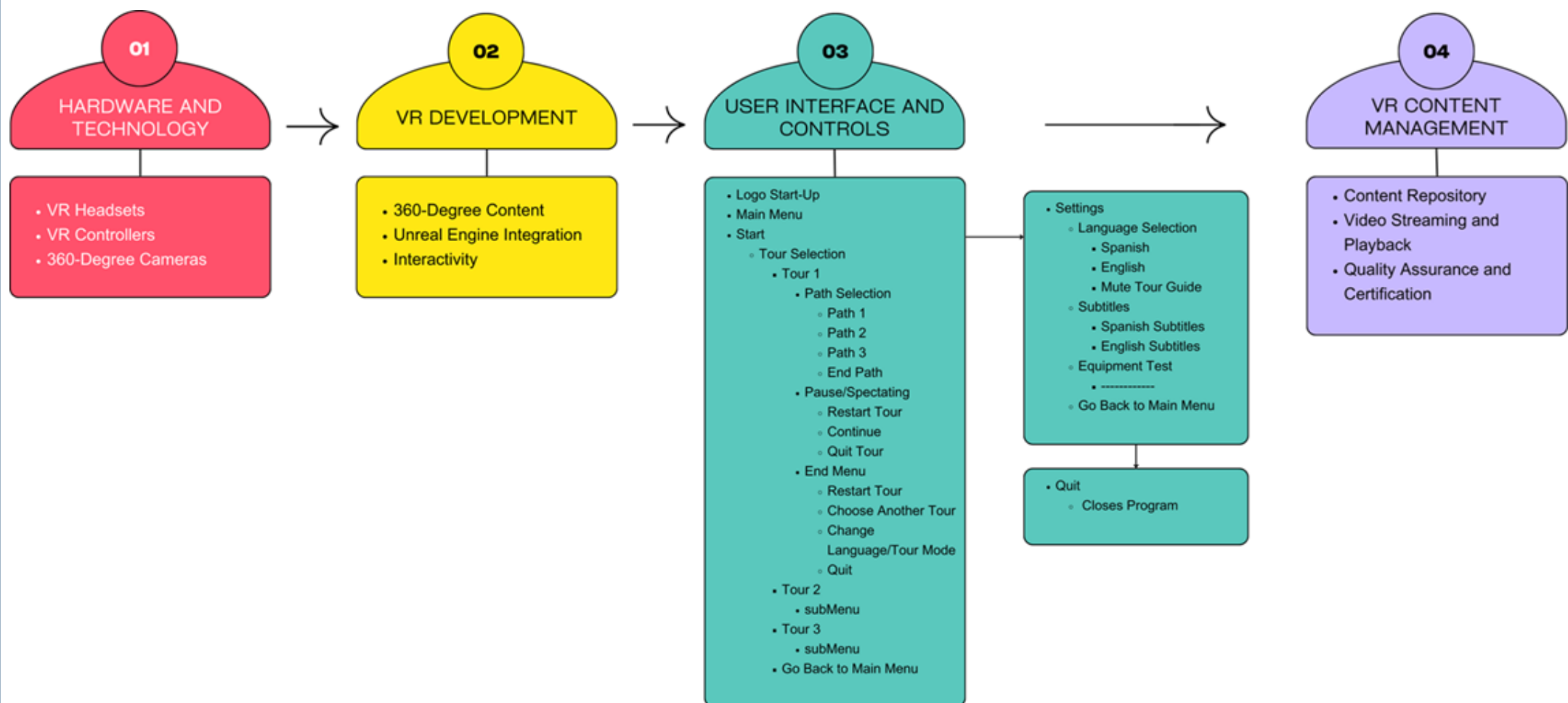Figure 4: Project Hardware

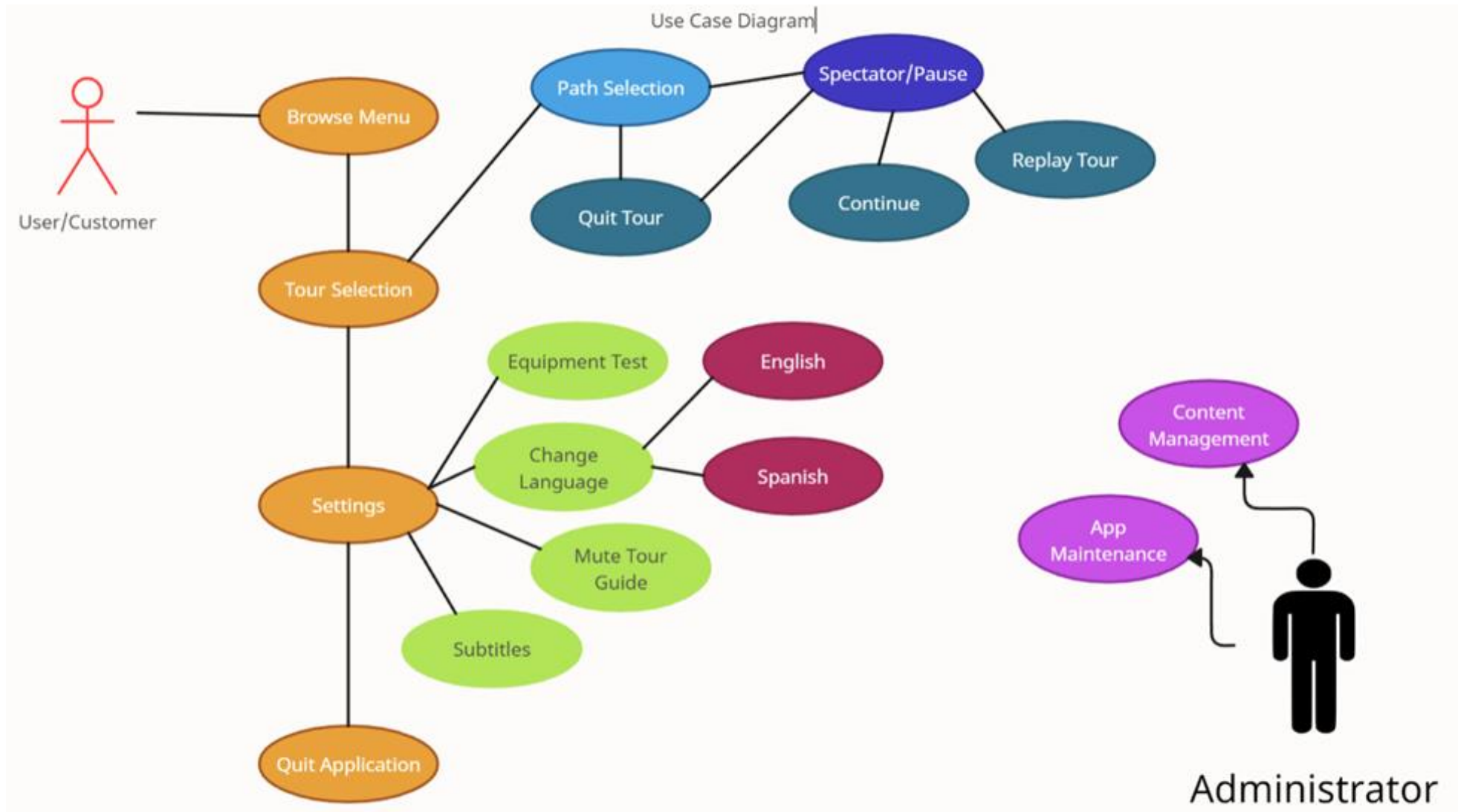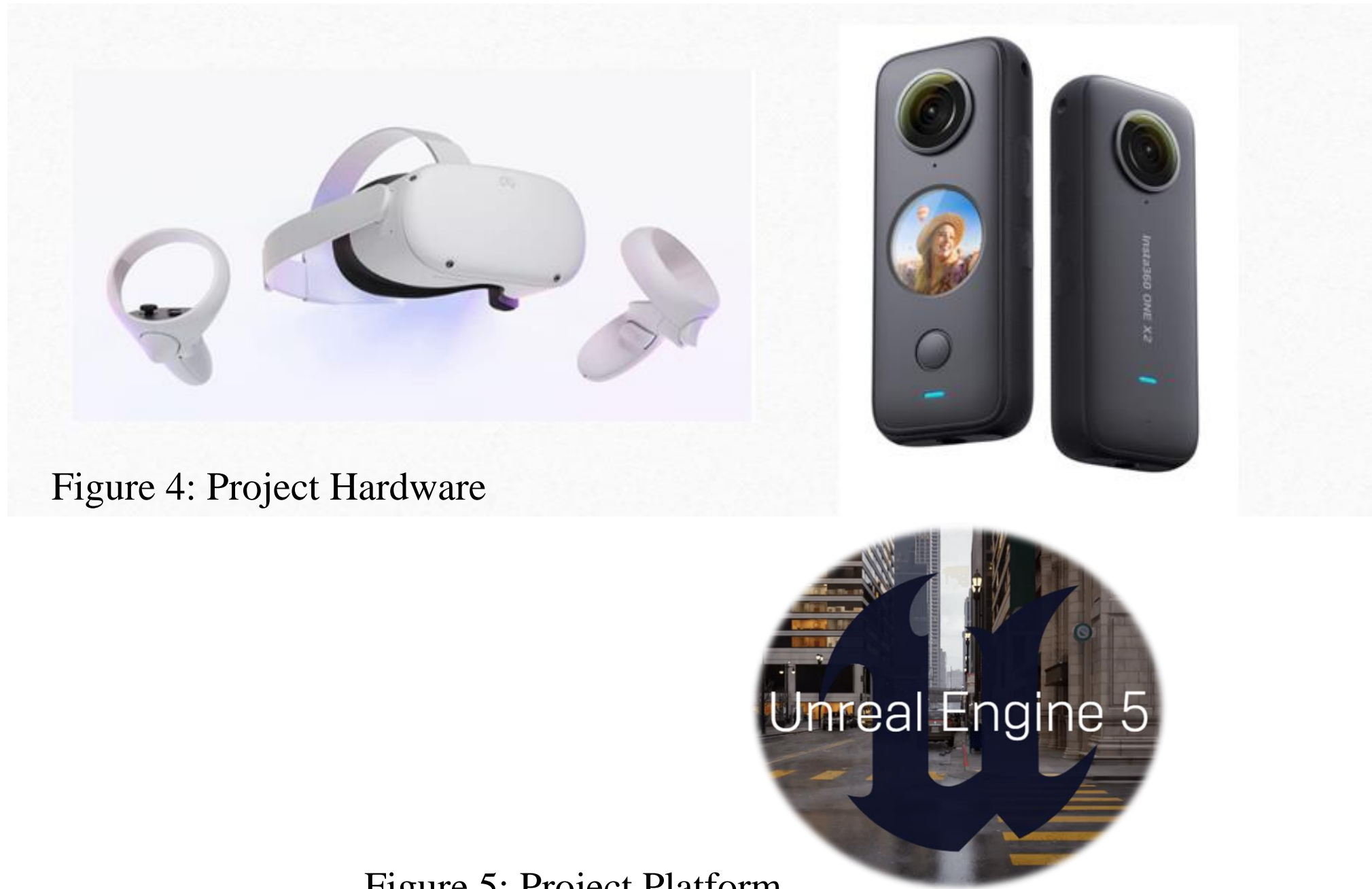Figure 5: Project Platform

FUTURE WORK

Project Development:

o Tour Application Finalization
o Seamless VR Integration
o Innovative VR Content Creation
o Multilingual Support Integration
o Ongoing User Feedback Loop

REFERENCES

❖ [1] M. Rauscher, A. Humpe, and L. Brehm, "Virtual reality in tourism: Is it 'real' enough?," Academica Turistica, vol. 13, no. 2, pp. 127–138, 2020. doi:10.26493/2335-4194.13.127-138

❖ [2] F. Rejón-Guardia, M. A. García-Sastre, F. Orfila-Sintes, and J. B. Garau-Vadell, "Virtual reality in tourism: Centennials acceptance," Tourism Analysis, vol. 25, no. 2, pp. 335–344, 2020. doi:10.3727/108354220x15758301241837

❖ [3] Epic Games, "Unreal engine 5.1 documentation," Unreal Engine 5.3 Documentation, https://docs.unrealengine.com/5.1/en-US/ (accessed Oct. 29, 2023).

❖ [4] X. Wu and I. K. Lai, "The use of 360-degree virtual tours to promote mountain walking tourism: Stimulus–organism–response model," Information Technology & Tourism, vol. 24, no. 1, pp. 85–107, 2021. doi:10.1007/s40558-021-00218-1

❖ [5] W. Lee and Y. H. Kim, "Does VR tourism enhance users' experience?," Sustainability, vol. 13, no. 2, p. 806, 2021. doi:10.3390/su13020806