SOFTWARE PROJECT MANAGEMENT

DEPARTMENT: UBIT

DEPARTMENT NAME: COMPUTER SCIENCE

COURSE CODE: CS-458

COURSE INSTRUCTOR: Miss Maryam Feroze

Group Members

Name	Seat Number
Syed Minhal Raza Kazmi	B23110006161
Fahad	B23110006025
Mughees Azhar	B23110006074
Muhammad Raffay Shaikh	B23110006112
Muhammad Ahmer Siddiqui	B23110006084
Muhammad Yahya Saleem	B23110006121

Project Plan

Project Title:

Video Game – Open-World Zombie Survival

Project Objective:

To develop a AAA-quality, open-world zombie survival game using Unreal Engine 5.6, featuring immersive survival mechanics, intelligent zombie AI, and a visually rich explorable town. The project aims to showcase advanced programming, 3D modeling, VFX, and sound design skills for academic and portfolio purposes.

1. Project Scope Statement

In Scope:
- Core survival mechanics (health, hunger, stamina)
- Basic and advanced zombie AI (navigation, sensing, combat)
- A small explorable town with enterable buildings
- Crafting, combat, and inventory systems
- AAA-grade visuals using Nanite, Lumen
- Audio effects including environmental, combat, and UI

Out of Scope (for now):
- Multiplayer support
- Large open-world expansion beyond prototype town

2. Deliverables

• Game Design Document (GDD)
• Core Mechanics Implementation (Prototype)
• Explorable Town
• AI Behavior System
• VFX and SFX Integration
• Playable Alpha Build
• Testing Report
• Deployment Build for Showcase

3. Work Breakdown Structure (WBS) (Simplified)

1.0 Project Initiation
1.1 Define project goals

1.2 Identify team roles

2.0 Design & Planning
2.1 Create environment layout
2.2 Visual concept and asset planning

3.0 Development
3.1 Core mechanics (health, stamina, hunger)
3.2 Basic zombie AI
3.3 Combat and crafting system
3.4 Town environment modeling

4.0 Visual & Audio Design
4.1 3D asset creation
4.2 VFX creation
4.3 Sound effect integration

5.0 Testing
5.1 Internal playtesting
5.2 Performance optimization

6.0 Alpha Build
6.1 Town and combat polishing
6.2 AI upgrade and integration
6.3 Closed alpha release

7.0 Project Closure
7.1 Prepare documentation
7.2 Showcase presentation

4. Project Schedule Snapshot

Phase	Start Date	End Date	Duration
Planning & Setup	Jul 24	Aug 3	11 days
Core System Development	Aug 4	Aug 31	28 days
AI & Combat Systems	Sep 1	Sep 12	12 days
World Building	Sep 13	Sep 23	11 days
Visuals & Sound	Sep 24	Oct 4	11 days
Testing & Optimization	Oct 5	Oct 18	14 days
Final Polish & Submission	Oct 19	Oct 28	10 days

5. Milestones

Milestone	Target Date
Project Kickoff	Jul 24
Core Systems Completed	Aug 31
Major 3D Models Ready	Sep 10
Combat & AI Integrated	Sep 12
World Map Assembled	Sep 23
Visuals & Sounds Implemented	Oct 4
Playtesting & Optimization Done	Oct 18
Final Build & Submission	Oct 28

6. Risks and Mitigation

Risk	Likelihood	Impact	Mitigation
Scope creep	High	High	Focus on one vertical slice only
AI performance issues	Medium	High	Modular AI system + Unreal profiling tools
Burnout due to workload	Medium	Medium	Balanced task distribution + sprint cycles

7. Project Team

Name	Role
Syed Minhal Raza	Project Manager/Lead Developer
Muhammad Raffay Sheikh	Developer
Mughees Azhar	3D Modeler
Ahmer Siddiqui	Visual Effects Specialist
Yahya Saleem	Visual Effects Specialist
Fahad	Sound Effects Designer

8. Budget (Not Applicable / None)

9. Communication Plan

- Weekly sprint meetings via Google Meet
- Discord – For team collaboration, real-time discussion, and daily check-ins.
- Trello for task tracking

• GitHub for source code collaboration
• Shared Google Drive for design docs, builds, and reports

10. Approval Requirements

• Prototype approval by: October 28, 2025

(No Alpha build required – project ends at prototype stage)

11. Success Criteria

• Functional full AI, combat, and survival systems
• Game runs at acceptable frame rate across tested machines
• Positive feedback from internal testers