FIT5057 Project Management Assignment Two – Team Assignment

Tempest

September 2024

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Team number: S03
Applied class: Saturday 11 am

Contents

1: Project Integration Management

Project Title: Tempest

Project Start Date: 1/1/25 **Projected Finish Date:** 18/11/25

Budget Information:
$1.125M

Project Manager: Adrian Leong Tat Wei
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Project Objectives:
Create a novel and engaging 3rd person fantasy action arena game, being the first of its genre and drawing a large and loyal player base to spread NexaForge as a game developer of choice.

Main Project Success Criteria:
To break 1 million monthly active users and a 1:10 daily active user:monthly active user ratio by the end of the 3 year time frame.

Project development approach:
Waterfall/Predictive

Roles and Responsibilities

Role in the project	Name	Position in the organisation/contract	Contact Information
Program Director	John Kennedy	Program Director	john@projectconsultant.com
Project Manager	Adrian Leong	Project Manager	adrian@projectconsultants.com
Technical Lead	Charles Anderson	Lead Engineer	charles@projectconsultants.com
Platform Engineer	Elizabeth Edwin	Platform Engineer	elizabeth@projectconsultants.com
Developer	Chad Miller	Senior Developer	chad@projectconsultants.com
Developer	Mary Brown	Senior Developer	mary@projectconsultants.com
Developer	Bob Smith	Developer	bob@projectconsultants.com
Developer	Sarah Wilson	Developer	sarah@projectconsultants.com
Developer	Robert Williams	Developer	robert@projectconsultants.com
Developer	Jennifer Davis	Developer	jennifer@projectconsultants.com
Test Analyst	Alice Johnson	Senior Test Analyst	alice@projectconsultants.com
Test Analyst	Michael Jones	Senior Test Analyst	michael@projectconsultants.com

Sign-off: John, Adrian, Charles, Elizabeth, Chad, Mary, Bob, Sarah, Robert, Jennifer, Alice, Michael

2: Project Scope Management

2.1 Requirements Traceability Matrix (RTM)

REQUIREMENTS TRACEABILITY MATRIX					
Project Name:	Tempest				
Project Manager Name:	Adrian Leong Tat Wei				
Project Description:	Create a novel and engaging 3rd person fantasy action arena game.				
ID	***Requirements (Functional or Non-Functional)***	***Assumption(s) and/or Customer Need(s)***	***Category***	***Source***	**Status**
R01	Character skills function correctly	The game must be bug-free	Functional	Project Manager	Not Started
R02	Character movement and movement skills interact properly with terrain and other skills	The game must be bug free	Functional	Project Manager	Not Started
R03	At least 10 distinct playable characters	Players will enjoy having more characters to choose from	Quality	Business Objective: Engaging games	Not Started
R04	Game runs on mid-tier computers and internet connectivity	Not all players will have good computers	Performance	Project Manager	Not Started
R05	Game is not easily hacked/difficult to cheat in	Some players will try to cheat, ruining the experience for others	Service	Project Manager	Not Started
R06	Matchmaking makes balanced matches without too long a queue time	Everyone deserves a fair match regardless of skill level	Quality	Project Manager	Not Started
R07	No game-crashing bugs or game-breaking exploits	The game must be bug free	Functional	Project Manager	Not Started
R08	Gameplay is visually and audibly satisfying	Good graphics and audio enhance the gaming experience	Performance	Project Manager	Not Started

R09	The game has a tutorial system that allows players to easily pick up the game	Players need to know how to play the game before they can enjoy it	Training	Project Manager	Not Started
R10	Gameplay should feel fluid and smooth	Fluid and smooth gameplay is most enjoyable	Performance	Business Objective: Engaging games	Not Started
R11	Gameplay should facilitate player teamwork	Teamwork encourages socialising and thus improves player retention and player attraction	Quality	Business Objective: Engaging games, player retention	Not Started
R12	Game should have visually pleasing superior cosmetics to sell	Better cosmetics to sell directly correlates with more sales	Performance	Business Objective: Sales	Not Started
R13	In-game power-ups/items that players can buy throughout a match with in-game currency	Variance between matches is desirable for a multiplayer replayable PvP game	Functional	Business Objective: Engaging games	Not Started
R14	Diverse array of status ailments and enhancements for players to use with character skills/items	Different players will appreciate there being multiple ways to play the game	Quality	Business Objective: Engaging games	Not Started
R15	User interface and controls should be intuitive and easy to learn	Ease of learning the game means less barrier to enjoying the game	Quality	Project Manager	Not Started
R16	Game servers can handle the playerbase	Playerbase might be large	Service	Project Manager	Not Started
R17	Game characters are balanced in performance for all characters to be competitively viable	Different people enjoy different characters	Quality	Business Objective: Engaging games	Not Started

2.2 Project Scope Statement

PROJECT	DATE
Tempest	30/9/2024

PROJECT BACKGROUND, OBJECTIVES and OUTCOMES

Background: At NexaForge, we seek to provide engaging experiences beyond AAA titles to a broad audience, balancing innovation and accessibility. To increase player retention, we propose project Tempest. Tempest is a 3rd person fantasy action-arena where players team up to battle against another team of players in quick rounds. Be it a warrior, a sorcerer, a cleric, an assassin, players can be the vanguard, control the battlefield, support their allies or disrupt the enemy backlines.
Our project aims to improve player retention rates, increase player play frequency and most of all, increase player engagement.

Objectives:
Exploit a first mover's advantage to be the first PvP non-shooter fantasy action game.
Deliver a novel, immersive and engaging gaming experience
Build a loyal playerbase who will continue playing games from NexaForge
Advertise NexaForge as a good game developer

Outcomes:
Increased playerbase in size and retention rates
A stronger reputation for NexaForge as a game developer
Cosmetic sales from the game

HIGH-LEVEL PROJECT REQUIREMENTS, FUNCTIONAL & NON-FUNCTIONAL

The game is to be a multiplayer fantasy action-arena.

The game is fun, engaging and has depth.

The game visuals and audio design immerses players in the game and inspires feelings of grandeur.

Combat looks and feels fluid and smooth.

Player teamwork to bolster each other's strengths and/or cover weaknesses is emphasised.

Players feel they have a wide array of ways to handle their opponents.

The game logistics allow for a smooth gaming experience for all players.

Players are matched against others with balanced skill levels and without too long a queue time.

Out-of-Scope:

Due to budget and time constraints, the post-launch maintenance, updates and bug fixes will not be considered as part of the project scope, and rather be considered as maintenance of a completed project.

Multiple game modes, including a single player campaign, will also be considered out of project scope and be considered a continuation of a completed project.

Translating the game to multiple languages will be out of project scope.

Porting the game from PC to cross-platform, will be considered out of the project scope.

DELIVERABLES

The game itself: Tempest, a 3rd person fantasy action arena where players team up to battle against another team of players with various characters of diverse playstyles and archetypes to choose from.

Visual assets: The art and character models created for use in the game

Audio assets: The music and sound effects created for use in the game.

Anti-cheat engine: The anti-cheat technology developed for the game.

Matchmaking system: The matchmaking system used to match a team of varying skill levels with another, ensuring fair and balanced matches without too long a queue time.

ASSUMPTIONS

Server infrastructure and integration is done by NexaForge's in-house team of experts.

The hardware and software (e.g. the computers and the game engine) for developing the games are already owned by NexaForge and do not incur any cost to use.

The game engine owned by NexaForge as mentioned above has built-in reusable functionality for basic core features of game development e.g. for collision detection with terrain (Björklund, 2019).

Developers may ask seniors/lead engineers for quick help on their work, as this is a small portion that is not counted towards the working hours of the seniors/lead engineers.

Some unpaid interns may be hired to help with smaller and easier tasks.

The post-launch projects of the mentioned out-of-scope projects are highly recommended to be undertaken after the completion of this project.

3: Project Work Breakdown Structure (WBS) and Schedule

3.1 Work Breakdown Structure (WBS)

Task Name	Duration (weeks)
1. Pre-Production	
1.1 Game concept and design document	
1.1.1 Game format	1
1.1.2 Character concept designs	2
1.1.3 Game thematic ambience	1
1.2 Graphics and art styles	
1.2.1 Art style design	2
1.2.2 Character and skill visual design	2
1.2.3 Terrain landscape design	1
1.2.4 UI design	1
1.3 Gameplay/combat system design	
1.3.1 Combo/stagger mechanics	2
1.3.2 Status ailment/enhancement mechanics	1
1.3.3 Item/power-up design	1
1.3.4 Character movement design	2
1.4 Logistics and operations	
1.4.1 Performance optimization design	4
1.4.2 Anti-cheat design	4
2. Production	
2.1 Map terrain development/design	
2.1.1 Visual environment	10

2.1.2 Pathable terrain design	10
2.2 Character model/physics	
2.2.1 3-D model of characters	4
2.2.2 Physics of character	4
2.2.3 Character animations	4
2.3 Core gameplay systems development	
2.3.1 Gameplay mechanics and skills	12
2.3.2 Playable character combat integration	4
2.3.3 UI/UX	2
2.3.4 Initial Game balance	4
2.4 Sound systems	
2.4.1 Sound effect design	6
2.4.2 Music composing	6
2.5 Logistics and Operations	
2.5.1 Game optimization	4
2.5.2 Matchmaking system	4
2.5.3 Tutorial	3
2.5.4 Anti-cheat system	5
3.0 Testing/bug-fixing	8

3.2 Team collaboration and Short reflection

Having discussed the WBS with the rest of the team, the importance of the game's logistics and operations was highlighted and added. The game needs to be free of bugs, cheats and exploits, be able to run on mid-level hardware and internet connectivity, and should also include a tutorial system to teach players how to play the game.

The WBS hierarchy was also reorganised to have more level 3 tasks under level 2 work packages, with fewer stand-alone level 2 tasks.

3.3 Gantt Chart

	Name	Cost	Duration	Start	Finish	Predecessors
1	**0.0 Tempest**	$846500.00	230 days	1/01/25 8:00 AM	18/11/25 5:00 PM	
2	**1.0 Pre-production**	$196000.00	60 days	1/01/25 8:00 AM	25/03/25 5:00 PM	
3	**1.1 Game Concept and Design Document**	$22000.00	20 days	1/01/25 8:00 AM	28/01/25 5:00 PM	
4	1.1.1 Game Format	$5500.00	5 days	1/01/25 8:00 AM	7/01/25 5:00 PM	
5	1.1.2 Character Concept Designs	$11000.00	10 days	8/01/25 8:00 AM	21/01/25 5:00 PM	4
6	1.1.3 Game thematic ambience	$5500.00	5 days	22/01/25 8:00 AM	28/01/25 5:00 PM	5
7	**1.2 Graphics and Art Styles**	$69000.00	30 days	29/01/25 8:00 AM	11/03/25 5:00 PM	
8	1.2.1 Art Style Design	$23000.00	10 days	29/01/25 8:00 AM	11/02/25 5:00 PM	3
9	1.2.2 Character and Skill Visual Design	$23000.00	10 days	12/02/25 8:00 AM	25/02/25 5:00 PM	8
10	1.2.3 Terrain Landscape Design	$11500.00	5 days	26/02/25 8:00 AM	4/03/25 5:00 PM	9
11	1.2.4 User Interface (UI) Design	$11500.00	5 days	5/03/25 8:00 AM	11/03/25 5:00 PM	10
12	**1.3 Gameplay/Combat System Design**	$69000.00	30 days	29/01/25 8:00 AM	11/03/25 5:00 PM	
13	1.3.1 Combo/Stagger Mechanics	$23000.00	10 days	29/01/25 8:00 AM	11/02/25 5:00 PM	3
14	1.3.2 Status Ailment/Enhancement Mechanics	$11500.00	5 days	12/02/25 8:00 AM	18/02/25 5:00 PM	13
15	1.3.3 Item/Power-up Design	$11500.00	5 days	19/02/25 8:00 AM	25/02/25 5:00 PM	14
16	1.3.4 Character Movement Design	$23000.00	10 days	26/02/25 8:00 AM	11/03/25 5:00 PM	15
17	Completion of Game Design Concept	$0.00	0 days	11/03/25 5:00 PM	11/03/25 5:00 PM	12;7;3
18	**1.4 Logistics and Operation**	$36000.00	40 days	29/01/25 8:00 AM	25/03/25 5:00 PM	
19	1.4.1 Performance optimization design	$18000.00	20 days	29/01/25 8:00 AM	25/02/25 5:00 PM	3
20	1.4.2 Anti-cheat Design	$18000.00	20 days	26/02/25 8:00 AM	25/03/25 5:00 PM	19
21	Completion of Pre-production	$0.00	0 days	25/03/25 5:00 PM	25/03/25 5:00 PM	18;17
22	**2.0 Production**	$586500.00	140 days	12/03/25 8:00 AM	23/09/25 5:00 PM	
23	**2.1 Map Terrain Development/Design**	$128000.00	80 days	12/03/25 8:00 AM	1/07/25 5:00 PM	
24	2.1.1 Visual Environment	$64000.00	80 days	12/03/25 8:00 AM	1/07/25 5:00 PM	17
25	2.1.2 Pathable Terrain Design	$64000.00	80 days	12/03/25 8:00 AM	1/07/25 5:00 PM	17
26	**2.2 Character Model/Physics**	$96000.00	60 days	12/03/25 8:00 AM	3/06/25 5:00 PM	
27	2.2.1 3-D Model of Characters	$32000.00	20 days	12/03/25 8:00 AM	8/04/25 5:00 PM	17
28	2.2.2 Physics of Characters	$32000.00	20 days	9/04/25 8:00 AM	6/05/25 5:00 PM	27
29	2.2.3 Character Animations	$32000.00	20 days	7/05/25 8:00 AM	3/06/25 5:00 PM	28;27
30	**2.3 Core Gameplay Systems Development**	$250000.00	100 days	12/03/25 8:00 AM	29/07/25 5:00 PM	
31	2.3.1 Gameplay Mechanics and Skills	$156000.00	60 days	12/03/25 8:00 AM	3/06/25 5:00 PM	17
32	2.3.2 Playable Character Combat Integration	$52000.00	20 days	4/06/25 8:00 AM	1/07/25 5:00 PM	31;26
33	2.3.3 UI/UX	$14000.00	20 days	2/07/25 8:00 AM	29/07/25 5:00 PM	32
34	2.3.4 Initial Game Balance	$28000.00	20 days	2/07/25 8:00 AM	29/07/25 5:00 PM	32
35	Completion of Core Game	$0.00	0 days	29/07/25 5:00 PM	29/07/25 5:00 PM	30;26;23
36	**2.4 Sound Systems**	$42000.00	60 days	2/07/25 8:00 AM	23/09/25 5:00 PM	
37	2.4.1 Music Composing	$21000.00	30 days	2/07/25 8:00 AM	12/08/25 5:00 PM	23
38	2.4.2 Sound Effect Design	$21000.00	30 days	13/08/25 8:00 AM	23/09/25 5:00 PM	32;37
39	**2.5 Logistics and Operations**	$70500.00	40 days	30/07/25 8:00 AM	23/09/25 5:00 PM	
40	2.5.1 Game optimization	$18000.00	20 days	30/07/25 8:00 AM	26/08/25 5:00 PM	35;21
41	2.5.2 Matchmaking System	$18000.00	20 days	27/08/25 8:00 AM	23/09/25 5:00 PM	40
42	2.5.3 Tutorial	$12000.00	15 days	30/07/25 8:00 AM	19/08/25 5:00 PM	35
43	2.5.4 Anti-Cheat System	$22500.00	25 days	20/08/25 8:00 AM	23/09/25 5:00 PM	42
44	3.0 Testing/Bug-Fixing	$64000.00	40 days	24/09/25 8:00 AM	18/11/25 5:00 PM	36;39
45	Game Beta Launch Ready	$0.00	0 days	18/11/25 5:00 PM	18/11/25 5:00 PM	44

Milestones:
Completion of Game Design Concept

- Groundwork for how to create the game is completed

Completion of Pre-Production

- Groundwork for the game, including its servers and logistics are completed.

Completion of Core Game

- Barebones version of a playable game as described is completed.

Game Beta Launch Ready

- Game is completed enough for a beta launch.

Rationale:
The durations are matched to a rough estimate of how long each task would take. Harder tasks are allocated more time and more people to work on it. Predecessors are set to the minimum prerequisite level-two tasks or milestones needed, items are worked on concurrently where possible, while trying to minimise overloaded time periods.

3.4 In-class demonstration of Gantt Chart and team Reflection

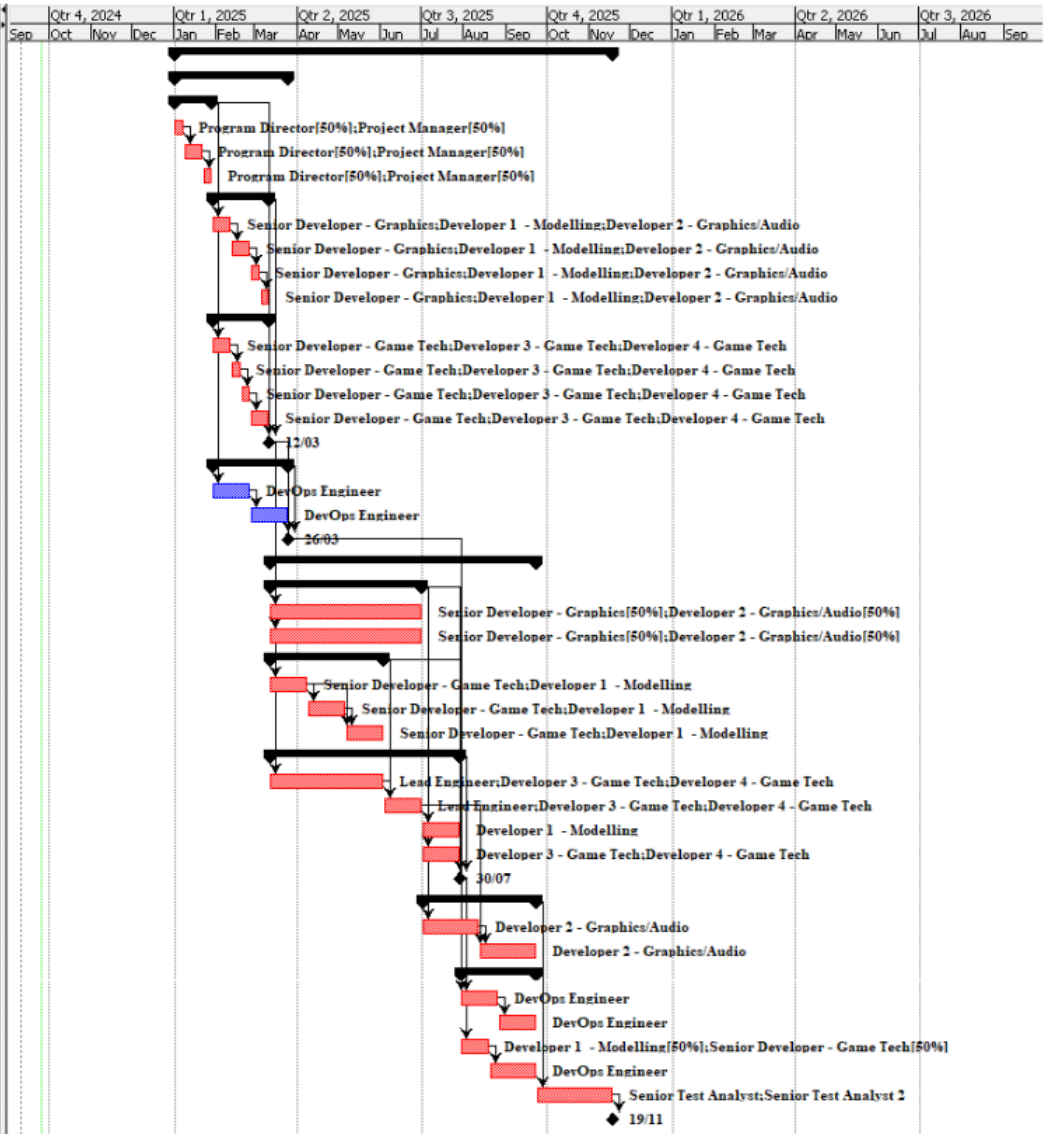
4: Project Cost Management

4.1 Cost Model

Labour cost (Shapley, n.d.):

Name	Standard Rate
Program Director	1,300/day
Project Manager	900/day
Lead Engineer	1,200/day
Senior Developer - Game Tec	900/day
Senior Developer - Graphics	900/day
Developer 1 - Modelling	700/day
Developer 2 - Graphics/Audic	700/day
Developer 3 - Game Tech	700/day
Developer 4 - Game Tech	700/day
Senior Test Analyst	800/day
Senior Test Analyst 2	800/day
Platform Engineer	900/day

	Name	Cost	Duration
1	**0.0 Tempest**	$846500.00	**230 days**
2	**1.0 Pre-production**	$196000.00	**60 days**
3	**1.1 Game Concept and Design Document**	$22000.00	**20 days**
4	1.1.1 Game Format	$5500.00	5 days
5	1.1.2 Character Concept Designs	$11000.00	10 days
6	1.1.3 Game thematic ambience	$5500.00	5 days
7	**1.2 Graphics and Art Styles**	$69000.00	**30 days**
8	1.2.1 Art Style Design	$23000.00	10 days
9	1.2.2 Character and Skill Visual Design	$23000.00	10 days
10	1.2.3 Terrain Landscape Design	$11500.00	5 days
11	1.2.4 User Interface (UI) Design	$11500.00	5 days
12	**1.3 Gameplay/Combat System Design**	$69000.00	**30 days**
13	1.3.1 Combo/Stagger Mechanics	$23000.00	10 days
14	1.3.2 Status Ailment/Enhancement Mechanics	$11500.00	5 days
15	1.3.3 Item/Power-up Design	$11500.00	5 days
16	1.3.4 Character Movement Design	$23000.00	10 days
17	Completion of Game Design Concept	$0.00	0 days
18	**1.4 Logistics and Operation**	$36000.00	**40 days**
19	1.4.1 Performance optimization design	$18000.00	20 days
20	1.4.2 Anti-cheat Design	$18000.00	20 days
21	Completion of Pre-production	$0.00	0 days
22	**2.0 Production**	$586500.00	**140 days**
23	**2.1 Map Terrain Development/Design**	$128000.00	**80 days**
24	2.1.1 Visual Environment	$64000.00	80 days
25	2.1.2 Pathable Terrain Design	$64000.00	80 days
26	**2.2 Character Model/Physics**	$96000.00	**60 days**
27	2.2.1 3-D Model of Characters	$32000.00	20 days
28	2.2.2 Physics of Characters	$32000.00	20 days
29	2.2.3 Character Animations	$32000.00	20 days
30	**2.3 Core Gameplay Systems Development**	$250000.00	**100 days**
31	2.3.1 Gameplay Mechanics and Skills	$156000.00	60 days
32	2.3.2 Playable Character Combat Integration	$52000.00	20 days
33	2.3.3 UI/UX	$14000.00	20 days
34	2.3.4 Initial Game Balance	$28000.00	20 days
35	Completion of Core Game	$0.00	0 days
36	**2.4 Sound Systems**	$42000.00	**60 days**
37	2.4.1 Music Composing	$21000.00	30 days
38	2.4.2 Sound Effect Design	$21000.00	30 days
39	**2.5 Logistics and Operations**	$70500.00	**40 days**
40	2.5.1 Game optimization	$18000.00	20 days
41	2.5.2 Matchmaking System	$18000.00	20 days
42	2.5.3 Tutorial	$12000.00	15 days
43	2.5.4 Anti-Cheat System	$22500.00	25 days
44	3.0 Testing/Bug-Fixing	$64000.00	40 days
45	Game Beta Launch Ready	$0.00	0 days



4.2 Cost Baseline

WBS Items	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Total
Program Director	13,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**13,000.00**
Project Manager	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**9,000.00**
Lead Engineer	0.00	0.00	16,800.00	26,400.00	26,400.00	25,200.00	1,200.00	0.00	0.00	0.00	0.00	**96,000.00**
Senior Developer - Game Tech	2,700.00	18,000.00	18,900.00	19,800.00	19,800.00	1,800.00	900.00	5,850.00	0.00	0.00	0.00	**87,750.00**
Senior Developer - Graphics	2,700.00	18,000.00	18,900.00	19,800.00	19,800.00	18,900.00	900.00	0.00	0.00	0.00	0.00	**99,000.00**
Developer 1 - Modelling	2,100.00	14,000.00	14,700.00	15,400.00	15,400.00	1,400.00	14,700.00	4,550.00	0.00	0.00	0.00	**82,250.00**
Developer 2 - Graphics/Audio	2,100.00	14,000.00	14,700.00	15,400.00	15,400.00	14,700.00	16,100.00	14,700.00	11,900.00	0.00	0.00	**119,000.00**
Developer 3 - Game Tech	2,100.00	14,000.00	14,700.00	15,400.00	15,400.00	14,700.00	14,700.00	0.00	0.00	0.00	0.00	**91,000.00**
Developer 4 - Game Tech	2,100.00	14,000.00	14,700.00	15,400.00	15,400.00	14,700.00	14,700.00	0.00	0.00	0.00	0.00	**91,000.00**
Senior Test Analyst	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,000.00	18,400.00	9,600.00	**32,000.00**
Senior Test Analyst 2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,000.00	18,400.00	9,600.00	**32,000.00**
Platform Engineer	2,700.00	18,000.00	15,300.00	0	0.00	0.00	1,800.00	26,100.00	30,600.00	0.00	0.00	**94,500.00**
Reserves	7,700.00	22,000.00	25,740.00	25,520.00	25,520.00	18,280.00	13,000.00	10,240.00	10,100.00	7,360.00	3,840.00	**169,300.00**
Total	**46,200.00**	**132,000.0(**	**154,440.00**	**153,120.00**	**153,120.00**	**109,680.00**	**78,000.00**	**61,440.00**	**60,600.00**	**44,160.00**	**23,040.00**	**1,015,800.0**

4.3 Assumptions

Assumptions:

NexaForge, being an already established gaming company, already owns the hardware and software required to do this project, and thus these are excluded from the cost calculations.

Server infrastructure and integration is done by NexaForge's in-house team of experts, and the cost of server infrastructure is also excluded from the cost calculations.

The game engine owned by NexaForge as mentioned above has built-in reusable functionality for basic core features of game development e.g. for collision detection with terrain (Björklund, 2019).

Developers may ask seniors/lead engineers for quick help on their work, as this is a small portion that is not counted towards the working hours of the seniors/lead engineers.

Some unpaid interns may be hired to help with smaller and easier tasks.

5: Project Risk Management

5.1 Risk Register

RISK ID	RANK	RISK DESCRIPTION	IMPACT DESCRIPTION	IMPACT LEVEL	PROBABILITY LEVEL	PRIORITY LEVEL	RISK RESPONSE
1	1	First mover's advantage	Monopoly on game genre market share	*5*	*3*	1	Exploit
2	2	Shifting market trends	Lack of player interest	4	3	2	Mitigate
3	3	Government regulations	Possible ban on game until changes are made	5	2	3	Mitigate

5.2 Probability & Impact Rationale

1. Shifting market trends – the video game industry has been changing extremely rapidly. And it's not just due to technology advancements, or indie games would never have been able to rise to compete with AAA games. (Goh et al., 2023)

   Likelihood: Moderate
   Impact: Moderately High

   Potential response: Mitigate – we can mitigate this risk by analysing market trends, and adapting our game to match market trends. Straying too far from our original audience will end up alienating our player-base, but a small and gradual amount of adaptation is generally safe enough.

2. Government regulations – Governments regulate gaming, and some countries do this a lot more than others. Some recent examples would be China restricting gaming time for minors, and Europe cracking down on gambling. These represent a risk in blocking our access to said countries.

   Likelihood: Low
   Impact: High

   Potential response: Mitigate – by designing our games ethically, we can be generally safe from changing regulations. Failing which, we can redesign our game and/or monetization strategies.

3. First mover's advantage – As the first game in the genre, this represents "an opportunity to growth that is both quick and profitable" (Härmä & LeGrand, 2013, p22). If exploited well, we could monopolise a large audience with relative ease, as we have no competitors yet.
   Likelihood: Moderately High
   Impact: High

   Potential response: Exploit – as we do not have competitors yet, we can secure a large audience simply by making the best game we can and advertising it.

5.3 The Matrix & Analysis

PROBABILITY	5					
	4					
	3				R2	R1
	2					R3
	1					
		1	2	3	4	5
	IMPACT					

From the matrix above, it is evident that the first risk, first mover's advantage, represents the greatest risk of a first mover's advantage to be exploited. However, the second and third risks, shifting market trends and government regulations, are not too far behind, and thus should be treated with caution to mitigate it.

6: Project Quality Management

6.1 Quality Standards/Requirements

To meet the portfolio requirements of player retention and sales, balancing difficulty levels, in this case via skill-based matchmaking, and keeping players engaged, is crucial. Sarkar et al. (2017) highlights the importance of balancing difficulty to maintain player interest, and as Hamari (2015) noted, players who are invested in the game are more likely to spend. Kang et al. (2024) further emphasises the importance of good matchmaking, as excessive win streaks leads to demotivation, while by definition also leading to more losses for the rest of the playerbase, further reducing other players' engagement.

6.2 Metrics and Measurement

To measure our progress in balancing difficulty levels for players, and keeping players engaged, we propose the following measurable metrics in addition to the decided D1 retention, D7 retention and M3 retention:

Player Engagement:

Following industry standards (Fields, 2013), we will measure monthly and daily active users. A higher daily active users per monthly users indicate more players are eager to keep playing regularly, and following the statistics of Valorant, Overwatch and CS:GO, 3 very popular FPS games, a ratio of 1 daily active player : 10 monthly active players is a gold standard to aim to achieve. Valorant, the most recent one, was able to pull 18 million monthly active players within the first 3 months of launch (Valorant Live Player Count & Statistics, 2024), another gold standard to reach for, albeit realistically impossible given how large a player base Riot Games already had.

Balancing Difficulty Levels For Players:

To measure how difficult matches players are facing, we will measure their win-rates and streaks. The 5^{th}-95^{th} percentile of players should have win-rates between 40% and 60% for the last 50 matches, and be on a win or lose streak of no longer than 10. These numbers are chosen as players having a win-rate below 40%, above 60% or on a win or lose streak of more than 10 are cases where our game has failed to give them a good gaming experience, and thus we have failed these players. Delivering a good gaming experience to less than 90% of our player base is our failure.

7: Project Stakeholder and Communication Management

7.1 Building Your Stakeholder Register

TITLE	ROLE IN PROJECT	CATEGORY	POWER LEVEL	INTEREST LEVEL	COMMS REQUIREMENTS	COMMS FREQUENCY
NexaForge CEO	Project Sponsor	External	High	High	Meetings, presentations, email	Often
Government Regulators	Project Regulator	External	High	Low	Email	Rarely
Project Manager	NexaForge infrastructure /integration team	External	Medium	High	Meetings, direct messages, email	Often
Players	Customer	External	Low	High	Blog post/website update	Rarely
Streamers	Advertiser/Play Tester/Game Feedback	External	High	High	Interviews, meetings, direct messages, email	Often
Project Manager	Project Manager	Internal	High	High	Meetings, direct messages, email	Weekly updates
Developer Team	Developers	Internal	High	High	Meetings, direct messages, email	Weekly updates
Test Analyst Team	Test Analysts	Internal	Medium	High	Presentations, meetings, email	Weekly updates

7.2 Engagement Strategy

Stakeholder 1: Client (NexaForge CEO)
Clients like NexaForge's CEO, being high-power stakeholders, can significantly influence project outcomes, sometimes unintentionally hindering their potential (Nikolova & Devinney, 2009). According to 'Application of Game Theory Methods to Optimize the Stakeholder Management Process' (2024), open communication about any problematic hurdles arising is essential for maintaining a mutually beneficial relationship. However, as Nikolova & Devinney also note, their ultimate decision-making authority necessitates careful persuasion to guide project choices toward shared objectives and prevent poorly-informed decisions.

Stakeholder 2: Streamers
Streamers, people who play and discuss games and showcase them to their audiences, have a high interest in the game and varying amounts of power. They advertise the games they play, are generally very knowledgeable of games and how they can be better (Parker & Perks, 2021), and can arguably make or break a game's success (Johnson & Woodcock, 2018). As such, we should engage directly with streamers, offering them incentives to showcase our game and interview them for feedback and ways to improve our game,

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GENERATIVE AI - Acknowledgement of use

I used Gemini (https://gemini.google.com) for estimating the timeline and cost, and to refine some of my sentence structure. I also used it to better understand the project requirements.

I used Quillbot (https://quillbot.com/citation-generator/apa) for generating the in-text citations and the reference list above.