

Business Analyst Assignment: Slot Machine Game Development

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Introduction & Overview

In today's competitive gaming industry, the role of a Business Analyst is crucial in ensuring a structured and efficient development process. This assignment evaluates the ability to gather comprehensive **game development requirements** and identify potential **risks** associated with the project. By applying analytical thinking and strategic risk mitigation, this document provides a Clarity and relevance of the requirements for the successful execution of an **Egyptian-themed slot machine game**.

The objective is to outline **key functional, technical, and design requirements**, ensuring smooth gameplay and optimal user experience. Additionally, risk assessment is conducted to identify potential challenges and propose effective mitigation strategies, contributing to a successful project launch.

Strategic Context

Scenario

The development team has been tasked with creating an **Egyptian-themed slot machine game** with a **5x3 reel layout**. This game will feature a rich visual experience, incorporating **high-value symbols** such as the **Pharaoh, Scarab, and Pyramid**, alongside **low-value hieroglyphs**. To enhance gameplay dynamics, the game will include **special symbols**:

- **Wild Symbol (Golden Ankh)** – Substitutes for other symbols except Bonus.
- **Scatter Symbol (Eye of Horus)** – Triggers Free Spins.
- **Bonus Round** – Players collect coins for multipliers.

The objective is to ensure the successful **development, implementation, and risk assessment** of this game, focusing on creating an engaging user experience while maintaining smooth performance and regulatory compliance.

Task

As a **Business Analyst**, you are required to:

- 1. **List 10 key requirements** for the successful development of this game. These requirements should cover **functional, technical, design, and gameplay aspects**.
- 2. **Identify two major risks** associated with the development of this game and propose effective **mitigation strategies**.
- 3. Present the information in a structured format, ensuring clarity and conciseness.

Business Impact

Using the **MoSCoW Prioritization** method, the following requirements have been given below:

Key Requirements for the Slot Machine Game

Priority	Requirement Type	Description
Must-Have	Gameplay	5x3 reel layout with defined symbols and mechanics
Must-Have	Symbols	High-value (Pharaoh, Scarab, Pyramid) & Low-value (Hieroglyphs)
Must-Have	Special Symbols	Wild (Golden Ankh) & Scatter (Eye of Horus)
Must-Have	Bonus Round	Collect coins for multipliers
Must-Have	RNG Integration	Fair Random Number Generation (RNG) algorithm
Should-Have	Multi-platform Compatibility	Desktop & Mobile responsive
Should-Have	UI/UX Design	Egyptian-themed interface with animations & sound
Could-Have	Leaderboards	Global ranking system for engagement
Could-Have	Social Integration	Share achievements on social media
Won't-Have	Real Money Gambling	No real-money betting to comply with regulations

Risk Identification & Mitigation Strategies			
Risk	Likelihood	Impact	Mitigation Strategy
Technical Risk: Game Lag & Bugs	High	High	Optimize game code, conduct stress testing
Regulatory Compliance Issues	Medium	High	Follow legal standards, implement age verification

Visualization

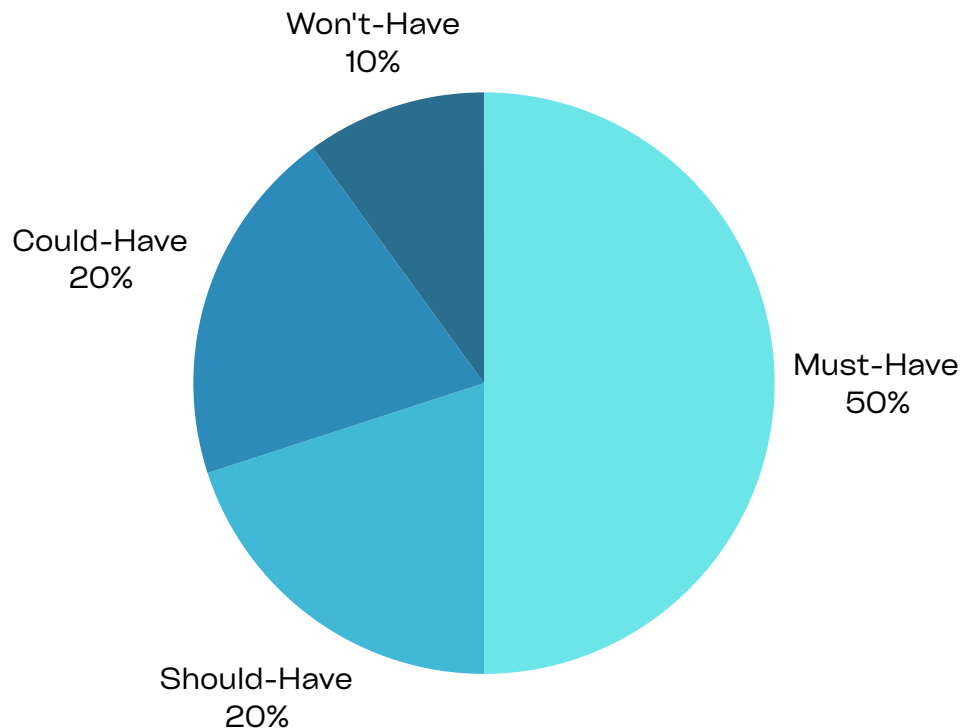
Since the assignment is more conceptual rather than data-driven, we are going to use **informative visualizations** rather than traditional charts.

1. Risk Matrix

We need to consider both **technical and business risks** for the game development process. Above given risk identification and mitigation strategies contain 2 major risk but here we will visualize 5 potential risks-

Risk Identification & Mitigation Strategies				
Risk	Risk Level	Likelihood	Impact	Mitigation Strategy
Technical Risk: Game Lag & Bugs	Major	High	High	Optimize game code, conduct stress testing
Regulatory Compliance Issues	Critical	Medium	High	Follow legal standards, implement age verification
Game Mechanics Imbalance	Critical	High	High	Regular playtesting and data analytics to adjust RTP (Return to Player) ratios.
Low Player Engagement	Major	Medium	Medium	Implement interactive features, loyalty rewards, and engaging animations.
Monetization Challenges	Moderate	Low	High	A/B testing different monetization models and adjusting pricing strategies.

2. Infographics: MoSCoW Prioritization of Game Requirements



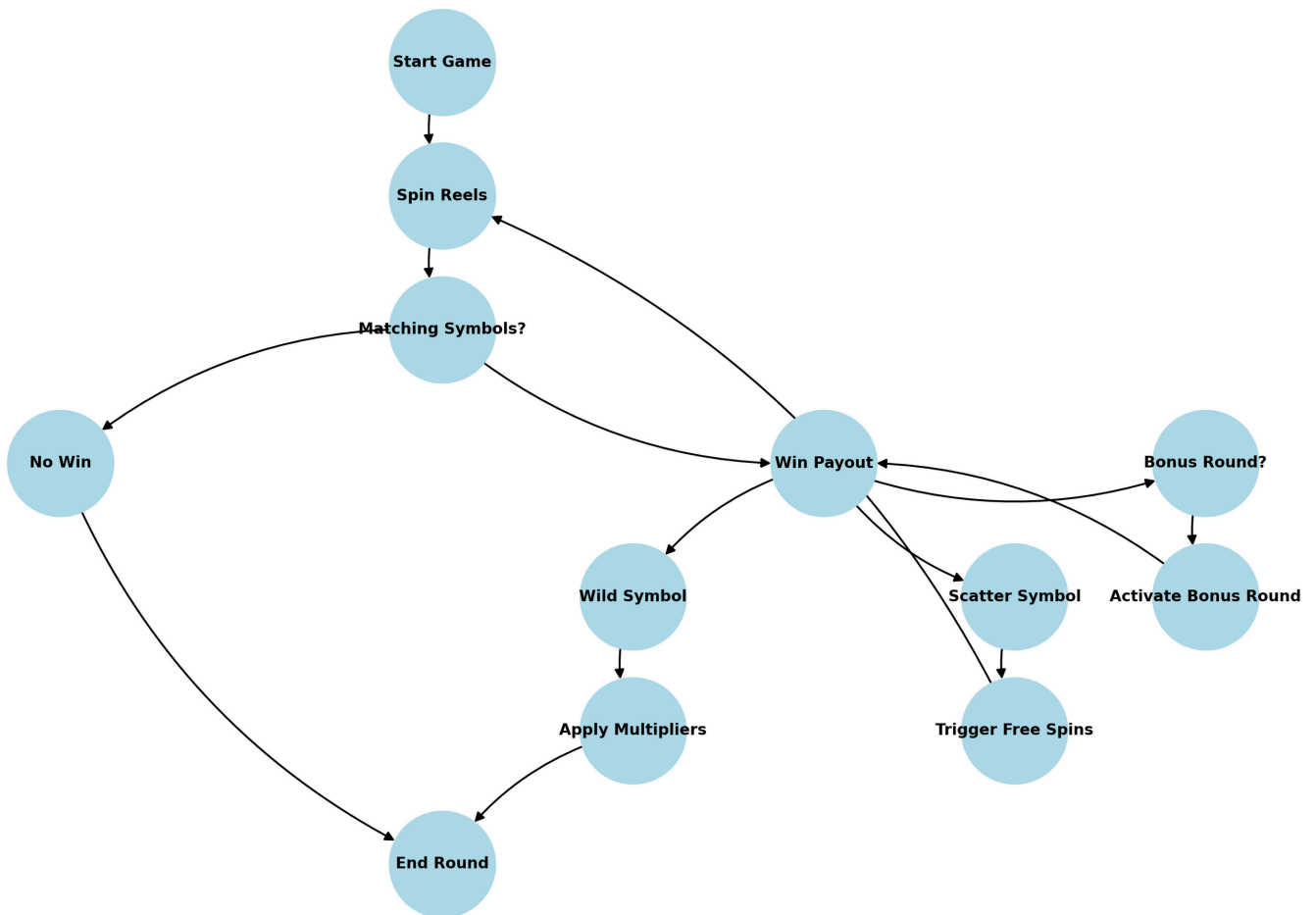
Here is the **MoSCoW Prioritization Pie Chart**

- **Must-Have (50%)** – Critical for core gameplay.
- **Should-Have (20%)** – Important but not essential.
- **Could-Have (20%)** – Enhancements if time permits.
- **Won't-Have (10%)** – Not planned for this phase.

3. Flowchart: For Game Mechanics

- This flowchart provides **structured game mechanics**, helping developers **map out** logic in the codebase.
- Ensures smooth transitions between **win, loss, bonus, and free spins cycles**.
- **Loops for Free Spins and Bonus Rounds** ensure **better player retention**.
- The structured win conditions **increase excitement & reward anticipation**.
- This flowchart helps **data analysts & game designers** understand **how often** players can win or engage with free spins.
- Can be used to **fine-tune probability models & reward structures** for **maximum profitability**.

Refined Slot Machine Game Mechanics Flowchart



UI/UX Design

A **Business Analyst (BA)** plays a crucial role in bridging the gap between stakeholders, designers, and developers by ensuring that the game's **design aligns with business objectives, user expectations, and technical feasibility**.

While the primary responsibility of a BA is to gather requirements, identify risks, and define functional aspects, they also contribute to the **game's conceptualization** by providing insights on **user engagement, market trends, and thematic consistency**.

By suggesting **design elements, UI/UX improvements, or first-page layouts**, a BA helps the design team create a more immersive and intuitive user experience while ensuring that the visual and functional aspects of the game support its core objectives.

Here is a **conceptual illustration** of the Egyptian-themed slot machine game, developed based on the provided scenario. This serves as a **visual reference** for the design team, enabling them to create the game in alignment with the stakeholder requirements.



Conclusion

The **Slot Machine Game Development Analysis** presented in this assignment encapsulates a structured approach to understanding the key requirements, risks, and design considerations essential for a successful project. Through a combination of **MoSCoW prioritization, risk assessment, flowchart-based mechanics, and visual representations**, the assignment provides a **comprehensive and data-driven** analysis of the game's functional, technical, and design aspects.

Key takeaways from this analysis include:

- A well-defined **requirement breakdown** covering functionality, technical performance, design aesthetics, and gameplay mechanics.
- A **risk matrix** identifying critical challenges and their respective mitigation strategies, ensuring smooth development and compliance with industry standards.
- **Visual frameworks** such as flowcharts and pie charts, enhancing the clarity of the development process and supporting decision-making.
- **Concept art guidance**, helping the design team align their creative execution with the game's core theme and stakeholder expectations.

This assignment **demonstrates a structured and analytical approach** towards game development, aligning business objectives with technical feasibility. It effectively conveys **key insights for stakeholders and decision-makers**, ensuring that the slot machine game project is both commercially viable and technically robust.

The detailed breakdown of **game mechanics, design elements, and risk mitigation strategies** positions this project for a streamlined and efficient execution. **With a user-centric approach and well-defined objectives, this analysis serves as a strong foundation for guiding the development team and achieving project success.**