

Project Description:

Game Rental

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March 13th, 2022

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1. Background Description

Video games form a large part of the modern entertainment business. With their ever-expanding genres and improving quality, video games have become a staple of indoor activities. Especially in the current day where outings have been replaced with playing games together over vast distances, with users from different regions of the world and different countries playing together. "The language of international communication is, of course, English" (Rudis, 2018). With a common language and game, these distances can be more easily bridged.

While the connectivity increased, so did the price. According to Ben Gilbert of Business Insider, for nearly 15 years the standard cost of a video game has been 60\$. However, with the new generation of video game consoles such as PlayStation and Xbox Series X, which went into circulation in November of 2020, the standard price of video games is increasing to upwards of 70\$. The first notion of this was with the announcement of the game "NBA 2K" in July when Sony announced that the price of the game on old consoles would be 60\$, but on new consoles it would cost 70\$ (Gilbert, 2020). Because of this, the consumerist mindset of acquiring new games as soon as they become available, often at obscene prices, has caused buyers to spend large sums of money on games that they play for a limited amount of time and forget about soon after.

This leads to the second issue of buying video games, losing interest in them. As with all forms of entertainment, all video games will sooner or later lose the attention of players and be forgotten, and quite possibly never played again. Because of this, many buyers do not get their money's worth because they simply lost interest and moved to the next new game. As an example, Halo Infinite has a main story play time of 20½ hours and 32 hours for general gameplay. And if one were to strive for a complete completion of the game it would average at around 51 hours (Davis, 2022). With most players not going to such an extent with every game they purchase, paying \$60 for a game they will play for 20 hours or less is far too much. Another common occurrence when buying and playing games is buying a game that the user later learns they do not enjoy. With most game distributors having quite short refund periods, consumers are often unable to get their money back.

In today's market, buying every new game that comes out can be very expensive. This greatly limits the diversity of games available to the consumer. On the other hand, renting games has the benefit of being cheaper than buying a game. Many companies allow you to subscribe to a monthly plan that lets you play many games without having to buy them and it can be as cheap as 5 (Stegner, 2020). This allows video game consumers the option to try many more games for a lower price. While there are advantages to buying a game such as being able to play it whenever you want and for as long as you want, this is often not worth it considering many video game consumers do not spend more than 20 hours on a game (Davis, 2022). It is much more efficient to rent a game due to the lower cost and the freedom to swap them out for new ones as needed.

In addition to the consideration of renting or buying, consumers also have the choice of physical or digital copies. Instead of just the executable game file, today's digital copies of games come with a suite of software to fight back against piracy and verify the identity of the user, which is typically referred to as Digital Rights Management or DRM. Consequently, many games today rely on a constant connection to a server to play, even if the game does not have multiplayer functionality. This need to always be online does not reflect how a large portion of the user base uses the product.

Sony revealed that their users still spend more time playing offline than online (Coulson, 2020). In November 2021, the entire Warner Brothers games library briefly went offline because of a domain issue, which stopped consumers from using the software they had purchased and downloaded (Robinson, 2021). In addition to reliability, Sony has even made great marketing videos to display the shareability of physical games that comes because of not needing to always be connected (PlayStation, 2013). With so many ways to enjoy video games, it is unsurprising that they have gained even more popularity in the recent decades.

This is also becoming an even more active topic during the current global health crisis, "During the ongoing period of lockdown and social distancing, many of us have observed a significant increase in the use of entertainment games (both analog and digital games) at home to pass the time and to deal with stress. Entertainment games are perceived as a relief for families, both for parents and children" (Kriz, 2020). Given the increased demand for digital entertainment, the decreased value described before is striking.

2. Problem Statement

Main problem

Video games have become too expensive for the consumer, but the quality of play time has not accordingly increased, which reduces the perceived value of the product they purchase.

1. How is physical media distributed?
2. What are the steps to rent a game?
3. How can game rentals be shared?

3. Definition of purpose

The purpose is to help video game consumers get better value from the games they play by offering a lower cost alternative to purchasing each title.

4. Delimitation

1. We will not support any language other than english.
2. We will not include digital copies of video games in the system for users to download.

5. Methodology

The methodology used for the duration of the project will consist of a combination of Unified Process and SCRUM with a focus on agility. In regards to Unified Process, the disciplines will be integrated throughout each of the phases. In particular, about 90% of requirements will become more fleshed out and 10% of the requirements will be implemented by the end of the elaboration phase. During inception, modeling will be used as a tool for understanding instead of documentation. However, modeling will continue in the different phases in differing amounts of emphasis as the transition phase approaches.

SCRUM will be utilized through the project to better define the structure of two pillars: roles and ceremonies. The roles of SCRUM master, product owner, and developer will be used to identify how team members interact with the artifacts that are created. The ceremonies consist of different types of meeting and will be used in the project to better integrate internal and external feedback. Using the small amount of time allotted for each daily SCRUM, the team will reflect on what has been accomplished, what needs to be accomplished, and how it can be accomplished better. Outside of the daily ceremonies, the sprint planning and retrospective will work to provide a roadmap as well as an internal evaluation. The sprints for this project will be relatively short, lasting 3 days each. However, that will be enough time to implement a feature that was planned in the sprint planning meeting, but it is short enough to make meaningful adjustments to the following sprints before the delivery of the project.

6. Time schedule

Using the Unified Process, the phases are clearly defined, but because of the adaptability and integration of feedback, the dates of the ends cannot be accurately estimated. However, using the structure of the semester, it is possible to make a prediction of which phase the project will be in.

Week	Date	Number of Hours (per member)	Tasks
6	7/2/22-11/2/22	8	Inception
7	14/2/22-19/2/22	8	Inception
8	21/2/22-25/2/22	8	Inception
9	28/2/22-4/3/22	8	Inception
	2/3/22		Project Description 1 st Draft
	4/3/22		Feedback and revision
10	7/3/22-11/3/22	8	Inception
	9/3/22		Description completion goal
	13/3/22		Project Description Final

11	14/3/22- 18/3/22	8	Elaboration
12	21/3/22- 25/3/22	8	Elaboration
13	28/3/22- 1/4/22	8	Elaboration
14	4/4/22- 8/4/22	8	Elaboration
15	11/4/22- 15/4/22	0	Holiday - no work allowed
16	18/4/22- 22/4/22	8	Elaboration
17	25/4/22- 29/4/22	8	Construction
18	2/5/22- 6/5/22	8	Construction
19	9/5/22- 13/5/22	36	Construction
20	16/5/22- 20/5/22	36	Construction
21	23/5/22- 27/5/22	36	Construction
22	30/5/22- 2/6/22	36	Transition

	2/6/22		Project Deadline
23-26	7/6/22- 10/6/22	8.75	Presentation preparation
24	13/6/22- 17/6/22	8.75	Presentation preparation
25	20/6/22- 24/6/22	8.75	Presentation preparation
26	27/6/22- 30/6/22	8.75	Presentation preparation
		Total: 275	ECTS points (10) x hours per ECTS point (27.5) = 275

7. Risk assessment

Risks	Likelihood Scale: 1-5 5 = high risk	Severity Scale: 1-5 5 = high risk	Product of likelihood and severity	Risk mitigation e.g. Preventive- & Responsive actions	Identifiers	Responsible
Merge ruins the project	4	4	16	Establish and follow rebase procedure. Avoid multiple working on the same file at the same time when possible.	Loss of previously existing work. Functionality previously tested fails following a merge.	Levente
Project management issues	4	3	12	Read the SCRUM guide with the group. Consult the supervisor if needed. Document roles in the meeting minutes when needed.	Group members confused about their role in the SCRUM framework.	Chris
The analysis in the final documentation does not match the final version	3	4	12	Update the documentation with the code. Interrogate the documentation when the release version is created.	The documentation describes a version before the release version	Levente (Scrum product owner)
Application (client or server) fails to open	2	5	10	Complete architecturally significant features in the early sprints.	Applications refuse to open when run.	Kruno
Unable to book a room for a meeting	2	2	4	Book the room for the next meeting at the start of the previous meeting. Work in the classroom or near the C5 microwave when needed.	Room booking is not secured by the start of the meeting on the lokale booking website.	Chris (Scrum master)

8. Sources of Information

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Appendices

Appendix A: Group Contract

Group Contract: Group 3

Participation Rules:

- Meetings will be in person at least 75% of the time
- Members will be tardy if not present within 15 minutes of the start time
- Members will be allowed 2 meeting absences or 2 class days absent unexcused during the tuition period
- Members will be allowed 2 unexcused during the project period
- Members can excuse an absence verbally or on Discord. All others must acknowledge the absence positively.
- If a member can work from home but unable to attend in person, they must be logged in to Discord voice chat and be available during the working hours

Expected Schedule:

- Group meeting during tuition period: Every Wednesday from 1-4PM

- Work hours during project period: Monday – Friday, 9-12PM, 1-4PM



Communication Policy:

- Discord will be the primary platform of communication
- #important channel will not contain social content, spam, or general chat
- Facebook Messenger will also be used for text chat to take advantage of the “read” feature
- Itslearning will hold the shared files in the group folder

Consequences:

- Absences
 - 3rd: Read group contract together and discuss in group
 - 4th: Supervisor meeting
- Member fails to complete assigned task without asking for help
 - 1st: Read contract and discuss in group
 - 2nd: Document in meeting minutes
 - 3rd: Supervisor meeting

Signatures:

Name	VIA ID	Date	Signature
Christian Foyer	315200	14/2/2022	
Martin Rosendahl	315201	14/2/2022	Martin Rosendahl
Levente Szajko	315249	14/2/2022	
Kruno Neric	315258	14/2/2022	