



American International University-Bangladesh (AIUB)

Department of Computer Science

Faculty of Science & Technology (FST)

GAME DISTRIBUTION PLATFORM

A Software Engineering Project Submitted

By

Semester: Spring 2023-24		Section: E	Group Number: 02	
SN	Student Name	Student ID	Contribution (CO3+CO4)	Individual Marks
01	MD. SHOHANUR RAHMAN SHOHAN	22-46013-1	50%	
02	ABIR BOKHTIAR	22-47038-1	50%	
03	MEHERUB IMAM	16-32232-2	0%	

The project will be Evaluated for the following Course Outcomes

CO3: <i>Select</i> appropriate software engineering models, project management roles and their associated skills for the complex software engineering project and evaluate the sustainability of developed software, taking into consideration the societal and environmental aspects	Total Marks	
	Appropriate Process Model Selection and Argumentation with Evidence	[5 Marks]
	Evidence of Argumentation regarding process model selection	[5Marks]
	Evaluate the sustainability of the developed software in terms of both society and the environment (Impact identification)	[5Marks]
Submission, Defense, Completeness, Spelling, grammar and Organization of the Project report	[5Marks]	
CO4: <i>Develop</i> project management plan to manage software engineering projects following the principles of engineering management and economic decision process	Total Marks	
	Develop the project plan, its components of the proposed software products	[5Marks]
	Identify all the activities/tasks related to project management and categorize them within the WBS structure. Perform detailed effort estimation correspond with the WBS and schedule the activities with resources	[5Marks]
	Identify all the potential risks in the specific project and prioritizing/categorizing those to overcome the risk factors.	[5Marks]

Description of Student's Contribution in the Project work

Student Name: **MD. SHOHANUR RAHMAN SHOHAN**

Student ID: **22-46013-1**

Contribution in Percentage (%): **50%**

Contribution in the Project:

- Proposed Solution
- Gantt Chart
- Project Risk
- Use Case Diagram
- Prototype Design
- Class Diagram
- Test/SQA Plan
- Maintenance Plan



Signature of the Student

Student Name: **ABIR BOKHTIAR**

Student ID: **22-47038-1**

Contribution in Percentage (%): **50%**

Contribution in the Project:

- Project Description
- Problem Statement
- Process Model
- WBS
- Prototype Design
- Activity Diagram
- Architectural Diagram
- Test/SQA Plan



Signature of the Student

Project Description:

The gaming industry has undergone a significant transformation in recent decades, evolving from a niche interest into a massive global entertainment sector worth billions of dollars. In 2022, the global video game market was estimated at USD 217.06 billion and was projected to reach USD 242.39 billion by the close of 2023. A key driver behind this growth has been the rise of gaming distribution platforms such as Steam, Epic Games Store, PlayStation Network, Xbox Live, and various mobile app stores. These platforms serve as digital marketplaces where gamers can buy, download, and access a wide range of games, often providing developers with direct connections to their audience. Beyond increasing accessibility, gaming distribution platforms have streamlined processes like updates, patches, and content delivery, ensuring that games can adapt and remain engaging over time. Additionally, they've empowered independent developers by granting them access to a global audience, thereby democratizing game development and playing a pivotal role in the industry's expansive growth.

Problem Statement:

Bangladesh is undergoing significant changes in its gaming landscape, with numerous indie game developers and studios entering the market, and more expressing interest. Despite the presence of talented game studios in the country, Bangladesh lacks dedicated game distribution platforms. Moreover, accessing established platforms like Steam and Epic Games is nearly impossible for Bangladeshi developers. This presents a challenge for gamers as well, as purchasing games through these platforms is difficult. Consequently, many gamers resort to unethical means or piracy to obtain games, resulting in substantial economic losses for the country. Establishing a gaming distribution platform specifically for Bangladeshi gamers would address these challenges, providing a legitimate avenue for game purchases and fostering the growth of local game studios and developers. This initiative has the potential to tap into a large market of gamers who are currently navigating various methods to acquire games, ultimately contributing to the country's economic development by integrating into the global gaming entertainment market.

Proposed Solution:

- Develop a web-based application capable of distributing online single/multiplayer games.
- The web-based version of the application allows new users to register and existing users to log in.
- Implement user-friendly features in the software application, enabling users to display and update their profiles, browse new games, make purchases, play games, and provide reviews.
- Provide comprehensive support to game developers through web-based applications, facilitating efficient management of their uploaded games.
- Ensure the management of game servers by the distribution platform, ensuring 24/7 availability.
- Enable transactions in dual currency (Taka and USD) for both gamers and developers, addressing a current gap in the market.

Process Model:

SDLC: XP (Extreme Programming) Model

Why choose XP model: Extreme Programming is a type of agile software development model known for its focus on collaboration, customer feedback, and flexibility. It was created by Kent Beck in the late 1990s and has gained popularity for its customer-centric approach to software development. For this project, the most crucial aspect of XP is its collaborative nature. XP fosters close teamwork among developers, testers, and customers, ensuring open communication and a shared understanding of requirements. This collaborative environment is invaluable for gathering frequent customer feedback, allowing us to stay attuned to market demands, stay on the right path and deliver a competitive software solution. Moreover, XP's iterative model with timeboxed deliveries aligns well with our project goals, providing predictability in release schedules and the flexibility to adjust to changing market conditions. This combination of customer focus, collaboration, and adaptability makes XP an ideal choice for our project. Some of the good practices that have been recognized in the extreme programming model and suggested to maximize their use are given below:

1. **Iterative and Incremental Development:** XP promotes short development cycles, typically one to three weeks long. During each cycle, a small part of the software is developed and tested. This iterative and incremental approach allows for frequent releases and quick feedback.
2. **Test-Driven Development (TDD):** Developers write automated tests before writing the code. This helps ensure that the code meets the specified requirements and continues to function correctly as changes are made.
3. **Pair Programming:** Developers work in pairs, with one writing the code and the other reviewing it in real-time. This practice promotes collaboration and knowledge sharing. Both developers brainstorm to provide higher-quality code.
4. **Simplicity:** XP encourages keeping the software as simple as possible. Unnecessary complexity is avoided, and the focus is on delivering valuable features efficiently.
5. **Refactoring:** Developers regularly restructure and remove duplicate parts from the code to improve its structure, readability, and maintainability. Refactoring is an essential part of keeping the codebase healthy.
6. **Collective Code Ownership:** Team members share responsibility for the entire codebase, which promotes collaboration and reduces bottlenecks. That means anyone can change the code, it encourages new changes without bottlenecks.
7. **On-Site Customer:** Ideally, a customer representative is physically present with the development team to provide immediate feedback and clarify requirements. Though physical customer present is a good thing but for this case gamers/game studio will be considered as beta testers and for every release they will be given a portion of time to test the software before its public release and the whole process will be fully online.

8. **Continuous Integration:** Code changes are integrated into the main codebase frequently, often multiple times a day. Automated tests are run to detect integration issues early.

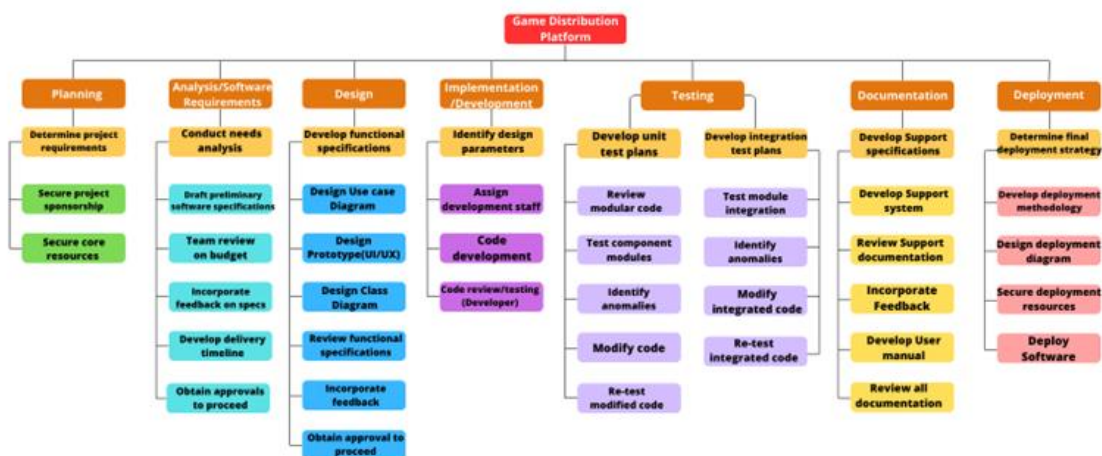
Conclusion:

The main goal is to deliver a competitive Game Distribution Platform which can compete with the already well-developed Platform in the marketplace. So, customer involvement, frequent release, timeboxed development, frequent feedback is the best way to develop such software. Also, XP usually works for small (up to 10) team-based development projects, which is a good practice for this project. Keeping the team size small, reduce communication errors, closer collaboration, and more efficient decision-making process. With a tightly knit team, it's easier to maintain a shared vision, quickly adapt to changes, and ensure that everyone is on the same page regarding project objectives. Also, XP is model for projects involving new technology or Research. Which aligns with the project's goal of creating a Game Distribution Platform different from already present Platforms, making it a suitable choice to deliver a high-quality and competitive software solution.

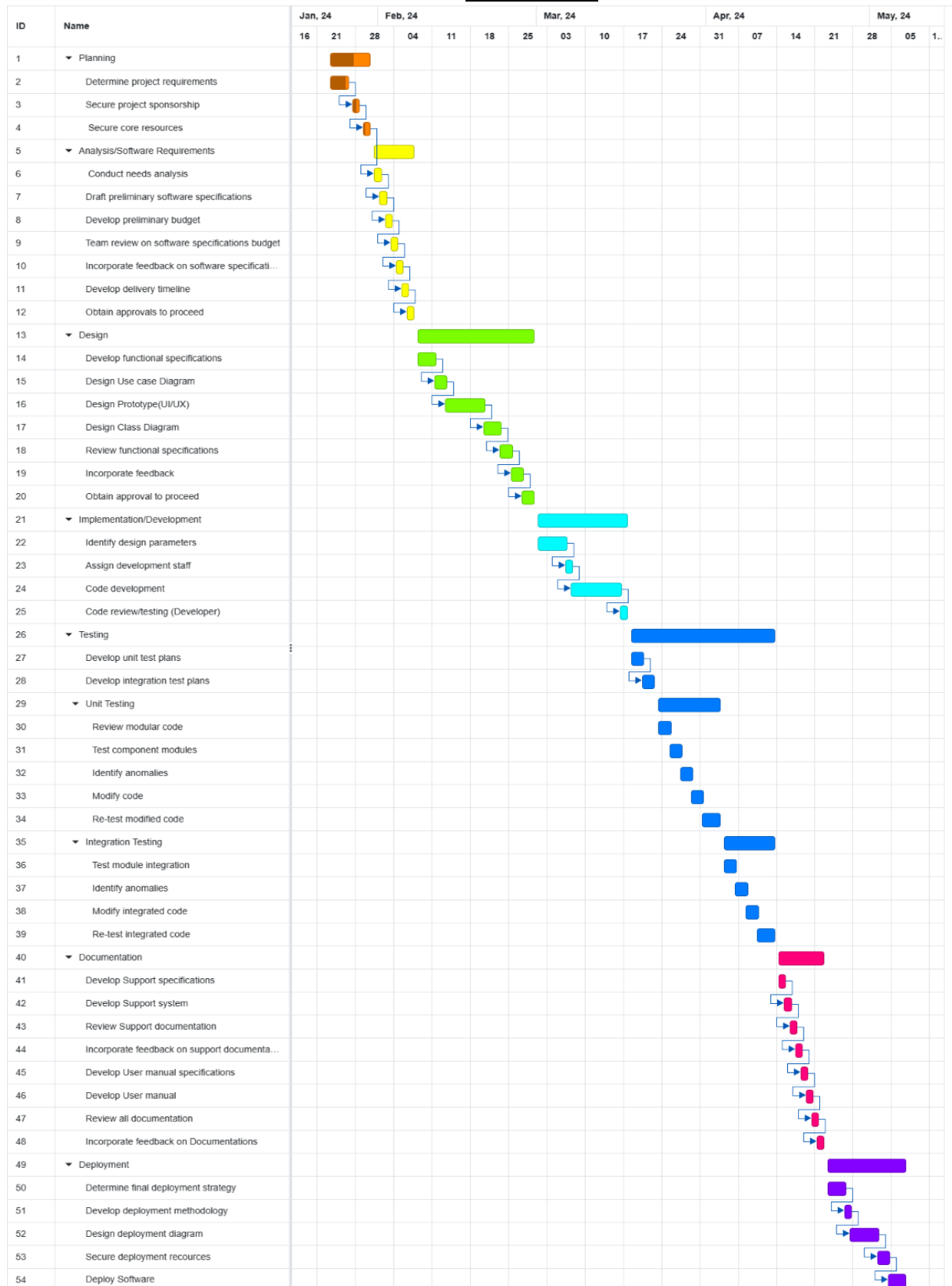
Change in Development Model: While Agile's XP model can be effective during the initial development stages of the platform, it's crucial to consider a change in the development approach after the public release. A gradual transition toward models like Feature-Driven Development (FDD) and Dynamic Systems Development Method (DSDM) may become necessary for long-term sustainability.

Schedule:

Work Breakdown Structure (WBS)



Gantt Chart



Project Risk:

Project Risk, Impact, Risk level

Date of last review: 30/04/2024

ID	Description of Risk	Impact	Risk Resonse	Risk Level	Risk owner
GDPR0	Planning				
GDPR0.1	Secure project sponsorship	Lack of Stakeholder Alignment	Clear understanding and communication between both parties	medium	Project manager
GDPR0.2	Secure core resources	Resource constraints	Resource Planning, Collaboration with Operations	low	Project manager
GDPR1	Analysis/Software Requirements				
GDPR1.1	Draft preliminary software specifications	Unclear Requirements Gathering	Iterative Approach	low	Project analyst
GDPR1.2	Develop preliminary budget	Inaccurate Cost Estimation	Contingency Planning, Detailed Cost Breakdown:	low	Project analyst
GDPR1.3	Obtain approvals to proceed (concept, timeline, budget)	Lack of Stakeholder Buy-In	Address Concerns, Clear Presentation	medium	Project analyst
GDPR2	Design				
GDPR2.1	Develop functional specifications	Ambiguity in Requirements	Documentation Precision, Stakeholder Collaboration	low	UI/UX designer
GDPR2.2	Develop prototype based on functional specifications	Misinterpretation of Specifications	Iterative Prototyping, Clear Communication	high	UI/UX designer
GDPR2.3	Review functional specifications	Lack of Thoroughness in Review	Diverse Reviewers, Structured Review Process	low	UI/UX designer
GDPR2.4	Obtain approval to proceed	Uncertainty or Resistance from Decision-Makers	Compelling Presentation, Address Concerns	low	UI/UX designer
GDPR4	Development				
GDPR4.1	Identify design parameters	Unclear or Evolving Design Requirements	Continuous Requirement Refinement, Documentation Updates	medium	Developer
GDPR4.2	Assign development staff	Skills and Resource Allocation	Skill Assessment, Training and Collaboration	high	Developer
GDPR4.3	Develop code	Code Quality and Consistency	Coding Standards, Code Reviews	low	Developer
GDPR4.4	Developer testing (primary debugging)	Inadequate Testing Coverage	Comprehensive Test Plans, Automated Testing	low	Developer
GDPR5	Testing				
GDPR5.1	Develop unit test plans using product specifications	Incomplete or Inaccurate Specifications	Specification Review, Traceability Matrix	high	Quality Tester
GDPR5.2	Develop integration test plans using product specifications	Complex Interactions and Dependencies	Incremental Testing Approach, Mocking and Simulation	high	Quality Tester
GDPR6	Unit Testing				
GDPR6.1	Test component modules to product specifications	Inadequate Test Coverage	Test Case Prioritization, Equivalence Partitioning	high	Quality Tester
GDPR6.2	Identify anomalies to product specifications	Ambiguities or Conflicting Specifications	Traceability and Documentation	high	Quality Tester
GDPR6.3	Modify code	Addressing Identified Anomalies	Regression Testing, Code Reviews and Collaboration	high	Quality Tester
GDPR7	Integration Testing				
GDPR7.1	Test module integration	Complex Integration Scenarios	Incremental Integration, Stubbing and Mocking	high	Quality Tester
GDPR7.2	Identify anomalies to specifications	Integration Inconsistencies	Cross-Module Validation, Logging and Tracing	high	Quality Tester
GDPR7.3	Modify code	Addressing Integration Anomalies	Collaborative Debugging, Version Control and Rollbacks	high	Quality Tester
GDPR7.4	Re-test modified code	Regression and Integration Testing Overheads	Automated Regression Testing, Comprehensive Test Suites	low	Quality Tester
GDPR8	Documentation				
GDPR8.1	Develop Help specification	Unclear or Incomplete Requirements	Stakeholder Involvement, Prototype and Feedback	low	Technical writer
GDPR8.2	Develop Help system	Complex Information Structure	Information Architecture, Usability Testing	medium	Technical writer
GDPR8.3	Develop user manuals specifications	Balancing Technical Details and User Comprehension	User-Centric Approach, Visual Aids	low	Technical writer
GDPR8.4	Develop user manuals	Consistency and Clarity	Style Guides and Templates, Peer Review	medium	Technical writer
GDPR8.5	Incorporate user documentation feedback	Diverse User Feedback	Feedback Analysis, Prioritization	low	Technical writer
GDPR9	Deployment				
GDPR9.1	Develop deployment methodology	Complex Deployment Scenarios	Standardization, Testing Environments	low	Deployment Team
GDPR9.2	Secure deployment resources	Resource Availability and Allocation	Resource Planning, Collaboration with Operations	high	Deployment Team
GDPR9.3	Train support staff	Knowledge Transfer and Training Efficiency	Comprehensive Training Materials, Hands-on Exercises	high	Deployment Team
GDPR10	Post Implementation Review				
GDPR10.1	Distribute to team members	Communication and Distribution Efficiency	Centralized Repository, Regular Updates	medium	SQA engineer
GDPR10.2	Create software maintenance team	Team Composition and Skills	Skill Assessment, Continuous Training	high	SQA engineer

[\[Online Excel Sheet\]](#)

Project Requirements:

Functional Requirements:

1. Software Login

- 1.1 The software (web version) will allow users to login with their given username and password.
- 1.2 The login credentials (username and password) will be verified with database records.
- 1.3 If the login successful, the home page of the user account will be displayed.
- 1.4 If the username and/or password has been inserted wrong, the random verification code. will be generated and sent to the user's email address by the system to retry login.
- 1.5 If the number of login attempts exceed its limit (3 times), the system will block the user account login for one hour.

Functional Priority: High

2. Distribution of Games

- 1.1 Users (gamers) will be able to buy games with their desired games in dual currency.
- 1.2 Developers (studio) will be able to sell games through the platform to gamers with different types of currency.
- 1.3 The platform will be able to manage the game prices and update them from time to time.
- 1.4 If a game gets a lower rating and gets reported by the gamers, it will be given review for 3 months or will be removed from the game library and 100% money will be given back to the buyer.
- 1.5 The price of a game will be set according to the popularity of games and game title and will be managed by the platform.

Functional Priority: High

3. Server Availability and Security Check

- 1.1 Game servers should be available 24/7 with the lowest latency possible. If a server is jammed with too many users, the platform will open sub servers to reduce the load.
- 1.2 Game servers will be set by the platform automatically. If a user is facing a connection issue the platform will change the server automatically. Also, the user will be given options to change the region too.
- 1.3 If an any suspicious activity is being observed by the server, the platform will cut the connection of the user and re-establish it. If the problem persists the user will be given a shadow ban and will be asked for further clarification.
- 1.4 Any server that has too much ping will be closed, and new server will be opened by the platform immediately.

- 1.5 Game server will always keep a connection to the user while playing games. So that no kind of unethical modifications can be made to the game.
- 1.6 High speed download servers will be provided to the gamers so that they can download/Update the games at high speed.

Functional Priority: Extremely High

4. Game Account Modifications

- 1.1 Users will be able to modify game libraries.
- 1.2 Users should be able to add new friends to the friends list so that they can play together.
- 1.3 Users will be able to rate/review the game in 3 systems (Stars, Comment, Percentile ranking) this rating will be reflected for future pricing of the game.
- 1.4 Users can give their player user tag as they like. They can either set up their profile as public or keep it anonymous.

Functional Priority: Medium

5. Payment

- 1.1 Users will be able to pay with different banking systems available in the country. Depending on the Banking system and their payment method not all Banks will be available on the platform.
- 1.2 Users will be able to pay with online Banking systems such as Bkash, Nagad.
- 1.3 If a user has MasterCard, he/she will be able to pay with it too.
- 1.4 Other popular payment systems will be available on the platform too.
- 1.5 All Payment credential (Account holder name, account number etc.) will be available with relevant selected payment method partners database records.
- 1.6 If the payment is successful, the system will generate the requested purchase almost instantly.
- 1.7 If the payment is unsuccessful due to any sort of issue, the user will get maximum 24 hours to complete the payment to confirm the purchase otherwise purchase request will be canceled.
- 1.8 All Payment records will be hidden. Only the account holder and the platform will be able to access the records.
- 1.9 The platform will not charge any hidden cost. What is shown is what will be paid by the user.
- 1.10 All payment procedures will be processed almost instantly so that users won't have to wait for the game to play.
- 1.11 If a user doesn't find any game worth playing, he/she will be able to refund 100% of the money within 24 hours of purchasing time.

Functional Priority: Extremely High

Non-Functional Requirements:

1. **Scalability:** The platform will be able to handle large numbers of users and game uploads, with the ability to scale resources as the user base grows.
2. **Performance:** All games will download and run quickly, and the platform will have minimal downtime and responsive user interface.
3. **Security:** User data will be encrypted and protected from fraud and hacking, with regular security audits and updates.
4. **Reliability:** The platform should be highly available and reliable, with regular backups to prevent data loss.
5. **Usability:** The user interface should be intuitive, user-friendly, and accessible to a wide range of users.
6. **Compatibility:** The platform should work smoothly on various hardware and software configurations, ensuring a consistent user experience.
7. **Legal Compliance:** The platform must adhere to relevant copyright and intellectual property laws, as well as regional legal requirements for game distribution.
8. **Regulatory Compliance:** Compliance with data protection and privacy regulations is a must, such as GDPR, to safeguard user data.
9. **Monetization and Revenue Model:** A clear revenue model, such as commission on game sales, should be established for the platform's sustainability.
10. **Data Analytics:** User data must be collected and analyzed to improve the platform and enhance recommendations.
11. **Backup and Disaster Recovery:** Implementation of robust backup and disaster recovery plans should be taken into mind to ensure data and service continuity.
12. **Documentation:** Maintaining comprehensive technical documentation for developers and administrators is needed to support ongoing development and maintenance.
13. **APIs and Integration:** APIs for third-party integration and support should be given for game developers to extend the platform's capabilities.
14. **Load Testing and Performance Optimization:** load testing and continuous optimization needs to be conducted frequently for the platform's performance to ensure it can handle user demand and run efficiently.

Pre-requisites: To successfully integrate and fulfill the functional and non-functional requirements for the game distribution platform some important pre-requisites need to be integrated first, so that all the above-mentioned can be fully integrated.

1. **High Performance Server:** The availability and performance of the Game distribution platform depends on the servers handling capacity and speed. With a high-performance server gamers and developers will be able download and push games efficiently without delay.
2. **Good Payment gateway:** The platform needs to Partner with secure and reputable payment gateways for processing transactions, ensuring users can make payments with confidence.
3. **Market Research:** In-depth market research is essential to identify user preferences, competitors, and trends in the gaming industry. This research will help shape your platform's features and capabilities.

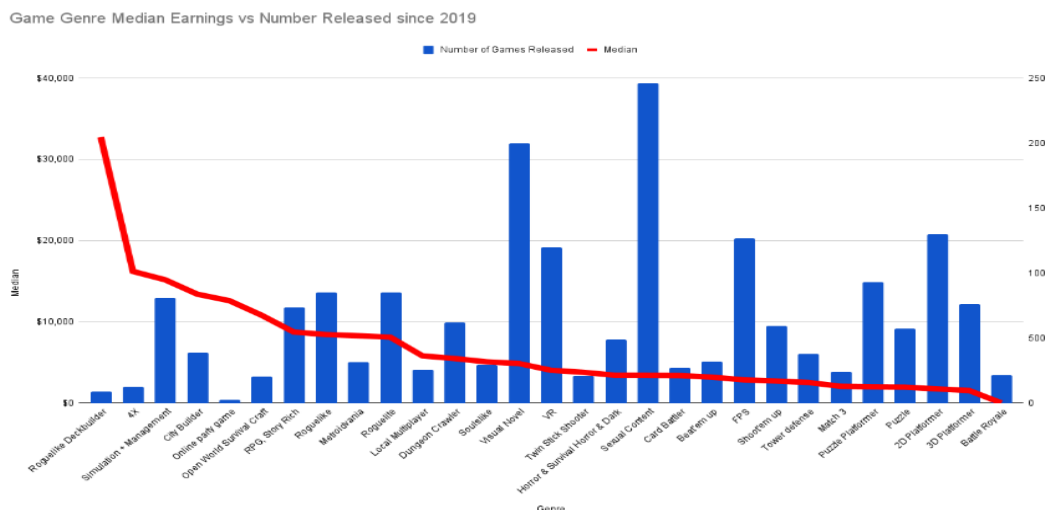


Fig 1: Genre releases and yearly revenue of games.

The distribution platform needs to focus on games that are hugely popular and have a better revenue on the market. From Fig 1, Games such as “RPG and Story” type games have good popularity and the market shares for such games are also high. Second to that “Rougelike” games are also popular and have a good revenue on the market. Also, the number of releases of these games are also high.

To create a successful Game Distribution Platform, **“It's essential to earn a place in gamers' hearts”**. While revenue may not always be the immediate goal, catering to niche or less popular games that have a dedicated community (Battle Royals, VR from the Bar graph) can help build loyalty among gamers. This loyalty can be a key factor in establishing a sustainable and trusted distribution platform.

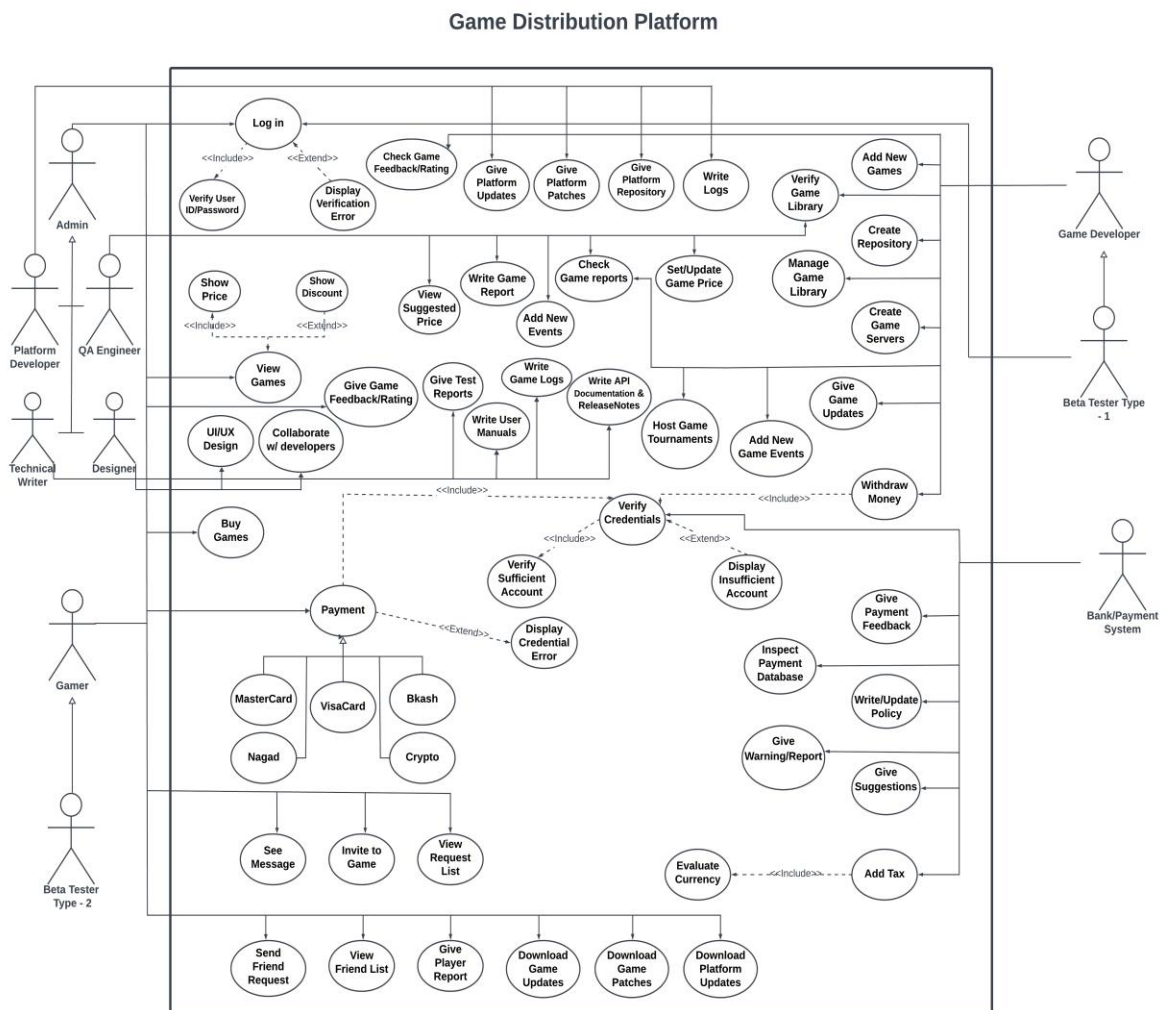
Conclusion: The platform will include games on 4 points.

1. Popularity

2. Market Revenue
3. Number of game Releases per year
4. Non-popular games with dedicated community

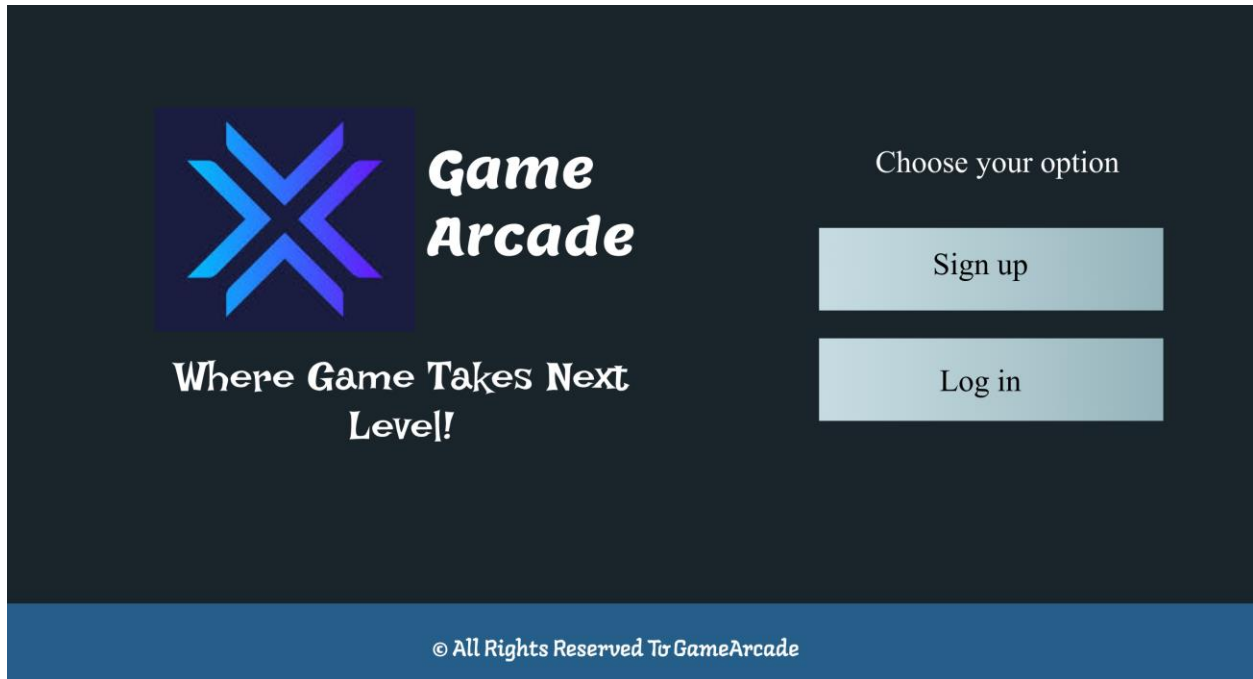
Secured Database: It is one of the most important parts of the Distribution platform. A secured database will ensure the safety of important data for gamers and developers also it will prevent any data breaches that might happen when the platform gains popularity.

USE CASE DIAGRAM



Prototype Design:

Starting page:



The starting page features a dark blue background. On the left, there is a logo consisting of a stylized 'X' made of blue and purple lines, followed by the text 'Game Arcade' in a white, bold, sans-serif font. Below the logo, the tagline 'Where Game Takes Next Level!' is written in a smaller, white, sans-serif font. To the right of the logo, the text 'Choose your option' is displayed in a white, sans-serif font. Below this text are two light blue buttons: 'Sign up' and 'Log in', both in a white, sans-serif font. At the bottom of the page, a dark blue footer contains the text '© All Rights Reserved To GameArcade' in a white, sans-serif font.

Game Arcade

Where Game Takes Next Level!

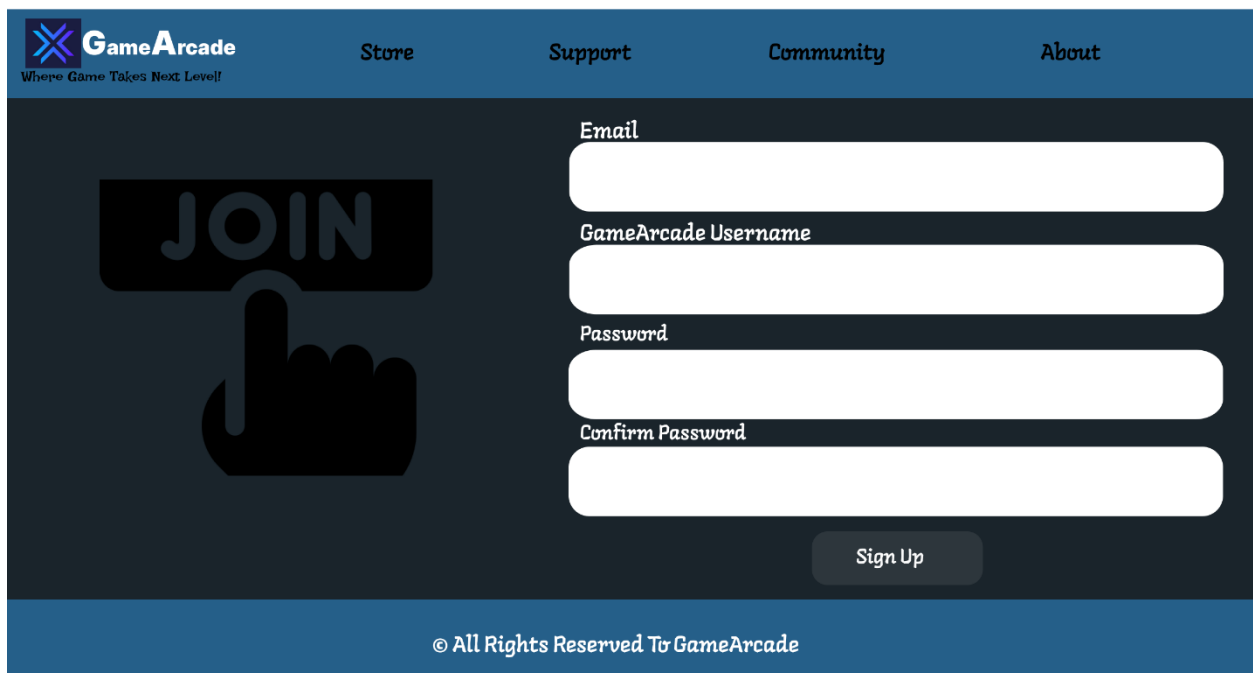
Choose your option

Sign up

Log in

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SignUp Page:



The sign-up page features a dark blue background. At the top, there is a navigation bar with the Game Arcade logo and tagline on the left, and links for 'Store', 'Support', 'Community', and 'About' on the right. The main content area is divided into two sections. On the left, there is a large, dark blue button with the word 'JOIN' in white, bold, sans-serif font, and a white hand icon pointing at it. On the right, there are four white input fields with labels: 'Email', 'GameArcade Username', 'Password', and 'Confirm Password'. Below the input fields is a dark blue button with the text 'Sign Up' in white, sans-serif font. At the bottom of the page, a dark blue footer contains the text '© All Rights Reserved To GameArcade' in a white, sans-serif font.

GameArcade
Where Game Takes Next Level!

Store Support Community About

JOIN

Email

GameArcade Username

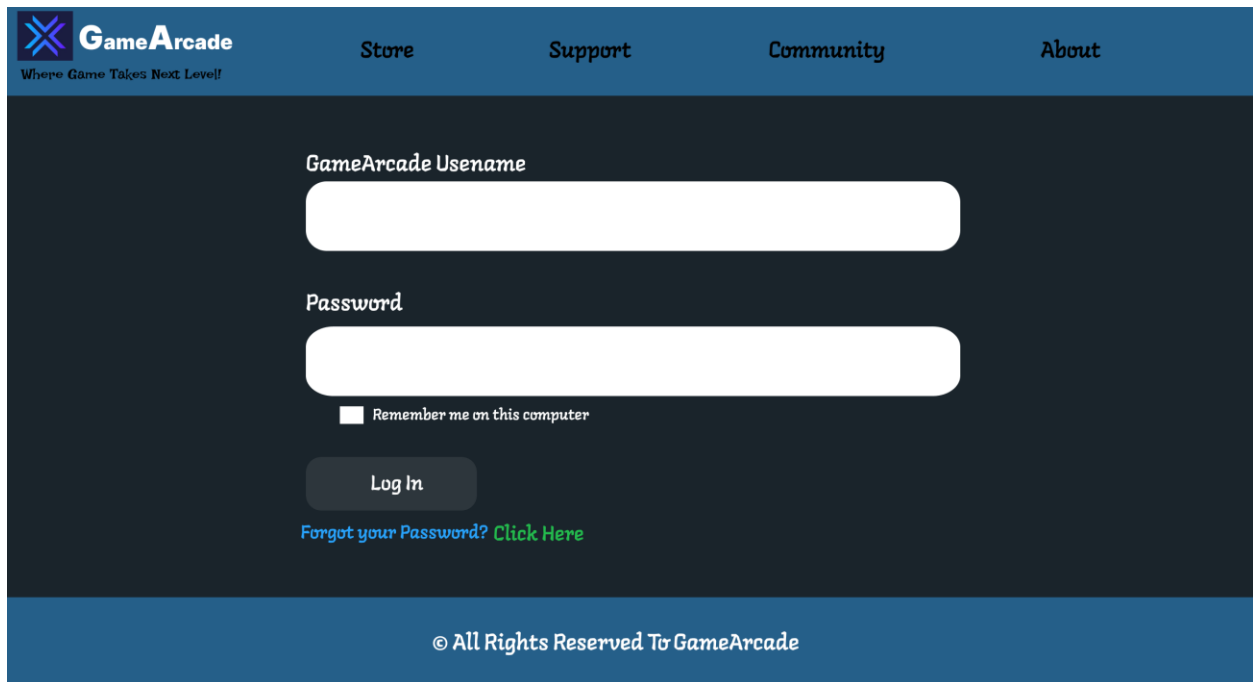
Password

Confirm Password

Sign Up

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SignIn Page:



The image shows the 'SignIn Page' for GameArcade. At the top, there is a dark blue header with the GameArcade logo on the left, which includes the text 'Where Game Takes Next Level!'. To the right of the logo are four navigation links: 'Store', 'Support', 'Community', and 'About'. The main content area has a dark blue background. It features two white input fields: the first is labeled 'GameArcade Username' and the second is labeled 'Password'. Below the password field is a checkbox labeled 'Remember me on this computer'. A 'Log In' button is positioned below the checkbox. A link that says 'Forgot your Password? Click Here' is located below the 'Log In' button. At the bottom of the page, there is a dark blue footer with the text '© All Rights Reserved To GameArcade'.

GameArcade
Where Game Takes Next Level!

Store Support Community About

GameArcade Username

Password

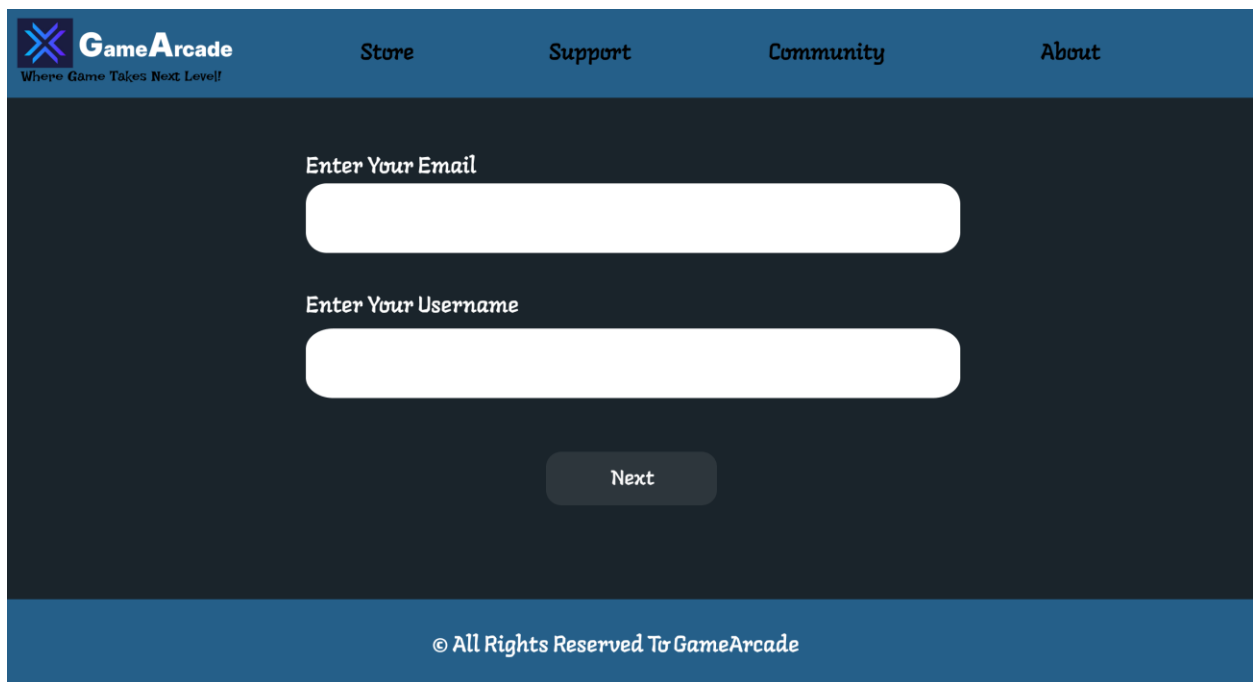
☐ Remember me on this computer

Log In

Forgot your Password? [Click Here](#)

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Recovery Page1: Account validation



The image shows the 'Recovery Page1: Account validation' for GameArcade. It has the same header and footer as the SignIn page. The main content area has a dark blue background. It features two white input fields: the first is labeled 'Enter Your Email' and the second is labeled 'Enter Your Username'. Below the username field is a 'Next' button. The footer contains the text '© All Rights Reserved To GameArcade'.

GameArcade
Where Game Takes Next Level!

Store Support Community About


Enter Your Email

Enter Your Username

Next

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Recovery Page2: Changing Password

**GameArcade**
Where Game Takes Next Level!

StoreSupportCommunityAbout

Enter OTP *(valid for only 3 minutes)*


Enter Your New Password

Confirm Your New Password

Log In

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Payment Page:

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ViewFriendsGamesSupportCommunityuser_profile






Your StoreNews & NoteworthyCategoriesPoints ShopSearch Here

user_profile's Payment History

Date	Items	Type	Total
15 FEB 2024	BATMAN: ARKHAM COLLECTION	VISA	\$18.23 USD


Purchase

Select Your Payment Option




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User Profile Page:


**GameArcade**
Where Game Takes Next Level!


[View](#) [Friends](#) [Games](#) [Help](#) [Community](#) [user_profile](#)

[Your Store](#) [News & Noteworthy](#) [Categories](#) [Points Shop](#)




user_profile

Dhaka, Bangladesh 

Currently Online 

Edit Profile


Recent Activity



Apex Legends™

Apex Legends is the award-winning, free-to-play Hero Shooter from Respawn Entertainment. Master an ever-growing roster of legendary characters with powerful abilities, and experience strategic squad play and innovative gameplay in the next evolution of Hero Shooter and Battle Royale.


Last Visit: 40 min ago



NARAKA: BLADEPOINT

Dive into the legends of the Far East in NARAKA: BLADEPOINT; team up with friends in fast-paced melee fights for a Battle Royale experience unlike any other. Find your playstyle with a varied cast of heroes with unique skills. More than 20 million players have already joined the fray, play free now!


Last Visit: 9 hr ago





Palworld


Fight, farm, build and work alongside mysterious creatures called "Pals" in this completely new multiplayer, open world survival and crafting game!


Last Visit: 1 day ago

 Notification


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 pro gamer

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Home Page:

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Browse Categories

Top Sellers

New Releases

Upcoming

VR Titles

Browse By Genre

Action

Adventure

Racing

RPG

Recently Viewed

Counter Strike 2

Pubg: Battleground

Recommended

Counter Strike 2

Elden Ring

Pubg: Battleground

Assasins Creed


Valorant

Pes: 2024

Farcry 5

Halo: Infinty

Featured & Recommended




Batman™: Arkham Knight

Now Available

Top Seller

BDT 1,999 Tk / \$18.23 USD

Updates & Offers




MIDWINTER IN MIDDLE-EARTH SALE

MIDWEEK DEAL

Offer ends 29 Feb @ 11:00pm.

Up to -85%




ZERO HOUR

MIDWEEK DEAL

Offer ends 4 Mar @ 11:00pm.


-40% ~~\$8.99~~ \$5.39 USD



SONS OF THE FOREST

v1.0 NOW AVAILABLE

\$10.49 USD



NEW AGE

FRANCHISE SALE

MIDWEEK DEAL


Offer ends 29 Feb @ 11:00pm.

Up to -75%

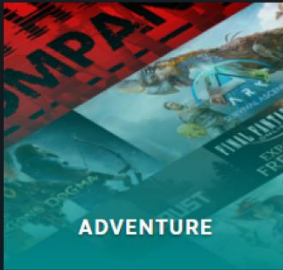
[View More](#)

Home Page: Browse More Games


Browse By Category



FIGHTING











ADVENTURE



STRATEGY


Trending Top Sellers Upcoming

	NBA 2K24 Sports, Basketball, Simulation, eSports -84% 4,400 Tk 719.84 Tk	 Overall User Reviews: Very Positive (1,048,321)  
	Tom Clancy's Rainbow Six® Siege FPS, PvP, eSports, Multiplayer -60% 5,999 Tk 2399.6 Tk	
	Dying Light 2: Reloaded Edition Action, Open World, Co-op, Adventure -50% 4,400 Tk 2249.5 Tk	
	Middle-earth™: The Shadow Bundle Action, Adventure, Open World, RPG -85% 3,400 Tk 524.85 Tk	
	WRC 7 FIA World Rally Championship Racing, Automobile Sim, Multiplayer, Simulation -90% 1,000 Tk 199.9 Tk	

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Inside Game Page:

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BATMAN™: ARKHAM KNIGHT

Now Available BDT 1,999 Tk / \$18.23 USD

Popular tags for this product: [Action](#) [Dark](#) [Fantasy](#)

BATMAN™: ARKHAM KNIGHT BRINGS THE AWARD-WINNING ARKHAM TRILOGY FROM ROCKSTEADY STUDIOS TO ITS EPIC CONCLUSION. DEVELOPED EXCLUSIVELY FOR NEW-GEN PLATFORMS, BATMAN: ARKHAM KNIGHT INTRODUCES ROCKSTEADY'S UNIQUELY DESIGNED VERSION OF THE BATMOBILE.

RECENT REVIEWS:
[OVERWHELMINGLY POSITIVE \(1,938\)](#)
ALL REVIEWS:
[VERY POSITIVE \(96,155\)](#)
RELEASE DATE: 23 JUN, 2015
DEVELOPER: [ROCKSTEADY STUDIOS](#)
PUBLISHER: [WB GAMES](#)

Buy Batman™: Arkham Knight

BDT 1,999Tk [Purchase](#)

Packages that include this game

Buy Batman™: Arkham Knight Premium


Includes 2 items: Batman™: Arkham Knight, Batman™: Arkham Knight Season Pass


BDT 2,999Tk [Purchase](#)


Buy Batman™: Arkham Collection


Includes 4 items: Batman: Arkham Asylum Game of the Year Edition, Batman: Arkham City - Game of the Year Edition, Batman™: Arkham Knight, Batman™: Arkham Knight Season Pass


BDT 2,999Tk [Purchase](#)


 [Single-player](#)

 [Multi-player](#)


 [Remote Play on Phone](#)


 [Remote Play on Tablet](#)

 [Remote Play on TV](#)


 [Family Sharing](#)

Full Controller Support

 [Xbox Controllers](#)

 [Support for other devices is not known](#)

Recent Events & Announcements



NEWS Tue, December 19, 2023 2:43 AM +06
From creators of the Batman Arkham series

Inside Game Page: (Details)

About This Game

Batman™: Arkham Knight brings the award-winning Arkham trilogy from Rocksteady Studios to its epic conclusion. Developed exclusively for New-Gen platforms, Batman: Arkham Knight introduces Rocksteady's uniquely designed version of the Batmobile. The highly anticipated addition of this legendary vehicle, combined with the acclaimed gameplay of the Arkham series, offers gamers the ultimate and complete Batman experience as they tear through the streets and soar across the skyline of the entirety of Gotham City. In this explosive finale, Batman faces the ultimate threat against the city that he is sworn to protect, as Scarecrow returns to unite the super criminals of Gotham and destroy the Batman forever.

Product Features:

- “Be The Batman” – Live the complete Batman experience as the Dark Knight enters the concluding chapter of Rocksteady’s Arkham trilogy. Players will become The World’s Greatest Detective like never before with the introduction of the Batmobile and enhancements to signature features such as FreeFlow Combat, stealth, forensics and navigation.
- Introducing the Batmobile – The Batmobile is brought to life with a completely new and original design featuring a distinct visual appearance and a full range of on-board high-tech gadgetry. Designed to be fully drivable throughout the game world and capable of transformation from high speed pursuit mode to military grade battle mode, this legendary vehicle sits at the heart of the game’s design and allows players to tear through the streets at incredible speeds in pursuit of Gotham City’s most dangerous villains. This iconic vehicle also augments Batman’s abilities in every respect, from navigation and forensics to combat and puzzle solving creating a genuine and seamless sense of the union of man and machine.

Read More

Languages:

	Interface	Full Audio	Subtitles
English	✓	✓	✓
French	✓	✓	✓
Italian	✓	✓	✓
German	✓	✓	✓
Spanish - Spain	✓	✓	✓
Korean	✓		✓
Portuguese - Brazil	✓	✓	✓
Polish	✓		✓
Russian	✓		✓
Japanese	✓	✓	✓

TITLE: Batman™: Arkham Knight
GENRE: [Action](#), [Adventure](#)

DEVELOPER: [Rocksteady Studios](#)
PUBLISHER: [WB Games](#)
FRANCHISE: [WB Games](#), [Batman: Arkham](#)
RELEASE DATE: 23 Jun, 2015

- Visit the website
- View the manual
- View the update history
- Read related news
- View discussions
- View community groups

System Requirements

• MINIMUM:

- Requires a 64-bit processor and operating system
- OS *: Win 7 SP1, Win 8.1 (64-bit Operating System Required)
- Processor: Intel Core i5-750, 2.67 GHz | AMD Phenom II X4 965, 3.4 GHz
- Memory: 6 GB RAM
- Graphics: Graphics: NVIDIA GeForce GTX 660 (2 GB Memory Minimum) | AMD Radeon HD 7870 (2 GB Memory Minimum)
- DirectX: Version 11
- Network: Broadband Internet connection
- Storage: 45 GB available space

• RECOMMENDED:


- Requires a 64-bit processor and operating system
- OS *: Win 7 SP1, Win 8.1 (64-bit Operating System Required)
- Processor: Intel Core i7-3770, 3.4 GHz | AMD FX-8350, 4.0 GHz
- Memory: 8 GB RAM
- Graphics: NVIDIA GeForce GTX 760 - 3 GB Memory Recommended | AMD Radeon HD 7950 - 3 GB Memory Recommended
- DirectX: Version 11
- Network: Broadband Internet connection
- Storage: 55 GB available space

Read More

Inside Game Page: (Reviews & Browse More Games)


More from WB Games

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Middle-earth™: Shadow o...

-85% ~~\$29.99~~ **\$4.49 USD**



Hogwarts Legacy

\$59.99 USD



Mortal Kombat 1


\$69.99 USD

Customer Reviews


Overall Reviews:
Very Positive (76,368 reviews)

Recent Reviews:
Overwhelmingly Positive (2,033 reviews)

Showing 53,853 reviews of this game



Jaina Solo
1,022 products in account
95 reviews




Recommended
15.6 hrs on record (7.5 hrs at review time)


★

POSTED: 2 FEBRUARY

Rocksteady has become the definition of:
"You either die a hero or you live long enough to see yourself
become the villain."



Topsy
5 reviews



Recommended
47.8 hrs on record (46.9 hrs at review time)

★

POSTED: 1 FEBRUARY

DONT PLAY SSKTJKL PLAY THIS INSTEAD

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Review Page:

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**Jaina Solo**
1,022 products in account
95 reviews

**Recommended**
15.6 hrs on record (7.5 hrs at review time)


POSTED: 2 FEBRUARY

Rocksteady has become the definition of:
"You either die a hero or you live long enough to see yourself become the villain."

Was this review helpful?

 Yes  No  Funny  Award

563 people found this review helpful
86 people found this review funny 22

**Recommended**
88.0 hrs on record

Posted: 3 March, 2022
I'm Vengeance

**Topsy**
5 reviews

**Recommended**
47.8 hrs on record (46.9 hrs at review time)

POSTED: 1 FEBRUARY

DONT PLAY SSKTJKL PLAY THIS INSTEAD


Was this review helpful?

 Yes  No  Funny  Award

412 people found this review helpful
6 people found this review funny

 2  3  12


**Zero4ty1**
827 products in account

**Recommended**
15.6 hrs on record

Posted: 2 February


Rocksteady has become the definition of:
"You either die a hero or you live long enough to see yourself become the villain."

44 people found this review funny 11

**Recommended**
3.7 hrs on record

Posted: 8 March, 2022
If you are justice, please do not lie. What is the price, for your blind eye?

9 people found this review funny 5

**Recommended**
4.8 hrs on record

Posted: 9 October, 2023
looks better than most games today

**Recommended**
55.0 hrs on record

Posted: 10 March, 2022
SOMETHING IN THE WAY
MMMMMMMMMMMMMMMM

Edit for 11/11/2022 I'm replaying this game out of respect for you, Kevin Conroy. May you rest in peace for we will keep the

185 people found this review helpful
3 people found this review funny 0

**Recommended**
47.3 hrs on record

Posted: May 29, 2016
Months ago this game was bashed by every PC user for the horrible launch. Since then I've watched and read dozens of reviews of both PC and PS versions and it was still getting mixed bad opinions. Therefore I had low expectations when I bought it a few days ago, only expecting the tech issues to be fixed.

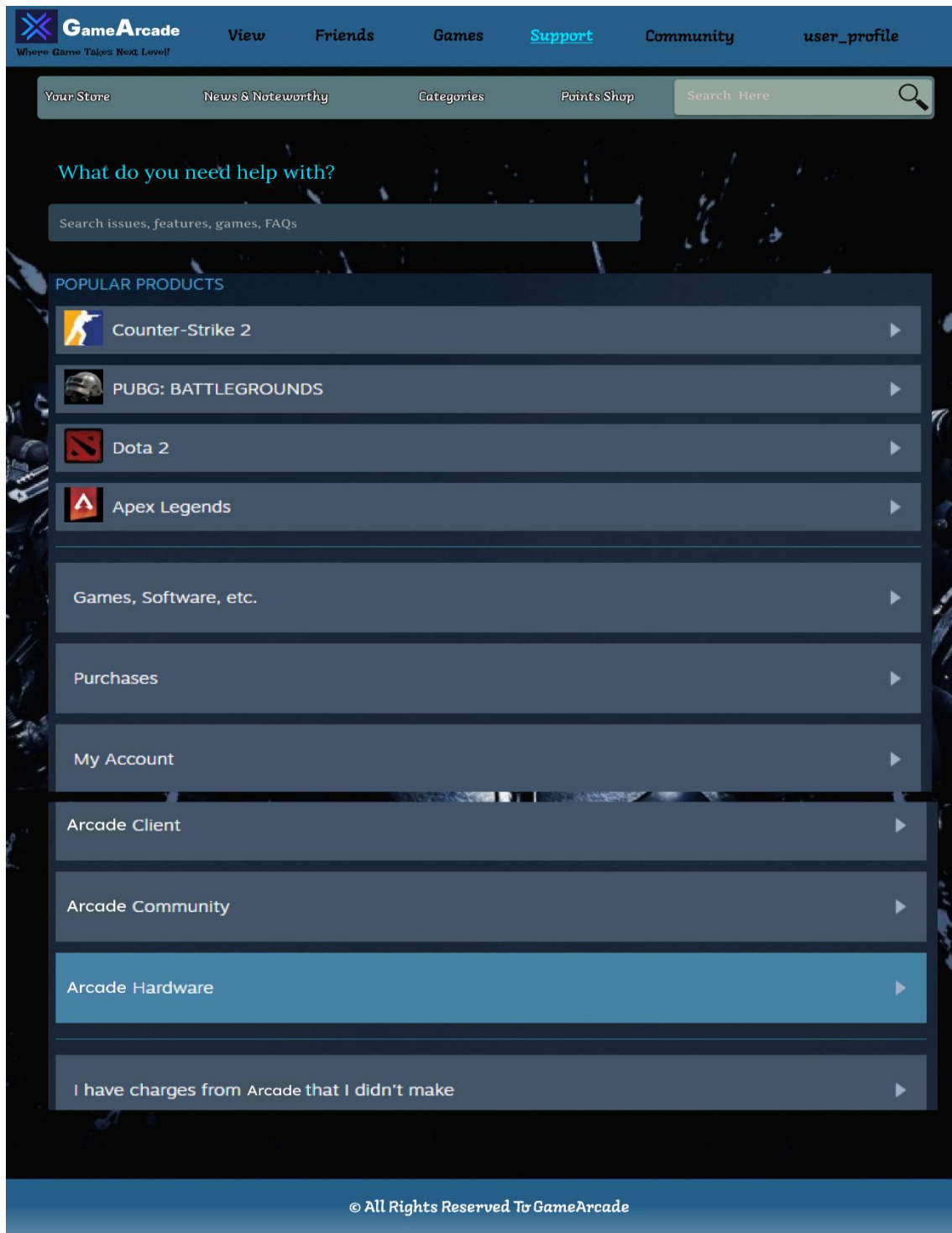
Now that I've finished the game I can safely say it was a great and very enjoyable experience. I won't spoil anything here, not a big fan of the ending but it was a great story. All the little touches and details you would expect from the previous games are here as well. Never had

**Riddermark**
279 products in account

Load more Reviews >>

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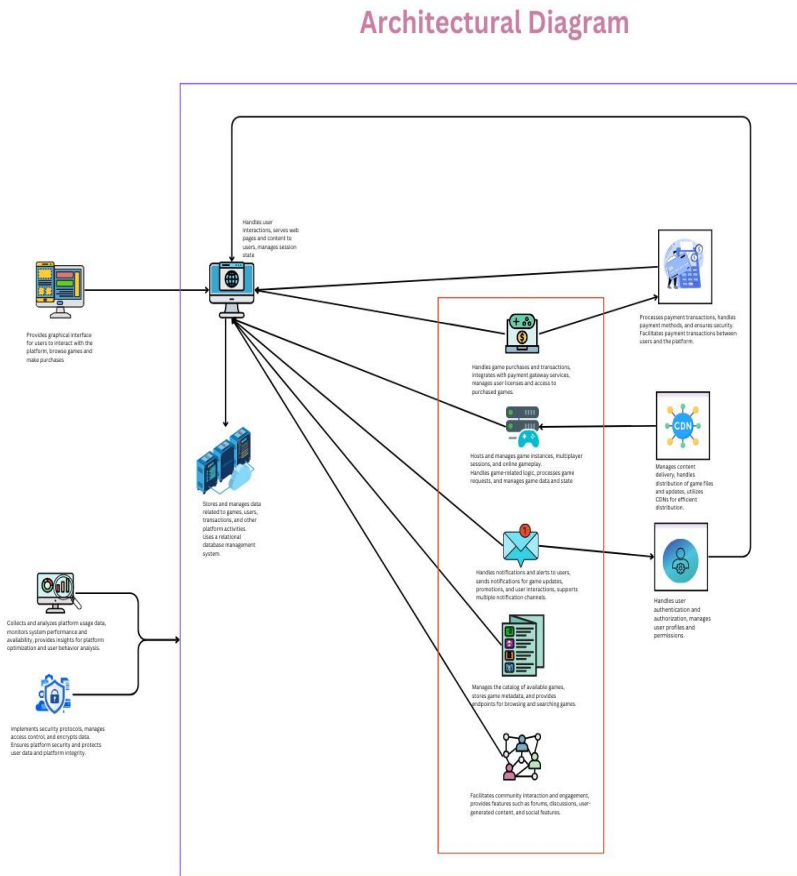
Support Page:



[\[Design Link\]](#)

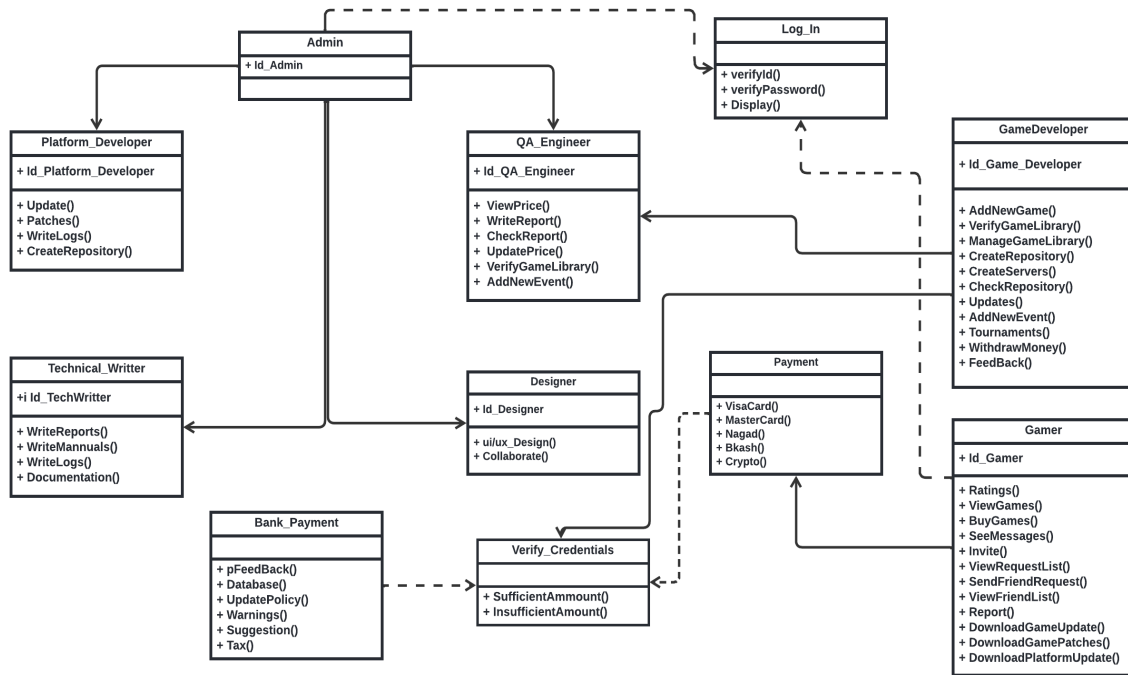
[\[Playable Link\]](#)

Archetectural Diagram:

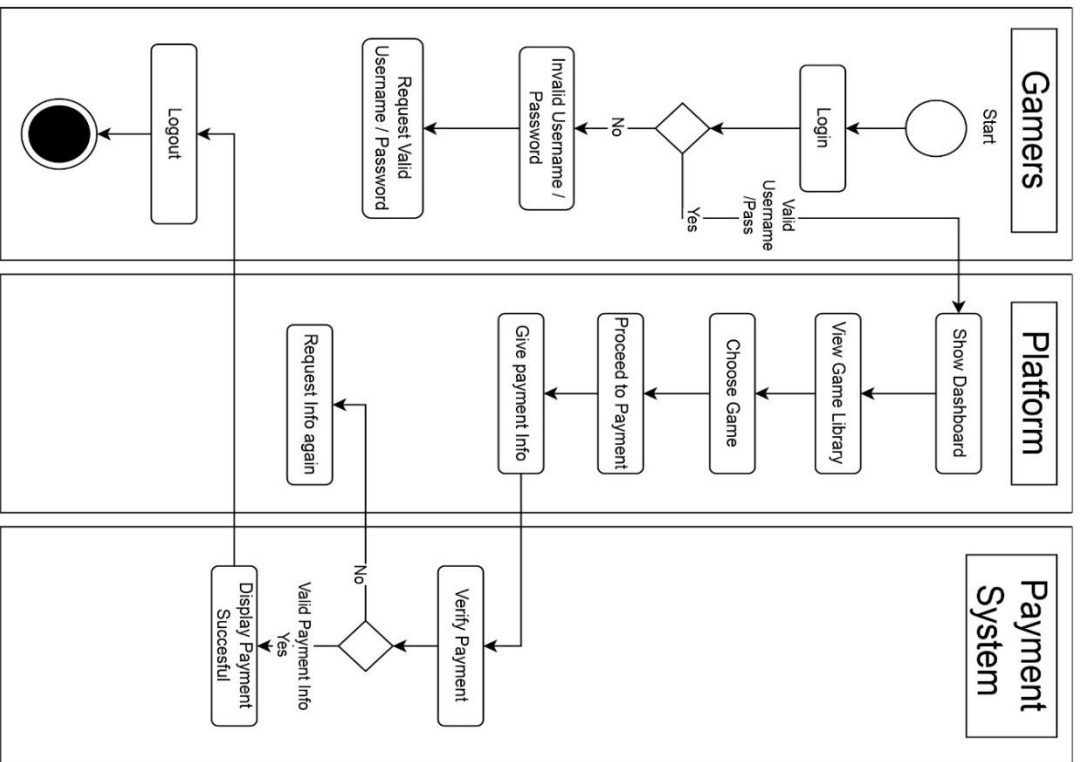


[[Online Link](#)]

Class Diagram:

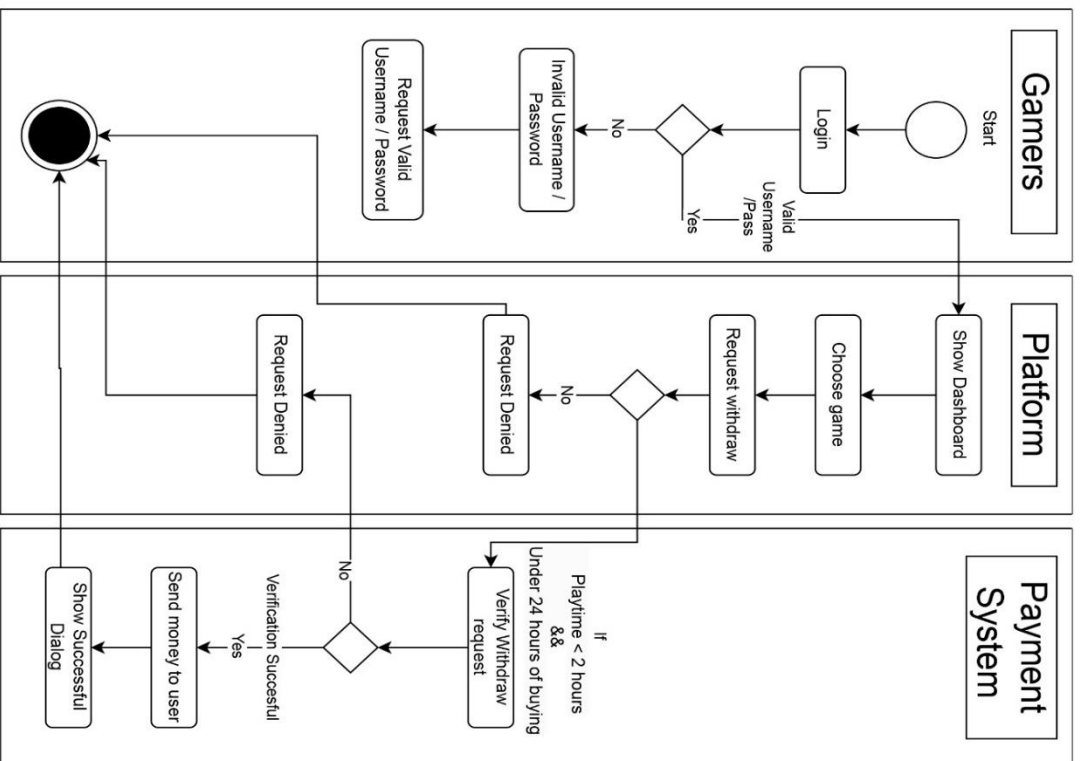


Activity Diagram of Buying Game



Activity Diagram of Money Withdrawing

N.B: If the withdrawal request is under 24 hours of buying the game and the playtime is under 2 hours



Activity Diagram:

Test/SQA Plan:

Test -01

Test Case ID	GDPTC001	Test Case Description	Test the user login functionality.		
Created By	Shohan	Reviewed By	Abir	Version	1

QA Tester's Log

Review comments from Bill incorporate in version 2.1

Tester's Name	Shohan	Date Tested	30-Mar-24	Test Case (Pass/Fail/Not Executed)	Pass
---------------	--------	-------------	-----------	------------------------------------	------

S #	Prerequisites:
1	The web application should open successfully in any browser
2	
3	
4	

S #	Test Data
1	username = alex007
2	password = Ab6#0FG8
3	
4	

Test Scenario

Verify that users can log in to the software using valid credentials.

Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended
1	Open the software application	User Login interface of the software is displayed.	As Expected	Pass
2	Enter valid username and password.	Username and password are entered.	As Expected	Pass
3	Click on the login button.	The user is logged in and directed to the home page.	As Expected	Pass

Test-02

Test Case ID	DGDPTC008	Test Case Description	Verify that users can search for games based on different criteria.		
Created By	Abir	Reviewed By	Shohan	Version	1.0

QA Tester's Log

Review comments from Bill incorporate in version 2.1

Tester's Name	Abir	Date Tested	1-Jan-2017	Test Case (Pass/Fail/Not Executed)	Pass
---------------	------	-------------	------------	------------------------------------	------

S #	Prerequisites:
1	Access to Chrome Browser
2	Logged in
3	Land on Home page

S #	Test Data
1	User id: a123
2	Pass: a123
3	Halo 2
4	Batman : Arkham city

Test Scenario	Verify on search functionality
----------------------	--------------------------------

Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended
1	Navigate to the game search feature	The cursor should blink	As Expected	Pass
2	Input search keywords or filters (game title, genre, developer, etc.).	Text can be entered	As Expected	Pass
3	Click on Search	Relevant games matching the search criteria should be displayed	As Expected	Pass

Test – 03

Test Case ID	DGDPTC017	Test Case Description	Refund Process		
Created By	Abir	Reviewed By	Shohan	Version	1.0

QA Tester's Log	Review comments from Bill incorporate in version 2.1
------------------------	--

Tester's Name	Abir	Date Tested	1-Jan-2017	Test Case (Pass/Fail/Not Executed)	Pass
----------------------	------	--------------------	------------	---	------

S #	Prerequisites:
1	Logged in
2	Land on Game page
3	Credit card details provided
4	Verification of card details

S #	Test Data
1	Card number = 123456789
2	Expiration date = 1/1/2030
3	Security code = 12gh@r21
4	

Test Scenario	Verify that users can request refunds for game purchases within the specified timeframe.
----------------------	--

Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended
1	Request a refund for a purchased game within the refund window	The refund request should be processed within the specified timeframe,	As Expected	Pass
2	Provide a reason for the refund request.	Text can be entered	As Expected	Pass
3	Verify the refund status and processing time.	User should receive the refunded amount without any complications	As Expected	Pass

Test – 04

Test Case ID	DGDPTC023	Test Case Description	Developer Support - Documentation Review		
---------------------	-----------	------------------------------	--	--	--

Created By	Abir	Reviewed By	Shohan	Version	1.0
-------------------	------	--------------------	--------	----------------	-----

QA Tester's Log	Review comments from Bill incorporate in version 2.1
------------------------	--

Tester's Name	Abir	Date Tested	1-Jan-2017	Test Case (Pass/Fail/Not Executed)	Pass
----------------------	------	--------------------	------------	---	------

S #	Prerequisites:
1	Logged in as Developer
2	Access to all relevant documentation
3	
4	

S #	Test Data
1	Dev_Id: a11dev
2	Dev_Pass: a11@dev
3	
4	

Test Scenario	Verify that comprehensive technical documentation is provided to assist developers in integrating their games with the platform
----------------------	---

Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended
1	Access the developer resources section of the platform	Transition to resources and documentation page	As Expected	Pass
2	Review available technical documentation, APIs, and integration guides.	Developers should have access to well-organized and informative documentation to facilitate smooth integration with the platform	As Expected	Pass
3	Verify completeness, clarity, and relevance of the documentation.	Comprehensive and technical issues fixed	As Expected	Pass

Test – 05

Test Case ID	DGDPTC029	Test Case Description	Notification Testing		
Created By	Abir	Reviewed By	Shohan	Version	1.0

QA Tester's Log	Review comments from Bill incorporate in version 2.1
------------------------	--

Tester's Name	Abir	Date Tested	1-Jan-2017	Test Case (Pass/Fail/Not Executed)	Pass
----------------------	------	--------------------	------------	---	------

S #	Prerequisites:
1	Logged in
2	Land on User profile page
3	Notification enabled
4	Ensure necessary permissions to send and receive notifications

S #	Test Data
1	New notification: check out this new game from Ubisoft
2	New notification: system error fixed for message requests
3	
4	

Test Scenario

Verify that users receive timely and relevant notifications for important events, such as game updates or event registrations.

Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended
1	Trigger various events that should generate notifications (game updates, event registrations, etc.).	Receive notification of updates and relevant events	As Expected	Pass
2	Monitor notification delivery across different channels (email, in-app, etc.).	Receive notifications in different channels	As Expected	Pass

Test – 06

Test Case ID	DGDPTC031	Test Case Description	User Profile Customization		
Created By	Abir	Reviewed By	Shohan	Version	1.0

QA Tester's Log

Review comments from Bill incorporate in version 2.1

Tester's Name	Abir	Date Tested	1-Jan-2017	Test Case (Pass/Fail/Not Executed)	Pass
---------------	------	-------------	------------	------------------------------------	------

S #	Prerequisites:
1	Access to Chrome Browser
2	Logged in
3	Land on User profile page
4	

S #	Test Data
1	Username: AbirB
2	Contact: 01231221345
3	Bio: Esports Tournament at Dhaka Summer Con. Finalists
4	

Test Scenario

Verify that users can customize their profile settings and preferences

Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended
1	Access the user profile settings page	User profile settings should be customizable	As Expected	Pass
2	Modify profile details such as display name, avatar, bio, and privacy settings	Profile details updated	As Expected	Pass
3	Save changes and verify that they are applied correctly.	Changes should be reflected accurately across the platform.	As Expected	Pass

Test – 07

Test Case ID	GDPTC002	Test Case Description	Test than user can purchase games		
Created By	Shohan	Reviewed By	Abir	Version	1

QA Tester's Log

Review comments from Bill incorporate in version 2.1

Tester's Name	Shohan	Date Tested	5-Apr-24	Test Case (Pass/Fail/Not Executed)	Pass
----------------------	--------	--------------------	----------	---	------

S #	Prerequisites:
1	User is logged in
2	Game store is accessible

S #	Test Data
1	username = alex007; password = Ab6#0FG8
	Preferred currency = USD; payment method = VISA

Test Scenario

Verify that users (gamers) can purchase games using dual currency (Taka and USD).

Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended
1	Log in to the platform.	User is logged in.	As Expected	Pass
2	Navigate to the game store.	Game store is displayed.	As Expected	Pass
3	Select a game for purchase.	Selected game's details are displayed.	As Expected	Pass
4	Choose the preferred currency and payment method.	Selected currency and payment method are set.	As Expected	Pass
5	Complete the purchase process.	The game is purchased and added to the user's library.	As Expected	Pass

Test – 08

Test Case ID	GDPTC005	Test Case Description	Test the Payment Processing		
Created By	Shohan	Reviewed By	Abir	Version	1

QA Tester's Log

Review comments from Bill incorporate in version 2.1

Tester's Name	Shohan	Date Tested	10-Apr-24	Test Case (Pass/Fail/Not Executed)	Pass
----------------------	--------	--------------------	-----------	---	------

S #	Prerequisites:
1	Game selected for purchase.
2	Payment details are available
3	
4	

S #	Test Data
1	payment method = VISA
2	Card number = 12345678; Expiration date = 1/1/2030; Security code = 12gh@r21
3	
4	

Test Scenario

Verify that users can successfully complete payments for game purchases using different payment methods.

Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended
1	Select a game for purchase.	Selected game's details are displayed.	As Expected	Pass
2	Choose the preferred payment method.	Selected payment method is set.	As Expected	Pass
3	Enter payment details and complete the transaction.	Payment is processed and game purchase is confirmed.	As Expected	Pass

Test – 09

Test Case ID	GDPTC006	Test Case Description	Test that user can register.		
Created By	Shohan	Reviewed By	Abir	Version	1

QA Tester's Log

Review comments from Bill incorporate in version 2.1

Tester's Name	Shohan	Date Tested	12-Apr-24	Test Case (Pass/Fail/Not Executed)	Pass
---------------	--------	-------------	-----------	------------------------------------	------

S #	Prerequisites:
1	Registration page is accessible

S #	Test Data
1	Valid registration details (username= alex007, email= alex@gmail.com, password= Ab6#0FG8, Confirm Password = Ab6#0FG8.)

Test Scenario

Verify that users can successfully complete registration.

Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended
1	Access the registration page.	Registration page is displayed.	As Expected	Pass
2	Enter valid registration details.	Registration details are entered.	As Expected	Pass
3	Submit the registration form.	New user is registered and a confirmation email is sent.	As Expected	Pass

Test – 10

Test Case ID	GDPTC007	Test Case Description	Test that user can recover their password.		
Created By	Shohan	Reviewed By	Abir	Version	1

QA Tester's Log

Review comments from Bill incorporate in version 2.1

Tester's Name	Shohan	Date Tested	15-Apr-24	Test Case (Pass/Fail/Not Executed)	Pass
---------------	--------	-------------	-----------	------------------------------------	------

S #	Prerequisites:
1	"Forgot Password" link is accessible

S #	Test Data
1	username= alex007, email= alex@gmail.com

Test Scenario	Verify that users can successfully recover their password.
---------------	--

Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended
1	Click on the "Forgot Password" link.	Password recovery page is displayed.	As Expected	Pass
2	Enter the registered email address	Email address is entered.	As Expected	Pass
3	Check the email for password reset instructions.	User receives an email with OTP.	As Expected	Pass

Maintenance Plan:

1. **Regular Updates and Patches:** The platform should undergo regular updates and patches to fix bugs, enhance security, and add new features. These updates should be scheduled and communicated to users in advance to minimize disruptions.
2. **Monitoring and Performance Optimization:** Continuous monitoring of the platform's performance, including server uptime, latency, and user feedback, is crucial. Performance optimization measures should be implemented based on monitoring results to ensure optimal user experience.
3. **Security Audits and Vulnerability Management:** Regular security audits should be conducted to identify and address potential vulnerabilities. Patching security flaws promptly is essential to prevent data breaches and ensure user data safety.
4. **Backup and Disaster Recovery:** Robust backup mechanisms should be in place to safeguard user data in case of system failures or disasters. Regular testing of backup and disaster recovery procedures is necessary to ensure they function as intended.
5. **User Support and Community Engagement:** Providing timely and effective user support is vital for maintaining user satisfaction. The platform should have channels for users to report issues and receive assistance promptly. Engaging with the community through forums, social media, and feedback channels can also help gather insights for improvement.
6. **Compliance Updates:** Stay informed about changes in relevant laws and regulations, especially regarding data protection and privacy. Ensure that the platform remains compliant with these regulations through regular reviews and updates to policies and procedures.
7. **Documentation Maintenance:** Keep technical documentation up to date to assist developers and administrators in understanding and using the platform effectively. Documentation should cover installation procedures, API references, troubleshooting guides, and best practices.

8. **Performance Testing and Scalability:** Conduct periodic performance testing to evaluate the platform's scalability and ability to handle increasing user loads. Adjust resources and infrastructure as needed to maintain optimal performance.
9. **Feedback Analysis and Feature Enhancement:** Analyze user feedback and usage data to identify areas for improvement and prioritize feature enhancements. Regularly release updates based on user needs and market trends to keep the platform competitive and relevant.
10. **Training and Skill Development:** Provide training opportunities for team members to keep their skills updated and aligned with evolving technologies and best practices. Investing in continuous learning ensures the team remains capable of addressing new challenges and implementing innovative solutions.

Rubric for Project Assessment (CO3)

Criteria	Marks distribution (Max 4X5= 20)				Acquired Marks
	Missing/ Incorrect (0-1)	Inadequate (2)	Satisfactory (3-4)	Excellent (5)	
Selection of Software Engineering Models	Does not articulate a position or argument of choosing appropriate model. Does not present any evidence to support the arguments for the choice of the model.	Articulates a position or argument for choosing models that is unfocused or ambiguous. Presents incomplete/vague evidence to support argument for model choice.	Articulates a position or argument of choosing models that is limited in scope. Does not present enough evidence to support the argument for the choice of the model	Clearly articulates a position or argument for the choosing software engineering models. Presents sufficient evidence to support argument for the model selection	
Role identification and Responsibility Allocation	The project has poor project management plans for identifying roles and assigning the responsibilities	Identify few roles in the project management where some of the roles are left alone with any project responsibilities	Identify most of the roles in the project management and assign their responsibilities	Well planned project with proper role identification and responsibility allocation in the project management activities	
Impact identification	Student vaguely discuss the impact of societal, health, safety, legal, cultural, or environmental issues in their project	Student provided with partial relevance to the impact of societal, health, safety, legal, cultural, or environmental issues in their project	Student fairly provided the analysis to the impact of societal, health, safety, legal, cultural, or environmental issues in their project	Student comprehensively provided the analysis to the impact of societal, health, safety, legal, cultural, or environmental issues in their project	
Formatting and Submission	Project report is not complete and Several errors in spelling and grammar. Present a Confusing organization of concepts, supporting arguments, and real-life example. Sentences rambling, and details are repeated.	Some errors in spelling and grammar. Some problems of organizing the answer in a logical order of defining, elaborating, and providing real-life examples.	Few errors in spelling and grammar. Presents most of the details in a logical flow of organization in definition, details, and example.	Project report is complete and No errors in spelling and grammar. Consistently presents a logical and effective organization of definition, details, and real-life example of the topic.	

Acquired marks:	
CO Pass / Fail:	

Rubric for Project Assessment (CO4)

Marks Distribution (Maximum 3X5=15)					Acquired Marks
Marking Criteria	Missing/ Incorrect (0-1)	Inadequate (2)	Satisfactory (3-4)	Excellent (5)	
Project Planning	Missing or incorrect project plan;	Insufficient project plan provided: project team, project tasks, goals etc. stated poorly.	Sufficient information provided : project team members, their tasks, project plan discussed in details.	Thorough and relevant project plan is provided; project plan is clear and easy to follow.	
Effort Estimation and Scheduling	Missing or incorrect effort estimation or schedules based on available project resources	Insufficient or poorly stated effort estimation or schedules based on available project resources	Correct or sufficient technique used for effort estimation or schedules based on available project resources	Project estimation was described using proper effort estimation or schedules based on available project resources	
Risk Management	Risk analysis activities were missing or inappropriate for the specific project: unidentified risks or wrongly categorized risks or not prioritized properly.	Risks are partially identified(insufficient) and not properly categorized or not prioritized properly.	Sufficient and critical risks are identified(insufficient) and properly categorized but not prioritized properly.	Sufficient and appropriate risks are identified, analyzed, and properly categorized or prioritized.	
Acquired Marks:					
CO Pass / Fail:					