
# Interactive Digital Art & Design Final Report

4th Year Project

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# Contents

# Acknowledgements

I would like to thank my supervisor Philip Burke for guiding me throughout this project, his continued counsel and direction were highly beneficial. His weekly meetings and his constant communication kept me on top of my work and gave me ideas and points for research that I otherwise would not have had. Without his input and knowledge especially on game design this project would not be what it is.

I would like to thank Colm O'Neill for his lectures and input which though not directly tied to my project affected and contributed to how I view design, without his teachings the structure and visual fidelity of both the game and website would never have been of the quality they are now.

I'd like to thank Anita Dice for her unwavering positivity, support, and motivation throughout the project. In addition, I'd like to thank Gerry Moloney who gave me input and advice that contributed to my website design and hosting choices.

Without going through every name, I would like to express my sincere gratitude to all the lecturers who have taught me throughout the past four years. Their dedication to teaching, guidance, and support has been invaluable in shaping my education and personal growth. Their expertise and passion for their fields of study have inspired me and pushed me to strive for excellence.

Collectively to all those mentioned your contributions to my academic journey have been immeasurable.

Finally, I would like to give a special mention to my friends, classmates, and peers among the IDAD 4th year group and the Games Development 4th year group, as we all went through a similar experience, we all leaned on each other for support and encouragement, when one of us was down the others were there to pick them back up.

Each of us acted as sound boards for ideas and inspiration, each a beacon of hope and support, without all the people mentioned this project would not have been possible.

# Project Abstract

This project involves the development of two distinct web-based applications. The first application is an endless runner desktop game built using the Phaser game engine and hosted on Netlify. The game features fast-paced gameplay, challenging obstacles, and an intuitive user interface.

The game is inspired by classic Super Mario and Sonic video games with a darker theme inspired by Little Nightmares and Hollow Knight with a pixel art style.

The gameplay is a side-scrolling experience in which the player controls a character that appears to run from left to right while a forest parallax effect plays behind them, they will jump to avoid obstacles, and use melee attacks to eliminate enemies. The game will track the player's score throughout gameplay and save the best score achieved.

The second application is a fully responsive website hosted on Github pages that provides information and promotion for the game, featuring descriptions, screenshots, and links to play the game as well as interactive elements and another parallax effect in the hero section this and the overall theme will be tied to the game and produce a cohesive visual design throughout both web pages.

The website is also a progressive web app, for this to be achieved the website was effectively built twice once for desktop and again for mobile devices with slightly reduced functionality and design changes.

This project report provides a detailed account of the development process, including the design and implementation of the game mechanics, art assets, and user interface, as well as the challenges encountered, and solutions employed.

The report also describes the web development process for the website, including the use of HTML, CSS, and JavaScript to create an attractive and functional site.

The project in its totality demonstrates the ability of the author to design, develop, and create engaging and immersive game experiences while also showcasing their skills in web development and design.

# Introduction

The game aspect of this project was chosen because of the popularity and nostalgia associated with endless runner games like Super Mario and Sonic, as well as this, independent game studios in recent years have had tremendous success with pixel art style games that the authors project mimics. Games such as Celeste, Undertale, Shovel Knight, Stardew Valley to name but a few. (Yen, 2023)

The website was largely inspired by mobile games and independent video game companies who build stunning showcase websites to promote their games, this includes Firewatch developed by Campo Santo (See Appendix A), an example that largely influenced how the author designed their website. (Campo Santo, 2023)

Wanting to show of all aspects of their ability the author stretched their limits to effectively create two comprehensive products that work both separately and together, when combined both share one visual identity, the project cover UX/UI design and development, game design and development, programming skills, and art creation.

# Background

There are several similar games to the one in this project that are currently available on various platforms. Some examples include:

> **Super Mario Run:** Developed and published by Nintendo, Super Mario Run is an endless runner game featuring the iconic character, Mario. Players control Mario as he automatically runs from left to right and must jump to avoid obstacles and defeat enemies.
>
> **Sonic Dash:** Developed and published by SEGA, Sonic Dash is an endless runner game featuring the iconic character Sonic. Players control Sonic as he automatically runs from left to right and must jump and slide to avoid obstacles and defeat enemies. The game also features a variety of playable characters, each with their unique abilities.
>
> **Temple Run:** Developed and published by Imangi Studios, Temple Run is an endless runner game set in an ancient temple. Players control an explorer who must run from a group of monkeys and avoid obstacles. The game also features a variety of power-ups and a variety of playable characters.

The gaming industry is a rapidly growing and constantly evolving field, with new games and technologies emerging on a regular basis. To attract players and stand out from the competition, game developers must create engaging and immersive game experiences that capture the attention and interest of their target audience.

Motivated by the popularity of the endless runner genre and a desire to create a unique and engaging game experience, the author of this project developed an endless runner desktop game using the Phaser game engine. The game features fast-paced gameplay, challenging obstacles, and an intuitive user interface, all of which are designed to keep players engaged and motivated to keep playing.

However, creating a great game is not enough to guarantee success. Effective promotion and marketing are critical for indie game developers to reach their target audience and generate interest in their game. To this end, the author also developed a fully responsive website hosted on Github pages that provides information and promotion for the game. The website features descriptions, screenshots, and links to play the game, as well as progressive web app features that allow users to install the game on their devices and play offline.

The project required a range of technical skills and tools, including proficiency in game engines like Phaser and web development technologies like HTML, CSS, and JavaScript. The author was able to leverage these skills to create an attractive and functional game and website that showcase their abilities in game development and web design.

# Feasibility Study

The purpose of this feasibility study is to evaluate the potential for developing an endless runner game and website, as described in the project abstract. This study will assess the technical, financial, and operational feasibility of the project, as well as the potential risks and challenges.

## Technical Feasibility

The technical feasibility of the project will be evaluated based on the available resources and tools required for game and website development.

The necessary tools and resources include:

- A suitable game engine (e.g., Phaser)
- Web development technologies (e.g., HTML, CSS, JavaScript)
- A hosting platform for the game and website (e.g., Netlify, Github Pages)
- Art assets (e.g., character designs, background images)

Based on an assessment of these resources, it is determined that the project is technically feasible, as the required tools and resources are readily available and accessible.

## Financial Feasibility

The financial feasibility of the project will be evaluated based on the estimated costs and potential revenues associated with game and website development.

The costs associated with the project include:

- Development tools and resources.
- Time and effort required for development.
- Hosting fees for the game and website.

The potential revenues associated with the project include:

- Sales revenue from the game.
- Advertising revenue from the website.
- Donations or support from fans and supporters.

Based on an assessment of these costs and revenues, it is determined that the project is financially feasible, as the potential revenues are expected to exceed the costs associated with development and hosting.

## Operational Feasibility

The operational feasibility of the project will be evaluated based on the ability to manage and maintain the game and website once they are developed. This will involve assessing the availability of resources and personnel required for ongoing management and maintenance.

Based on an assessment of the available resources and personnel, it is determined that the project is operationally feasible, as there are no significant barriers to ongoing management and maintenance.

## Potential Risks and Challenges

The potential risks and challenges associated with the project will also be evaluated. These risks and challenges include:

- Technical difficulties and glitches during development.
- Competition from other endless runner games.
- Difficulty in generating interest and promotion for the game and website.

To mitigate these risks and challenges, the author plans to conduct rigorous testing and quality assurance during development, as well as implementing effective marketing and promotional strategies to generate interest and attract players.

## Conclusion

Based on the assessments of technical, financial, and operational feasibility, as well as the potential risks and challenges, it is determined that the project is feasible and has the potential to be successful. With careful planning and execution, the author can develop an engaging and immersive endless runner game and website that will attract players and has the potential to generate revenue.

# Requirement Analysis

## User Requirements

The game and website should be designed for gamers aged 13-25 who enjoy action and adventure games.

The game and website should be accessible to users with varying levels of gaming experience.

## Functional Requirements

The game should feature an endless runner game mechanic, with randomly generated obstacles and enemies.

The game should have degrees of difficulty and a high score tracking system.

The website should provide an overview of the game, including screenshots and descriptions of game mechanics.

The website should have clear navigation and be optimized for mobile and desktop devices.

## Performance Requirements

The game should run smoothly on desktop, with minimum frame rates of 30 FPS.

The game should have load times of less than 5 seconds.

The website should have load times of less than 2 seconds.

## Security Requirements

The game and website should be protected from hacking and malware attacks.

The game and website should comply with relevant data privacy laws.

## Compatibility Requirements

The game should be compatible with all major web browsers, including Chrome, Firefox, and Safari.

The website should be compatible with major web browsers, including Chrome, Firefox, and Safari and with desktop and mobile devices running Windows, macOS, iOS, and Android.

## Usability Requirements

The game and website should be user-friendly and intuitive to use.

The game and website should be accessible to users with disabilities.

## Legal Requirements

The game and website should comply with relevant industry standards and regulations, including the Entertainment Software Rating Board (ESRB) guidelines for game content.

## Testing Requirements

The game and website should undergo thorough testing to ensure they meet the user, functional, performance, security, compatibility, usability, and legal requirements.

Testing should include functional testing, usability testing, and security testing.

By conducting a thorough requirement analysis, the author can ensure that the game and website meet the needs and expectations of the target audience, are functional and user-friendly, and meet relevant legal and industry standards.

# Project Milestones

## Game Design and Development Milestones

Completion of game concept and design documents.

Development of a prototype of the game mechanics and user interface.

Development of the full game, including graphics and sound assets.

Implementation of a high score tracking system.

Testing and debugging of the game to ensure it meets functional, performance, and security requirements.

## Website Design and Development Milestones

Completion of website concept and design documents.

Development of a prototype of the website's user interface and navigation.

Development of the full website, including content and multimedia assets.

Implementation of progressive web app features.

Testing and debugging of the website to ensure it meets functional, performance, and security requirements.

## Integration Milestones

Integration of the game and website to ensure seamless user experience.

Testing and debugging of the integrated game and website to ensure it meets functional, performance, and security requirements.

## Deployment and Launch Milestones

Deployment of the game and website to Netlify and Github pages, respectively.

Beta testing of the game and website by a select group of users.

Final testing and debugging of the game and website to ensure it meets all requirements, including testing lighthouse scores.

Public launch of the game and website.

# Research

To gain insights and knowledge about best practices and techniques in the development of web-based games and websites, a literature survey was conducted.

The following resources were consulted (See Appendix B):

"Game Programming Patterns" by Robert Nystrom.

"HTML and CSS: Design and Build Websites" by Jon Duckett.

"JavaScript and JQuery: Interactive Front-End Web Development" by Jon Duckett.

"Responsive Web Design" by Ethan Marcotte.

"Mobile First" by Luke Wroblewski.

"Designing Games: A Guide to Engineering Experiences" by Tynan Sylvester.

"Game Development Essentials" by Kevin Saunders and Jeannie Novak.

"Make 2D Games in JavaScript with Phaser" by Thomas Palef.

"Learning JavaScript Design Patterns" by Addy Osmani.

## Key Findings

The Phaser game engine is a popular and powerful tool for building web-based games that can be hosted on platforms such as Netlify.

Responsive web design using frameworks such as Bootstrap can ensure that the website is optimized for viewing on various devices.

Progressive web apps can provide users with a native app-like experience while also allowing for easy installation and updates.

Good design and user experience are crucial for the success of both the game and website.

## Areas for Further Research

Further exploration of game development techniques such as AI and physics engines could be useful in creating more complex and engaging game mechanics.

The use of machine learning and data analytics to optimize user experience and performance could be beneficial in future projects.

The integration of social media and other external platforms into the game and website could enhance user engagement and expand the reach of the project.

# Project Description

This project is the result of the design, development, and implementation of two distinct web-based applications - an endless runner desktop game and a responsive website to promote the game. The game, built using the Phaser game engine, features fast-paced gameplay, challenging obstacles, and an intuitive user interface. It is hosted on Netlify and designed to provide an engaging and immersive experience to players.

The accompanying website, which is also a progressive web app, provides detailed information about the game, including descriptions, screenshots, and links to play the game. The website is hosted on Github pages and was designed to be fully responsive, accessible, and visually appealing.

The development process involved careful planning, research, and design to ensure that both the game and website met the project's goals and requirements. The project was completed in several stages, including a feasibility study, a requirements analysis, a design phase, and an implementation phase. Each stage was thoroughly documented, and the project was completed on time.

The final project is a testament to the author's skills in game development and web design, as well as their ability to manage a complex and multifaceted project. It demonstrates a high level of technical proficiency and creative problem-solving and serves as a showcase for the author's abilities in game development and web design.

(See Appendix C for more screenshots)

## Game

I'd like to first take time to acknowledge and reference the resources I used from various websites and creators.

The character sprite and animations.

(Anokolisa, 2023)

The main character as well as the enemies are animated using Phasers built in tools, inputting how many frames and their dimensions in a pre-load scene and then in game they change based on player input or interaction (e.g., player presses attack button then the player sprite changes to the attack sprite).

The forest pixel art.

(DavidG, 2023)

The parallax effect in the background is achieved by offsetting all the layers movement, making the layers closer to the player move fast and those further away on the z-index move slower or with the player.

In addition, the ground of this asset pack was used to create the platforms, in-game they are effectively an array of objects that spawn in based on a timer and constraints in the config file, once the image leaves the confines of the screen it is no longer rendered, and a new platform takes its place in the array.

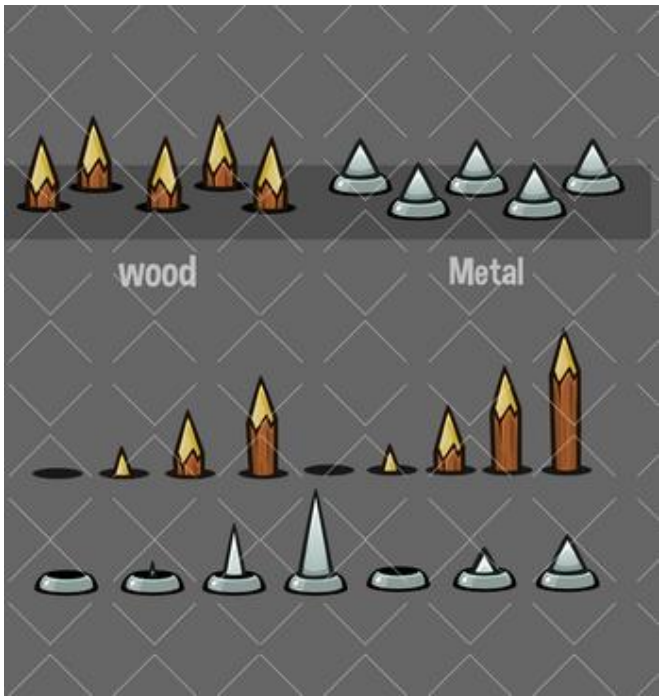
The Enemies and spikes work in a similar way.

Skeleton enemy sprite and animations.

(Astrobob, 2023)

The various sprites and objects are all given colliders which are built into the physics of the Phaser game engine. Using these colliders I detect if a player is on a platform or attacking an enemy, or has hit the spike obstacle etc.

The forest spikes.




(Brooks, 2023)

Various in-game voices, grunts, and callouts.


(Becker, 2023)

In a similar fashion to the animation changes the sound effects happen on interactions or collisions (e.g., player gets hit by enemy while not in attack animation leads to death and triggers the death sound effect).

The "game over" voice.

(ZapSplat, 2023)

The game start-up sound.

(sapht, 2023)

The in-game soundtrack.

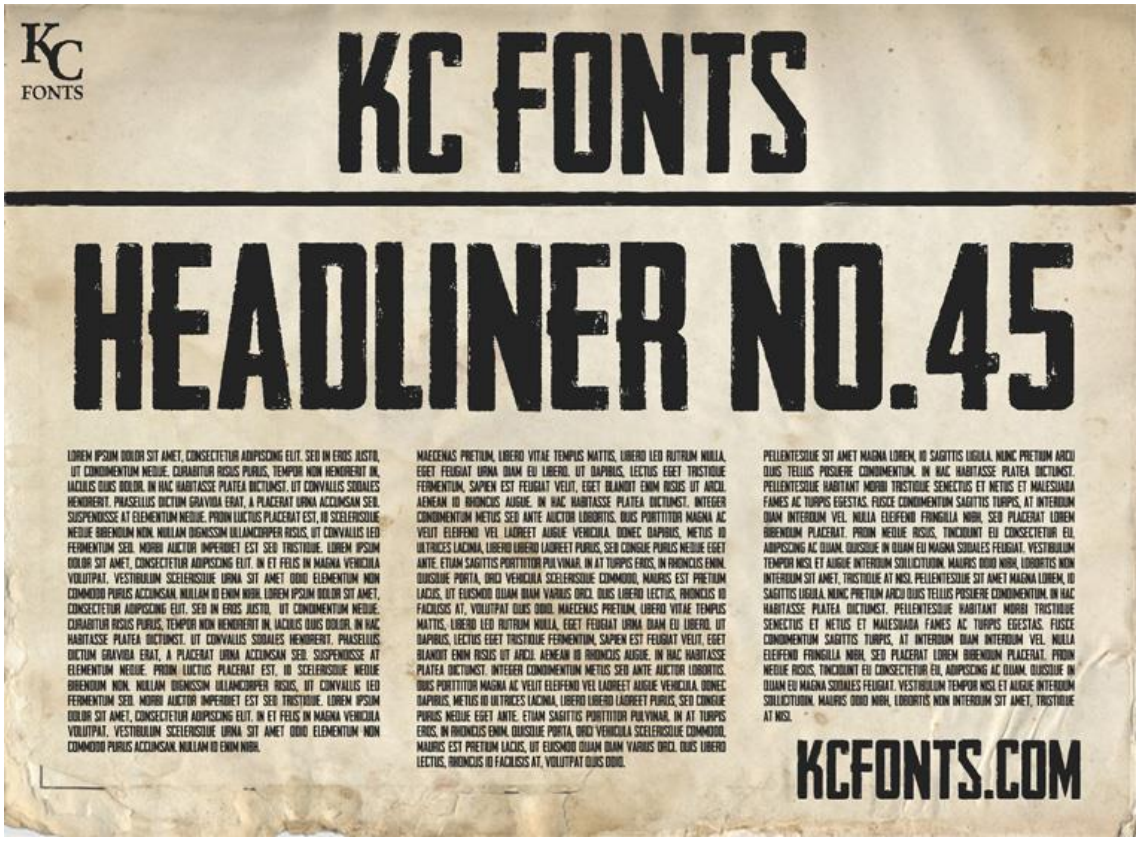

(Tallbeard Studios, 2023)

Other aspects of the game include the high score system, the score updates based on the time spent alive with an added multiplier for when the player is on a platform, there is a separate counter for kills, instead of combining them I thought to separate them so people could play to beat one score or the other, this allows for more variance in how you play the game.

The score itself is held in local storage, this is read in the main menu to show the highest score on your browser and is also read when you play the game under the current in-game score.

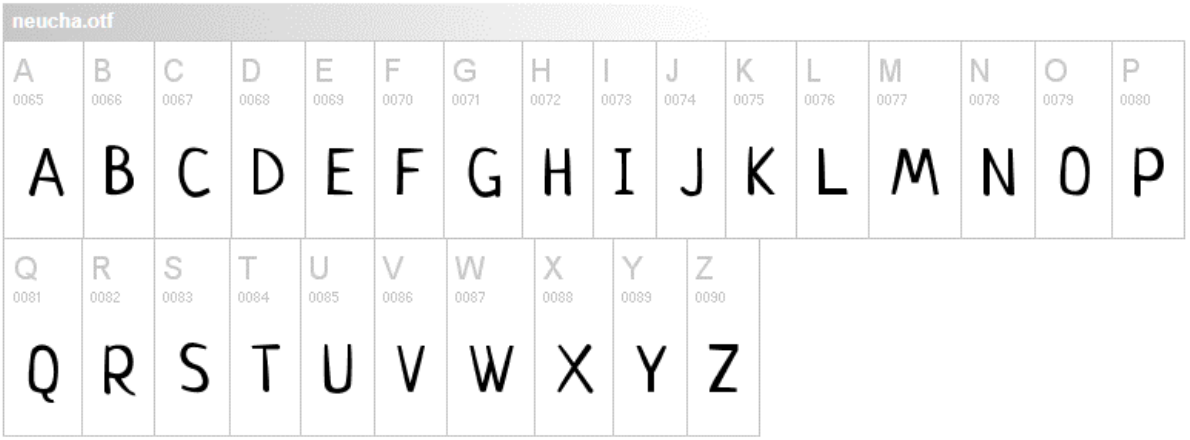
The game loop itself starts with the splash screen, this brings up the pre-load scene which loads all the games assets and while this has the potential to be slow it prevents any issues during gameplay. On load the main menu appears and the user can start the game, the initial launch will present the user with an instructional screen with a brief story and the controls, then the game and on death the score is presented, and you can return to the main menu or you can play again which resets everything and brings you straight back to the start of the level.

The various fonts used throughout the game (and website).




(KC Fonts, 2023)


(datagoblin, 2023)




(Lemonad, 2023)

## Website

As before I'd like to first take time to acknowledge and reference the resources I used from various websites and creators.

The Headliner No.45 font is the same as referenced in the game section, there is an addition of Open Sans for the body text.

For the website itself I started out with a simple template and then took it apart and added my own functionality, mainly the parallax effect on the hero section and then the pop-up character cards. (html5up, 2023)

Additionally, the original image for the hero is from the game Firewatch.

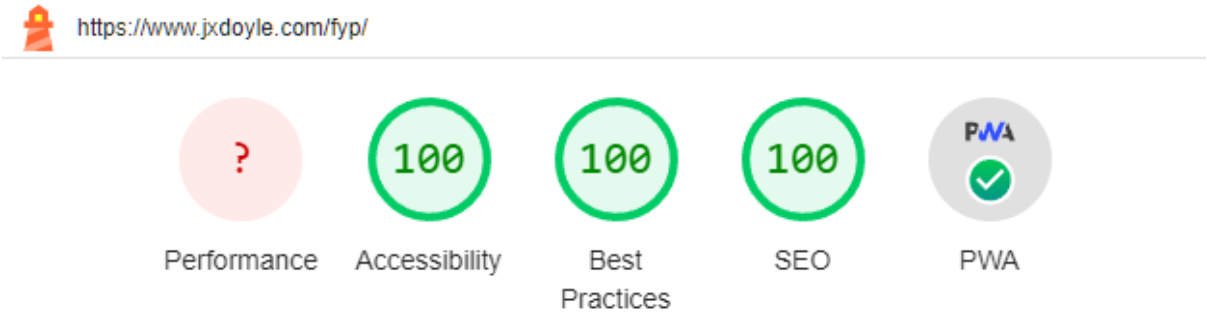
I took this image and separated each row of trees into individual layers, I further modified the layers and altered the colours and then added them to the website, I added scale functions to get them all to sit right and then various levels of depth and movement speed while scrolling to create the desired effect.

On mobile devices the image is static to make it responsive more easily.

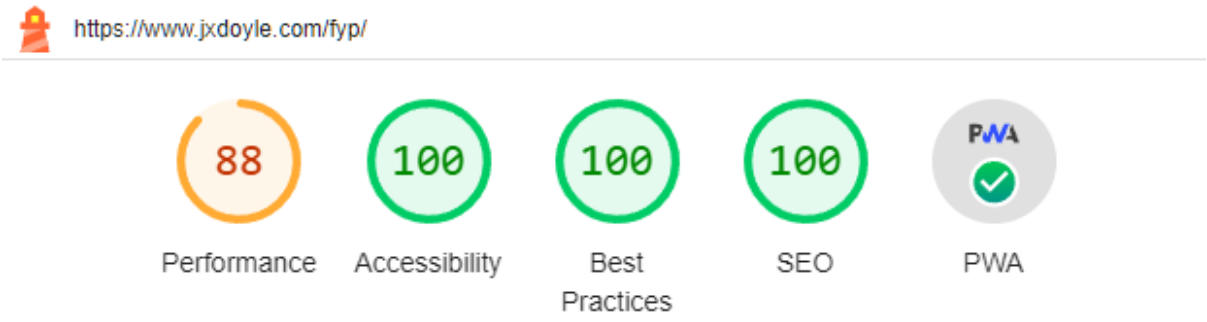
For the character cards it's effectively fancy hover effects and images that appear on hover, although simple in theory the implementation and especially making them responsive was a tall task.

To preserve the parallax effect in the hero section I effectively had to create the website twice, once with the effect for desktop and larger screens and another for smaller devices.

On completion pf the website I tested with lighthouse which initially had very poor scores, averaging 60's. I spent a great deal of time improving the performance and accessibility to get the best possible scores, as well as adding full pwa functionality.




Thes desktop test doesn't record performance because of an error with lighthouse, some of the desktop pages effects make lighthouse think the page will never finish loading and breaks the performance test.




On the mobile test as you can see the 100's persist but the performance still takes a small hit, the largest contributor to this issue is actually the embedded YouTube video showing the run-through of the game.

Ideally, I'd find an alternative or just link away to YouTube and leave the page without. Additionally I could look at lazy-loading and other means to improve the load performance and increase the performance score.

## Conformance

Some of the biggest missing elements from the original documents are with the game, power-ups, more enemies, more obstacles, more animations, collectables.

The power-ups and collectables we're dropped because of time constraints, the obstacles were at one stage in the game, but I removed them from the platforms because there was a lot of clipping issues, and it made it so there were times where no matter what the player did, they would die so I toned down the obstacles to not cause frustration in players.

There were also more animations in the game but I scaled them back so the game looked more fluid, I would have needed more time to tweak the animations to make them seamless and not pull you out of the gameplay.

I did also hope to have a live leader board as opposed to a local one but again time constraints prevented me from exploring what I would need to do to implement the feature to the level I wanted.

The website was almost wholly a new addition, upon finding out about the showcase and realising this is something I would want to show to employers I wanted to branch out and include my web development and design abilities as it's an area I enjoy and would want to continue or aim for on my career path.

Although again with the website I would have liked to have the live leader board embedded to show off the top players and further incentivise players to check out the game and try get their name on the leader board.

## Technical Achievements

I developed an endless runner game using the Phaser game engine, which is a popular open-source framework for creating browser-based games using HTML, CSS, and JavaScript.

To host my game and website, I used Netlify and GitHub Pages, which are cloud-based hosting services that made it easy for me to deploy my project online.

The website I created is fully responsive, which means it looks great on any device, including desktops, tablets, and smartphones. I achieved this by using HTML, CSS, and JavaScript to make the website adaptable to different screen sizes.

I also made my website a progressive web app (PWA), which means that users can install the game as an app on their mobile device, just like a native app.

Throughout the development process, I used Git for version control, which allowed me to track changes to my codebase over time, collaborate with others, and roll back changes if necessary.

## Personal Achievements

Through the development of this project, I gained valuable skills in game development, including experience working with the Phaser game engine and creating engaging game mechanics, graphics, and sound effects.

I also honed my skills in web development, including designing and implementing a fully responsive website that looks great on any device and creating a progressive web app that users can install on their mobile devices.

By using Git for version control, I learned best practices for collaborating with others, tracking changes to my codebase, and rolling back changes if necessary.

Throughout the project, I encountered challenges that required me to think creatively and problem-solve to find effective solutions. This helped me develop my critical thinking and analytical skills.

Finally, completing this project gave me a great sense of accomplishment and boosted my confidence in my abilities as a developer.

During the showcase event I received a lot of positive feedback, I used a poster and developed NFC business cards with QR codes to promote my project which was highly successful, through the programs I used I was able to track how often the links were clicked and since the showcase there's been almost two dozen interactions (See Appendix D).

# Conclusions

In conclusion, this project involved the development of two distinct web-based applications: an endless runner game built using the Phaser game engine and a responsive website to promote and host the game. The game features fast-paced gameplay, challenging obstacles, and an intuitive user interface, while the website provides information about the game and links to play it. The project demonstrates my ability to design, develop, and create engaging and immersive game experiences while showcasing my skills in web development and design.

Throughout the project, I conducted a feasibility study, performed a requirements analysis, and surveyed relevant literature to ensure the success of the project. I also established key milestones and worked diligently to meet them, resulting in a finished product that met my expectations and showcased my technical achievements.

The personal achievements gained from this project include the development of valuable skills in game and web development, as well as the ability to think creatively and problem-solve in challenging situations. These achievements have boosted my confidence in my abilities as a developer and will serve me well in future projects.

Overall, this project was a rewarding experience that challenged me to push the boundaries of my knowledge and skills. I am proud of the final result and believe it represents a significant achievement in my development as a game and web developer.

# Declaration

Ollscoil Teicneolaíochta an Oirdheiscirt
South East Technological University

**Work submitted for assessment which does not include this declaration will not be assessed.**

***** I declare that all material in this submission e.g. thesis/essay/project/assignment is entirely my/our own work except where duly acknowledged.

***** I have cited the sources of all quotations, paraphrases, summaries of information, tables, diagrams or other material; including software and other electronic media in which intellectual property rights may reside.

***** I have provided a complete bibliography of all works and sources used in the preparation of this submission.

***** I understand that failure to comply with the Institute's regulations governing plagiarism constitutes a serious offence.

| | |
|---|---|
| Student Name: (Printed) | JAMES DOYLE |
| Student Number: | C00252855 |
| Signature: | *James Doyle* |
| Date: | 28/04/2023 |

**Please note:**

The Institute regulations on plagiarism are set out in Section 13.3 Examination and Assessment Regulations published each year in the Student Handbook.

# References


Anokolisa. (2023, April 27). *Leagacy fantasy: Game Asset*. Retrieved from anokolisa.itch.io: https://anokolisa.itch.io/sidescroller-pixelart-sprites-asset-pack-forest-16x16

Astrobob. (2023, April 27). *Animated pixel art skeleton*. Retrieved from astrobob.itch.io: https://astrobob.itch.io/animated-pixel-art-skeleton

Becker, D. (2023, April 28). *Super Dialogue Audio Pack*. Retrieved from dillonbecker.itch.io: https://dillonbecker.itch.io/sdap

Brooks, R. (2023, April 28). *Floor spikes*. Retrieved from gamedeveloperstudio.itch.io: https://gamedeveloperstudio.itch.io/floor-spikes

Campo Santo. (2023, April 26). *Firewatch*. Retrieved from firewatchgame.com: https://www.firewatchgame.com/

datagoblin. (2023, April 28). *monogram extended is out!* Retrieved from datagoblin.itch.io: https://datagoblin.itch.io/monogram/devlog/30375/monogram-extended-is-out

DavidG. (2023, April 27). *Forest Pixel Art*. Retrieved from incolgames.itch.io: https://incolgames.itch.io/forest-pixel-art-parallax

html5up. (2023, April 26). *Spectral*. Retrieved from html5up.net: https://html5up.net/spectral

KC Fonts. (2023, April 28). *Headliner No. 45*. Retrieved from dafont.com: https://www.dafont.com/headliner-no-45.font

Lemonad, J. (2023, April 27). *Neucha*. Retrieved from dafont.com: https://www.dafont.com/neucha.font

sapht. (2023, April 27). *SNES startup.wav*. Retrieved from freesound.org: https://freesound.org/people/sapht/sounds/61234/

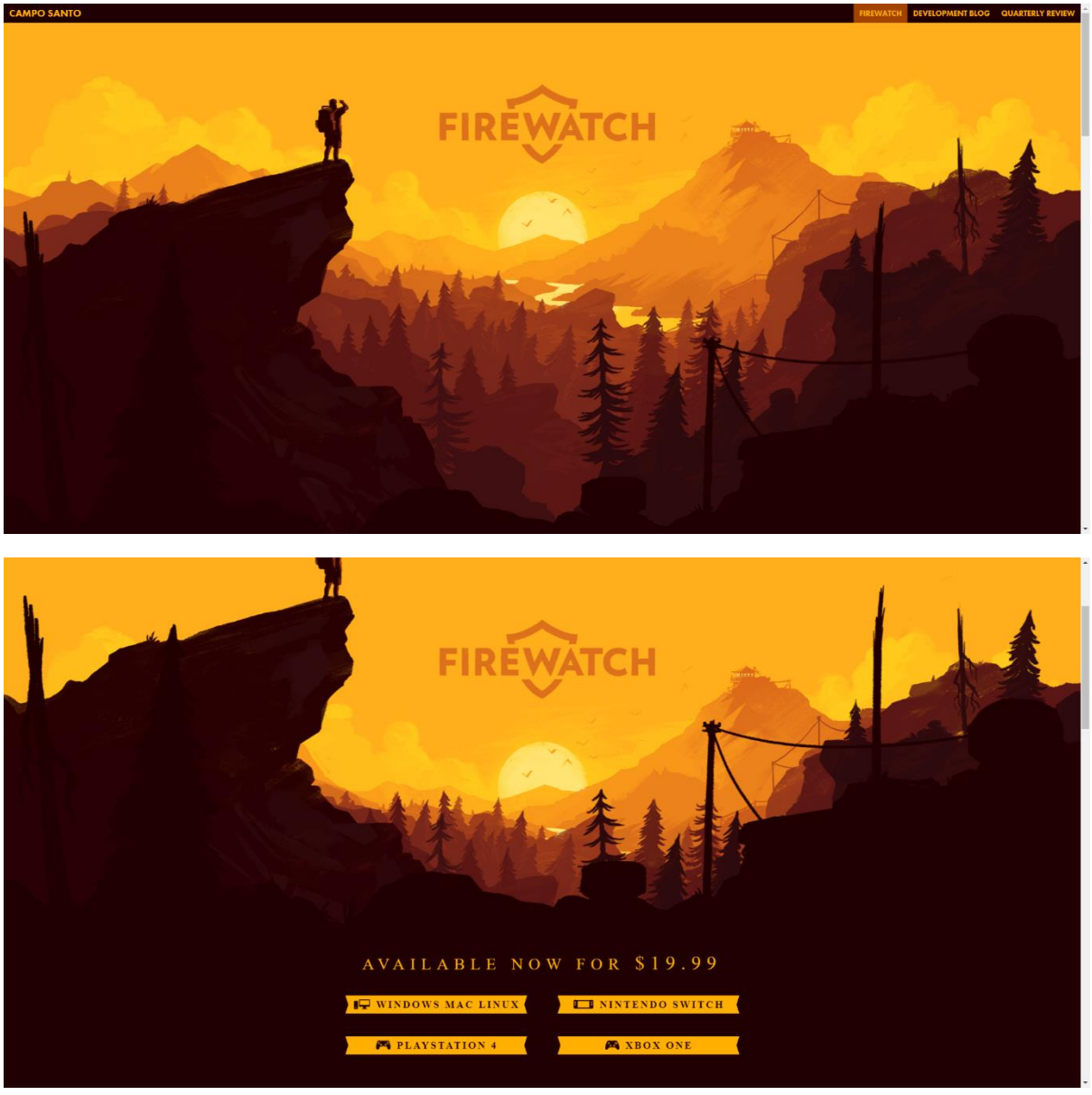
Tallbeard Studios. (2023, April 27). *[Music Assets] FREE Music Loop Bundle*. Retrieved from tallbeard.itch.io: https://tallbeard.itch.io/music-loop-bundle

Yen, A. (2023, April 27). *Editors' Choice: Why Celeste is One of the Best Games of 2018*. Retrieved from blog.playstation.com: https://blog.playstation.com/2019/01/05/editors-choice-why-celeste-is-one-of-the-best-games-of-2018/

ZapSplat. (2023, April 28). *Multimedia, male game voice, processed says game over 4*. Retrieved from zapsplat.com: https://www.zapsplat.com/music/multimedia-male-game-voice-processed-says-game-over-4/

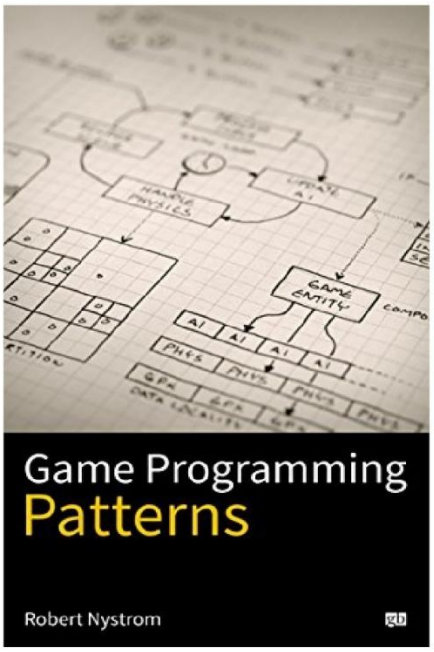
# Appendix A

Firewatch website parallax effect

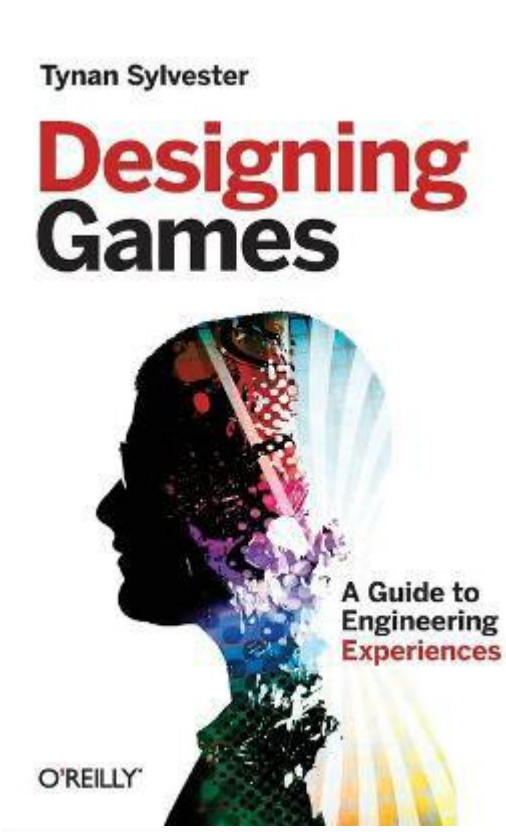


# Appendix B

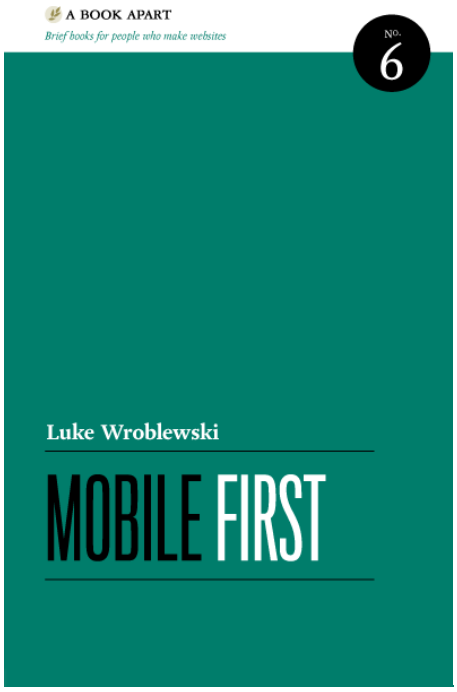
Research books

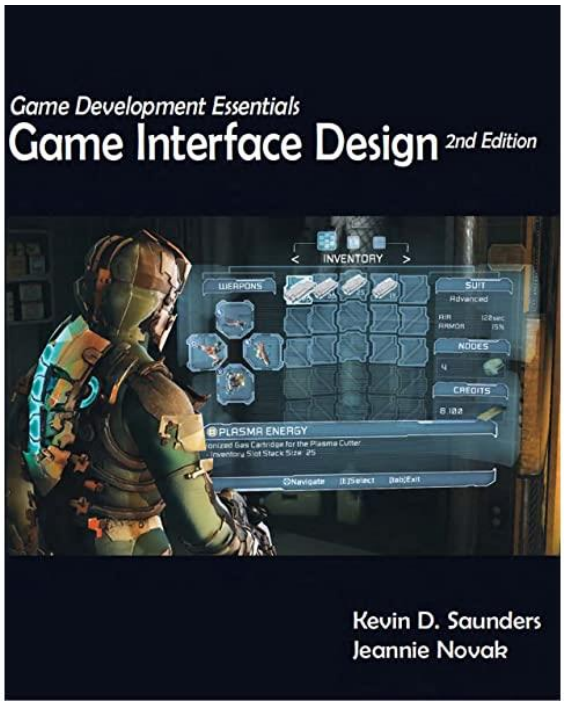


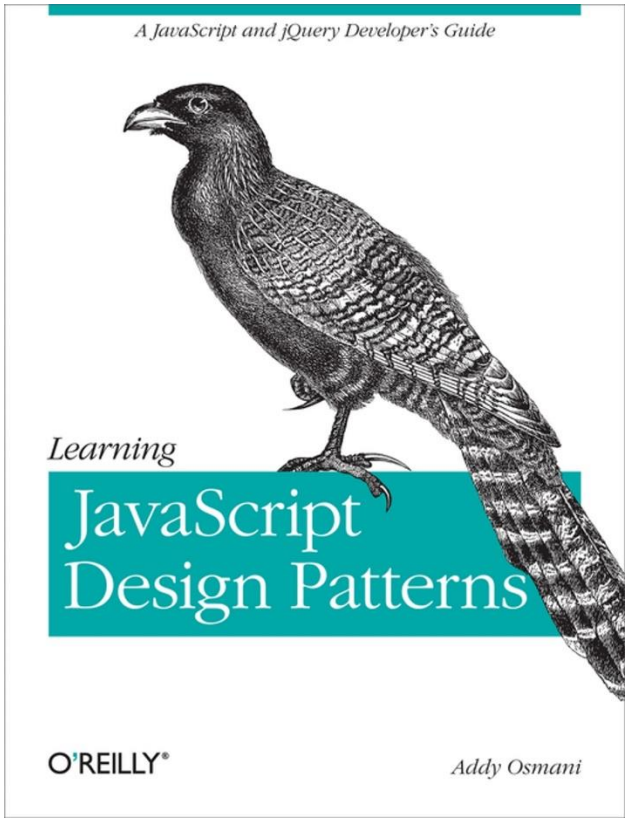


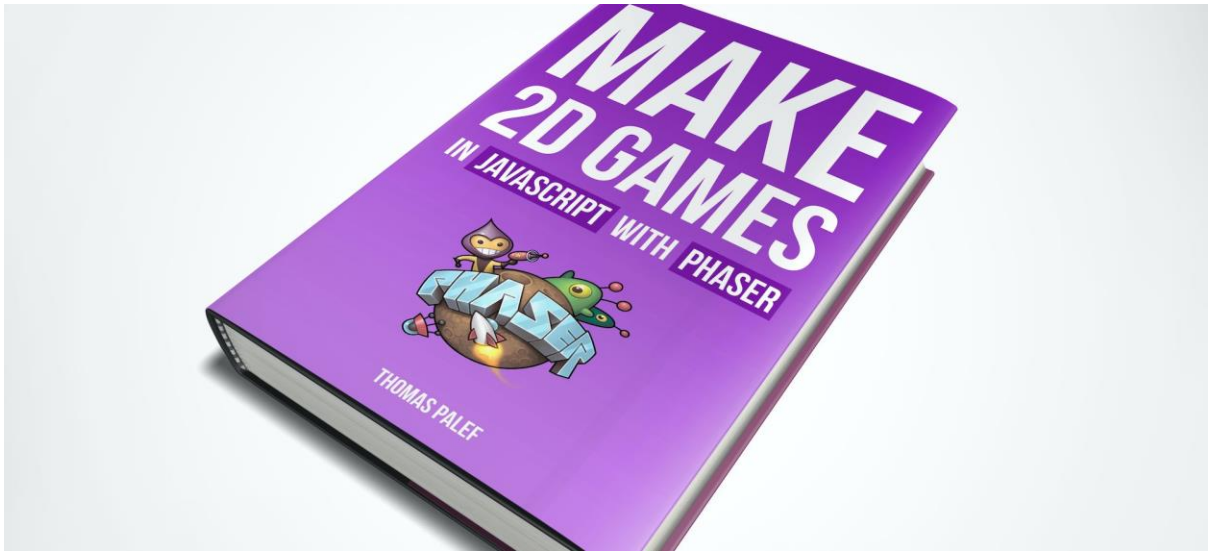

Tynan Sylvester
Designing Games
A Guide to Engineering Experiences
O'REILLY


A BOOK APART
Brief books for people who make websites
4
Ethan Marcotte
RESPONSIVE WEB DESIGN


A BOOK APART
Brief books for people who make websites
No. 6
Luke Wroblewski
MOBILE FIRST


Game Development Essentials
Game Interface Design 2nd Edition
INVENTORY
WEAPONS
SUIT
NODES
CREDITS
PLASMA ENERGY
Kevin D. Saunders
Jeannie Novak

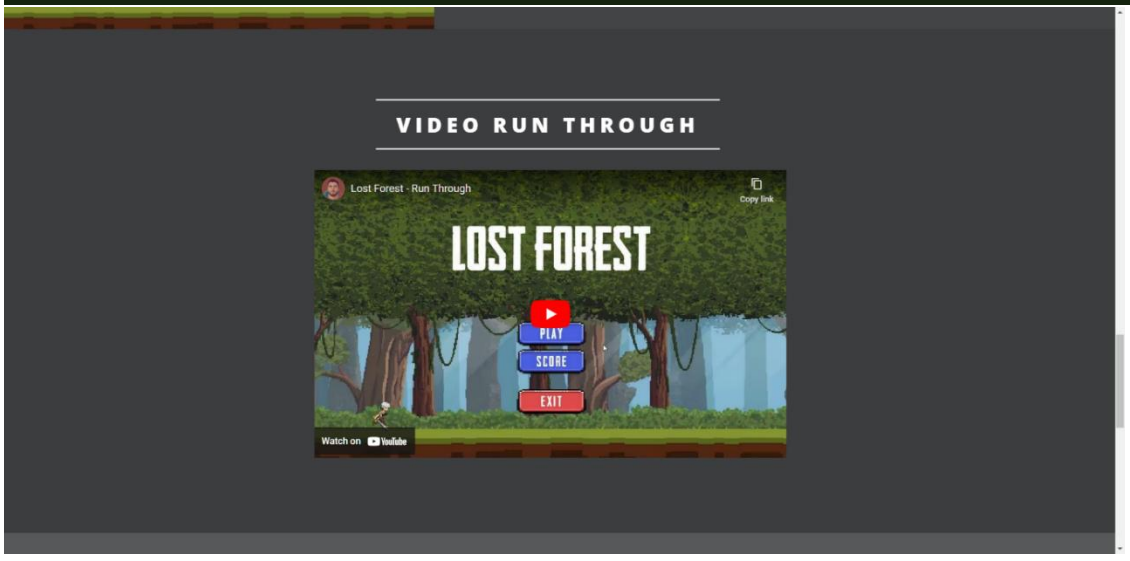

A JavaScript and jQuery Developer's Guide
Learning
JavaScript
Design Patterns
O'REILLY
Addy Osmani

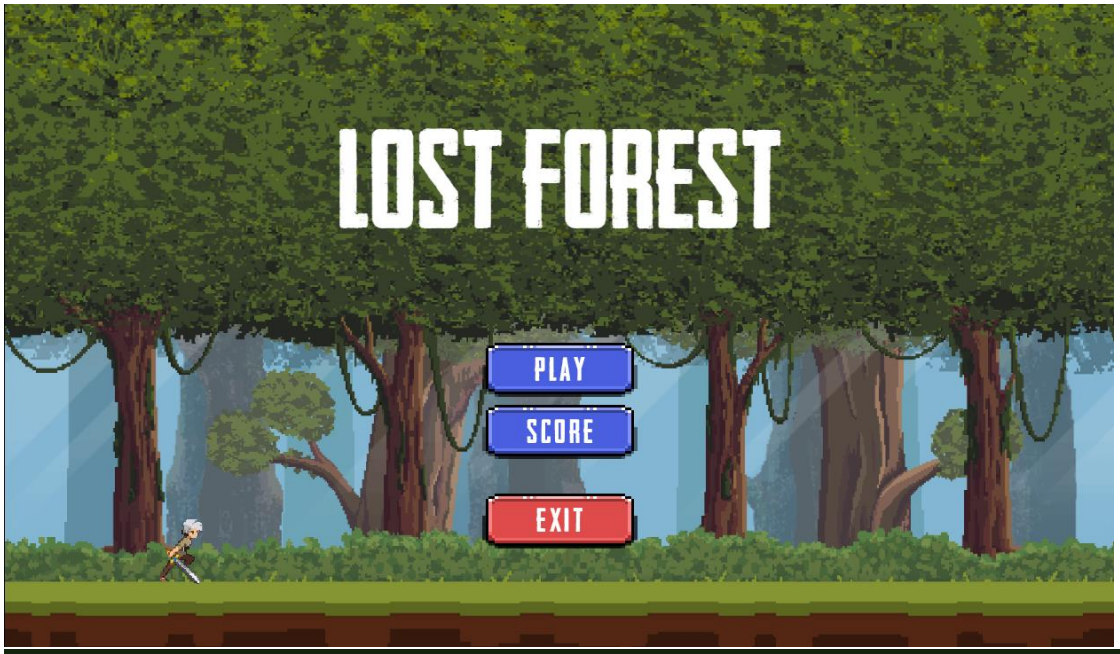

MAKE
2D GAMES
IN JAVASCRIPT WITH PHASER
PHASER
THOMAS PALEF

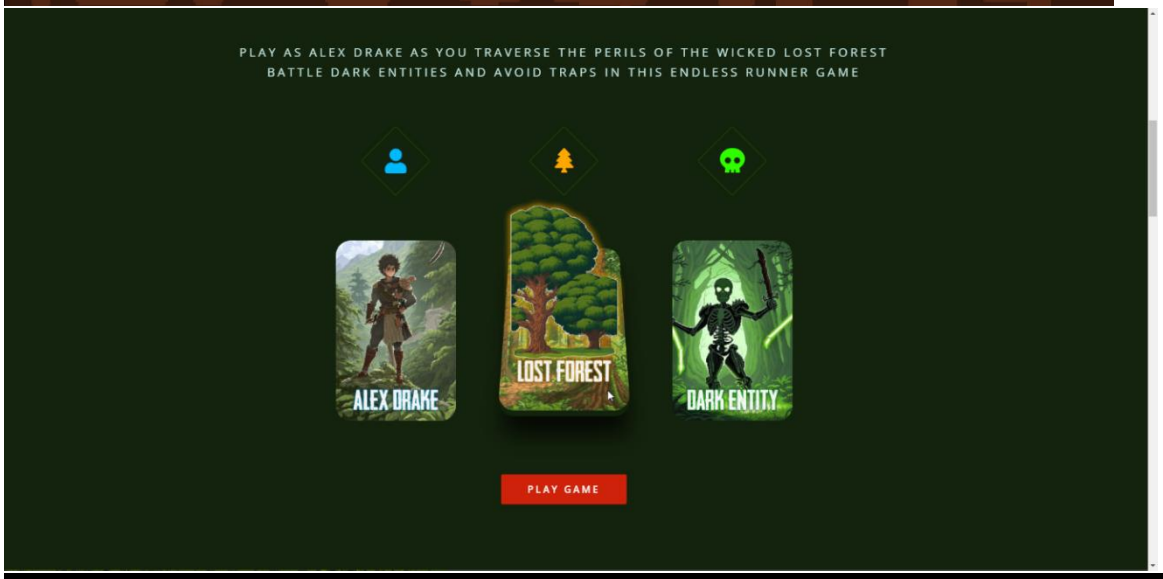
# Appendix C

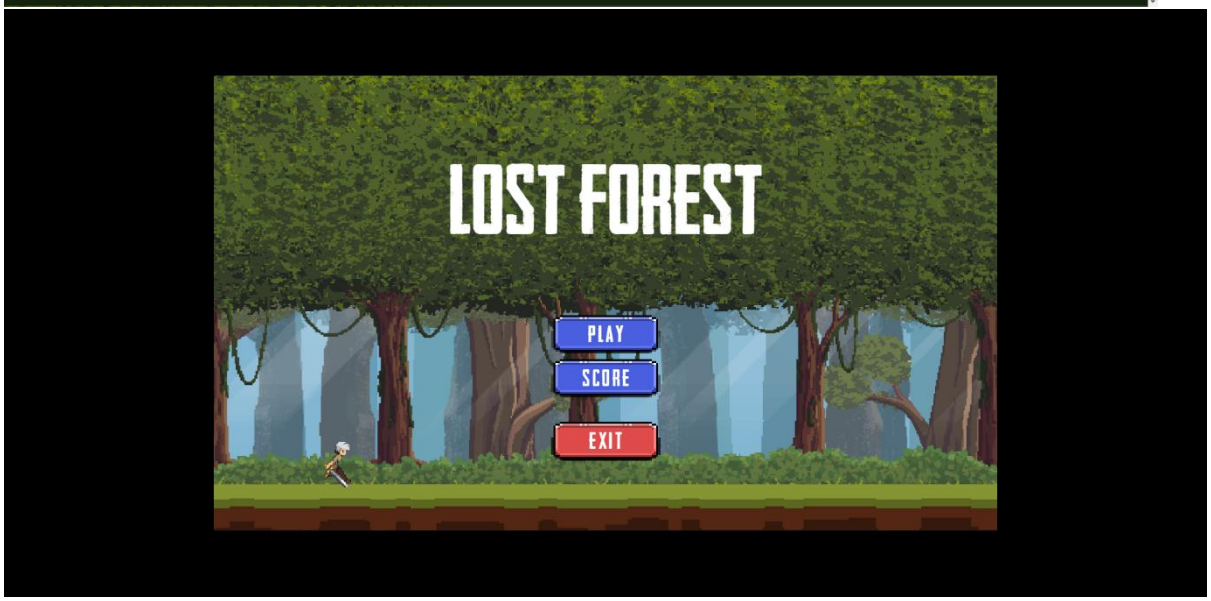
Game & Website Screenshots

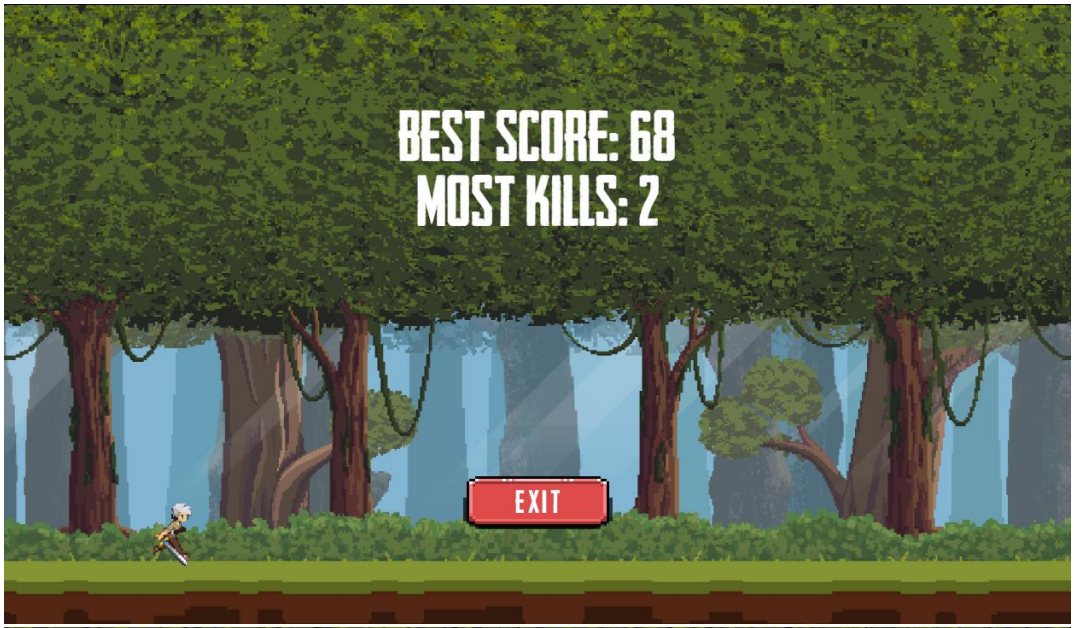




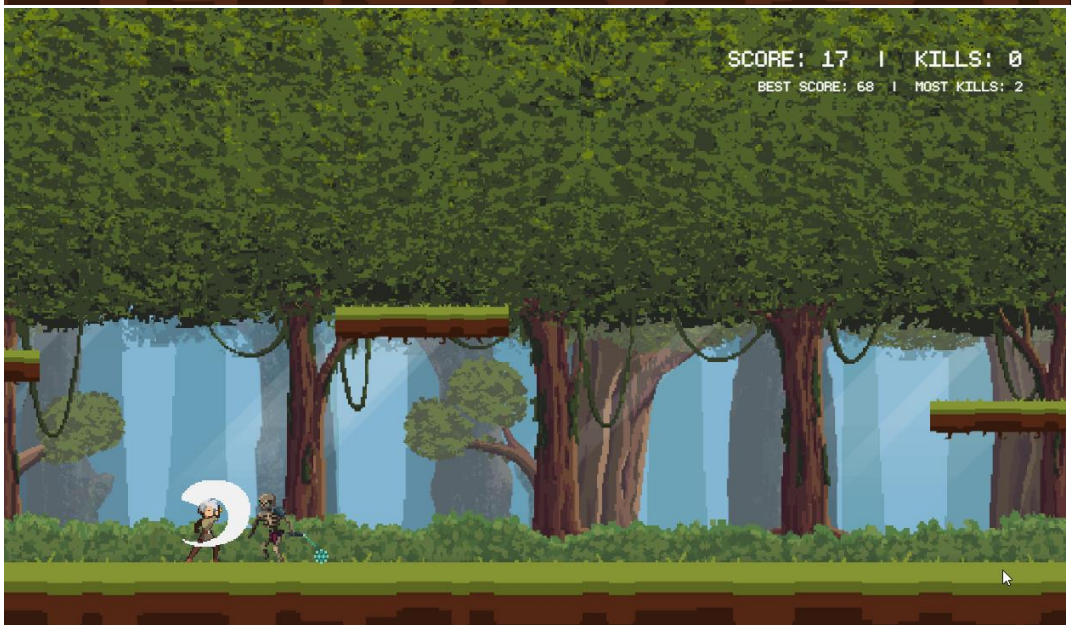

LOST FOREST
PLAY
SCORE
EXIT

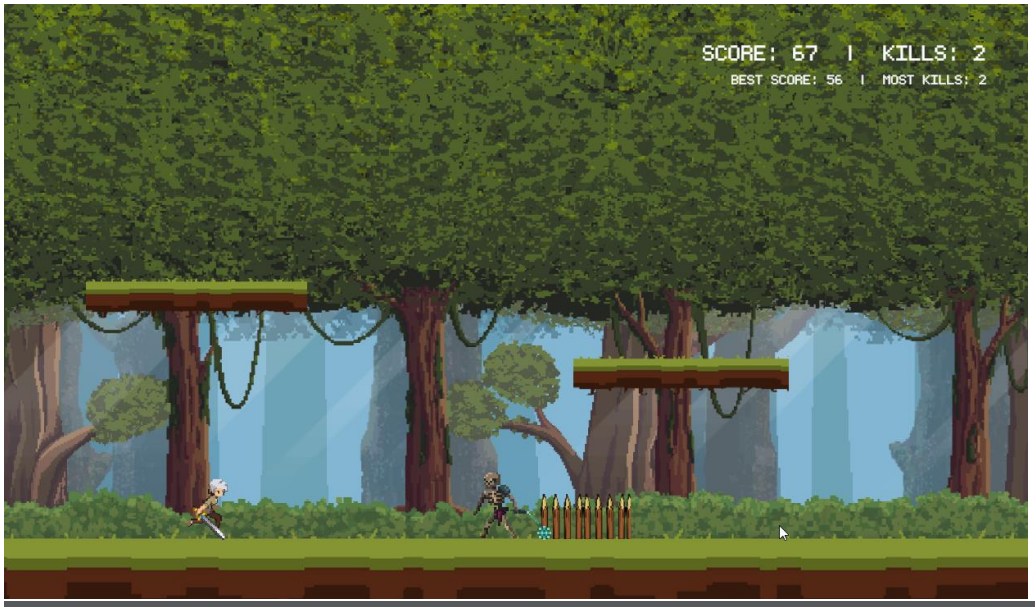

PLAY AS ALEX DRAKE AS YOU TRAVERSE THE PERILS OF THE WICKED LOST FOREST
BATTLE DARK ENTITIES AND AVOID TRAPS IN THIS ENDLESS RUNNER GAME
ALEX DRAKE
LOST FOREST
DARK ENTITY
PLAY GAME


LOST FOREST
PLAY
SCORE
EXIT


BEST SCORE: 68
MOST KILLS: 2
EXIT


SCORE: 26 | KILLS: 1
BEST SCORE: 68 | MOST KILLS: 2


SCORE: 17 | KILLS: 0
BEST SCORE: 68 | MOST KILLS: 2




## LINKS & ACKNOWLEDGMENTS

DOCUMENTATION AND RESOURCES USED TO BUILD THIS GAME AND WEBSITE

**DESIGN DOCUMENT**

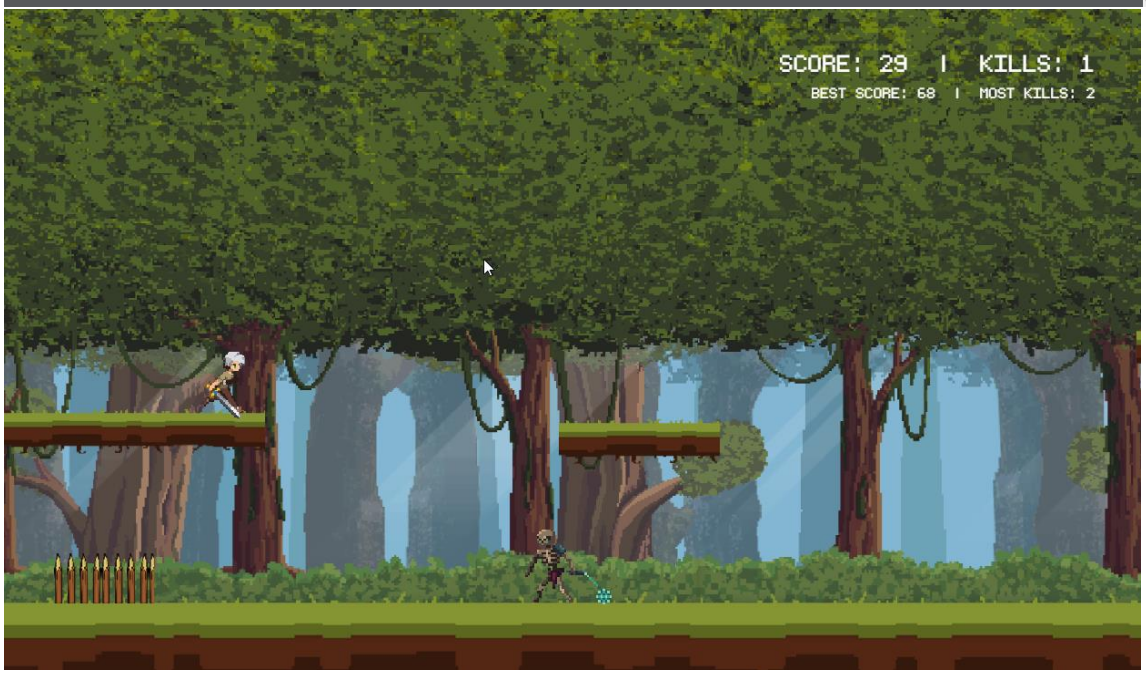
**PAPER PROTOTYPE**

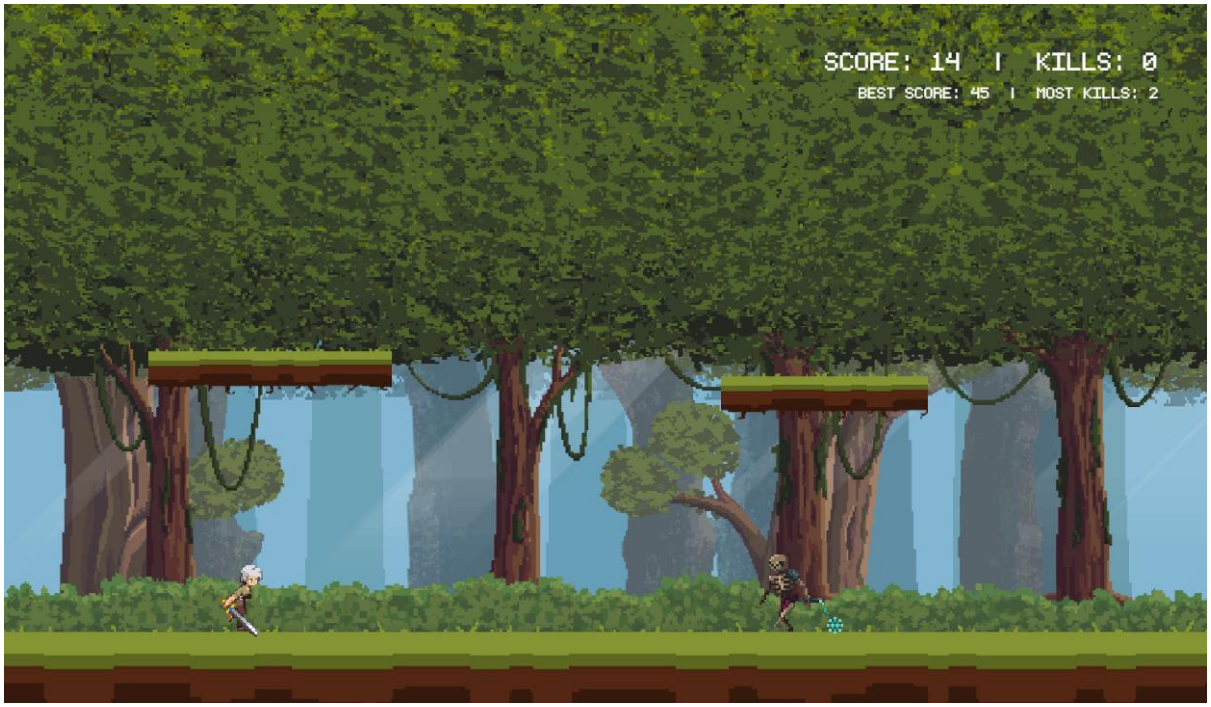
**GAME RESOURCES**

- PHASER
- JAVASCRIPT
- NPM
- WEBPACK
- BABEL
- NETLIFY

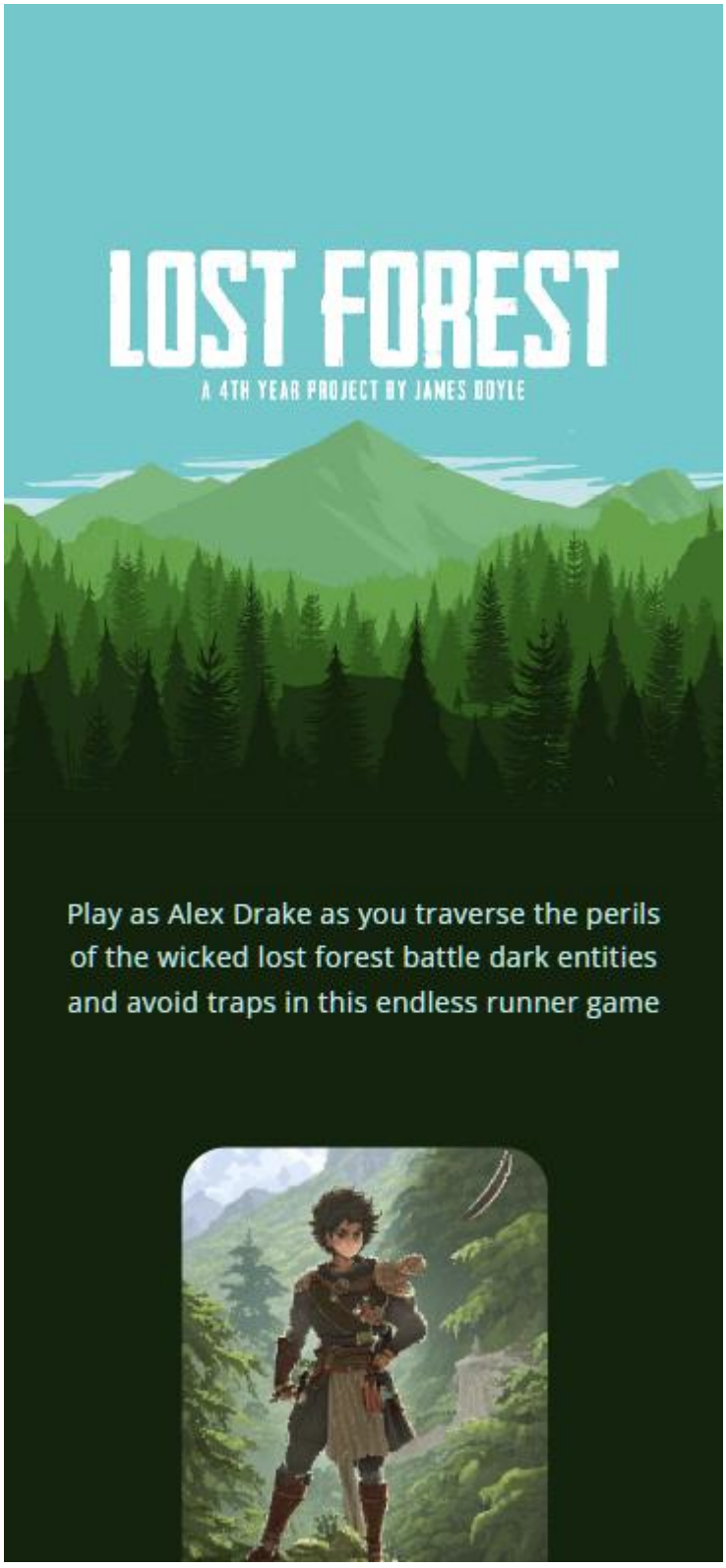
**WEBSITE RESOURCES**

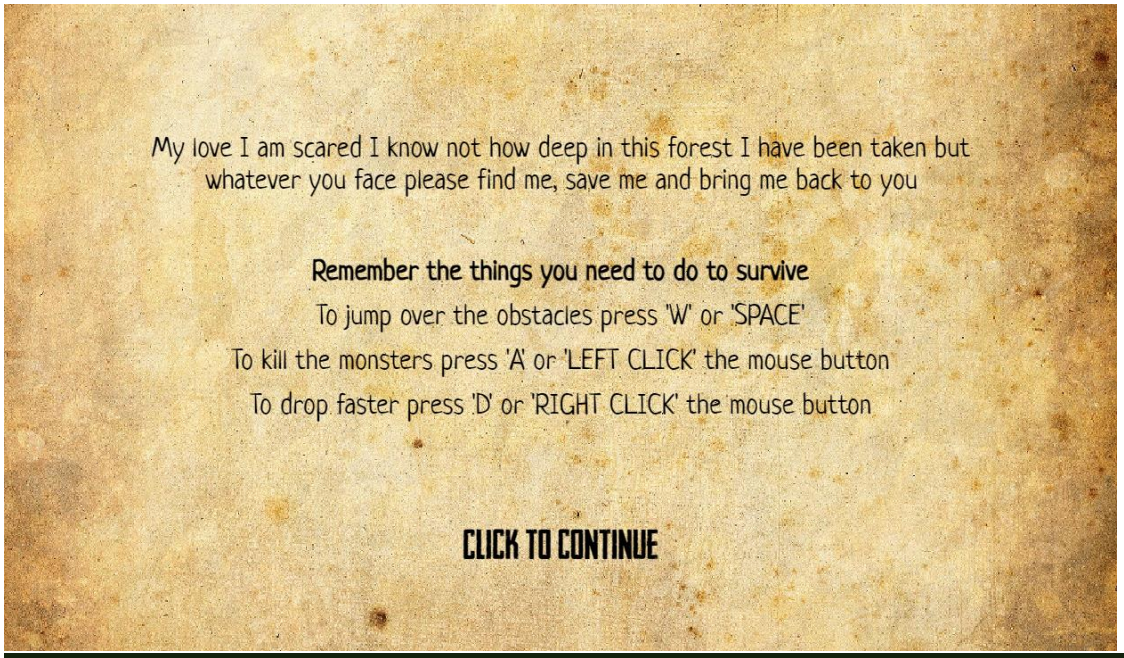
- HTML
- JAVASCRIPT
- CSS
- MODERNIZR
- JQUERY
- GITHUB PAGES

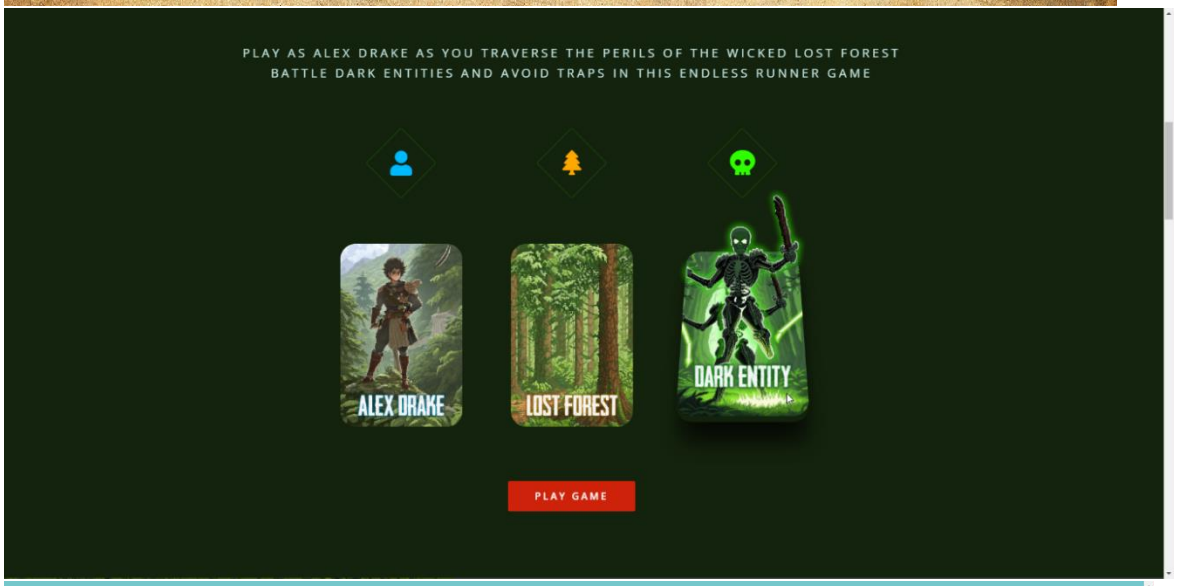



SCORE: 14 | KILLS: 0
BEST SCORE: 45 | MOST KILLS: 2


SCORE: 17 | KILLS: 0
BEST SCORE: 45 | MOST KILLS: 2


LOST FOREST
A 4TH YEAR PROJECT BY JAMES DOYLE
Play as Alex Drake as you traverse the perils of the wicked lost forest battle dark entities and avoid traps in this endless runner game


My love I am scared I know not how deep in this forest I have been taken but whatever you face please find me, save me and bring me back to you
Remember the things you need to do to survive
To jump over the obstacles press 'W' or 'SPACE'
To kill the monsters press 'A' or 'LEFT CLICK' the mouse button
To drop faster press 'D' or 'RIGHT CLICK' the mouse button
CLICK TO CONTINUE


PLAY AS ALEX DRAKE AS YOU TRAVERSE THE PERILS OF THE WICKED LOST FOREST
BATTLE DARK ENTITIES AND AVOID TRAPS IN THIS ENDLESS RUNNER GAME
ALEX DRAKE
LOST FOREST
DARK ENTITY
PLAY GAME


LOST FOREST
A 4TH YEAR PROJECT BY JAMES DOYLE

# Appendix D

Promotional media & analytics

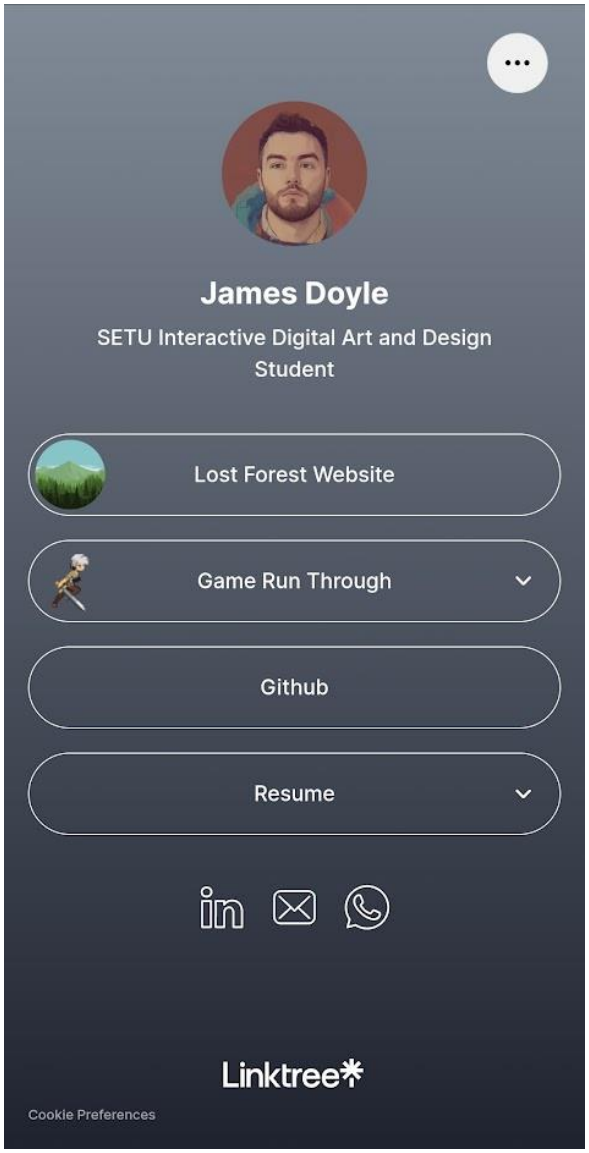


For my final year project I built a web based game using the Phaser framework. Built entirely in javascript Lost Forest is a desktop endless runner with pixel art style animated sprites, parallax effects, a memorable soundtrack, sound effects, and much more.

Accompanying the game is the Lost Forest website, a fully responsive progressive web app. The website shows off similar parallax effects, animated character cards, and of course the game and its features.

A video run through of the game is featured on the website along with paper prototypes, and documentation.

linktr.ee/jxdoyle




## Activity

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