

## **Sean Coaker – Software Engineering User Feedback Study**

### **What the study is for:**

This study is designed to gain user feedback from a novice user of my retro game application, where you can provide feedback on the game and perhaps suggest potential extensions or improvements to the game. This will be a very laid back study where you can explore the game's features, can answer some questions and respond with some ideas of what you'd like to see in the game, for example, an idea to make the game more intuitive and easier to navigate or an idea that can extend the game's features. Your user feedback will then be used by myself to implement changes and add features to the game to complete my third assignment for my software engineering module. The game is based on the retro game 'Chip's Challenge'. You are placed in a level and your main goal is to find the goal tile to complete the level. You must cross many obstacles along the way such as, navigating through a maze, finding keys and tokens and using them to open doors, avoiding enemies and avoiding water/lava, unless you've found the flippers/fire boots which enable you to walk over these tiles.

### **The Procedure:**

I will first ask you to read through this information sheet regarding this user study and ask you to sign your name to agree to being part of the user study. I will then guide you through instructions of how to get the game started, how to make a user and how to explore the game's functionalities. I will then leave you to play and explore the game's features in peace, I believe this is especially important as from my own experience I find it difficult to perform tasks when being put under pressure by somebody watching over me. Then I'll ask you to answer a survey for me whilst playing the game or immediately after and offer the opportunity for you to partake in a diary study alongside the survey. This can allow you to keep track of your thoughts and findings whilst playing the game and can help in the feedback process in the interview stage. The reason I've decided to run a diary study alongside a survey is because a diary study can offer rich contextual information and can keep track of your exact feelings and opinions whilst exploring a specific feature. Finally, I will end the user research by interviewing you to ask for more specific feedback on the game. This interview will be open ended and more like an informal and open chat where you are free to answer as fully or briefly as you choose. I hope that this can help give you the comfort and peace of mind to be able to answer openly and honestly. I also insist that you offer any constructive feedback if you wish to, no opinion is right or wrong and I'd love to hear your feedback on the game, whether it be criticism or praise.

## **Research Participants Bill of Rights**

The following is a list of your rights should you accept to participate in this round of user research.

As a participant of this user research, you have the right:

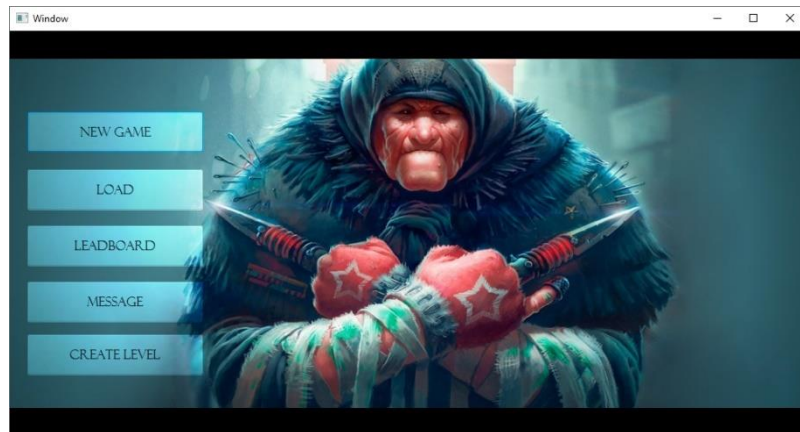
- To object to continuing the user research at any time.
- To object to answering any questions that you don't feel comfortable answering.
- To be treated with respect and dignity throughout the research.
- To be fully informed of every aspect of the research and what the research will be used for prior to being a part of it.
- To choose whether you will be a part of the research prior to it taking place.
- To know what data about you is being used.
- To rectify or erase any data about you that is being used.
- To block or suppress the use of your data.
- To know that your data shall be processed lawfully and in a transparent manner.
- To know that I will only collect data that is relevant to this user research only and that your data shall only be used for this user research.
- To know that your data will be kept for no longer than is necessary.
- To know that your data shall be processed in a manner that ensures appropriate security of that data.
- To be informed of the results of the research and how your feedback was used.

### Study Plan:

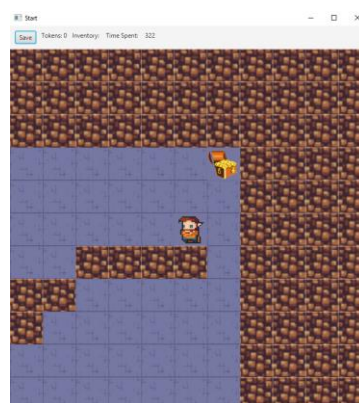
The plan for this study is to conduct a research study with 3-5 participants and to use the findings from the study to create an analysis report on the data collected, to implement the features and changes suggested by users in the feedback and to then present these changes in a video capture at the end of the coursework. I'll be taking data from the study procedure outlined above. The study plan is designed for my target demographic of novice users with no experience of playing the game previously. The novice users in the study plan will be both male and female and will range from a young age to older people.

### The Study Participants Task:

- 1) First, start the game by clicking the green play button in the top right of the screen and wait for the game to load. You should be greeted with a screen like this.



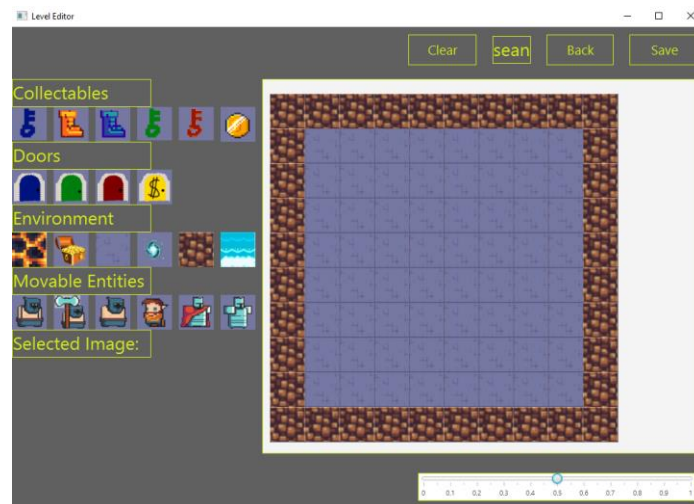
- 2) You will then need to make a new user account. To do this you need to click the 'New Game' button in the top left of the game window. Enter a username and click the create button. You will then enter the first level of the game, like so.



- 3) You can now play through all 5 levels of the game, answering some questions from the questionnaire as you go along. If you'd like to stop in between playing levels, you can click the 'Save' button in the top left of the window. Then when you want to start playing again you can click the 'Load' button on the main menu to load your save. This save is called

PlayerSave.txt. To do this, click your username in the left-hand table and then click PlayerSave.txt to start playing your save.

- 4) Once you are happy after playing some or all levels, you can go back to the main menu and view the leader board for the best times for completing each level or create your own levels to play. You can do this by clicking 'Create Level' in the main menu, you will then be taken to another window where you can create, edit or delete custom levels. When editing a level, you can choose to edit a pre existing save or pre-set level (which is a level created by the development team). When creating a level, you can input a square size for your map, for example, if you input 5 into the text box, you'll create a map of dimensions 5 squares x 5 squares. If you choose to not enter a value into this box and click 'OK' a default map of 10 squares x 10 squares will be created for you to edit. There's also a 'Title' textbox beneath the 'Size' textbox where you can name your custom map. This has to be filled in before creating a level.
- 5) Once you've created a map or chosen a map to edit, you will be taken to this level editor window.



- 6) Here you can place different tiles from our game on your custom map. Don't forget to add a goal tile (treasure chest image) as this is your only way to complete the level. To add a tile, first click the image on the left side of the window to choose the tile to add. Then click a square inside the map on the right to add the tile to the custom map. You cannot change the wall going around the outside of the map. It may be useful to know that some tiles can be dragged across multiple ground (purple) tiles so that you can place several of the same tile at once. To delete a tile you've placed, right click that tile. If you decide not to place a player on the map or forget to our game will step in and place a player on the first empty ground tile it finds. Please see below a list of tile images and what they are in the game.
- 7) Once you've finished editing your custom map you can save it and play the level. After saving, navigate back to the main menu and click 'Load'. Select your username from the left-hand table and then in the far-right table you can select your custom level to play. Whilst playing your custom level, you can save your progress and reload that save in a similar way to the instructions in 3). Only this time you'll need to select 'PlayerSaveCustom.txt' to load your custom level save

## Collectables



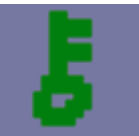
Blue Key – This needs to be picked up by players to unlock a blue door.



Fire Boots – This needs to be picked up by the player to be able to walk over lava.



Flippers – This needs to be picked up by the player to be able to walk over water.



Green Key – This needs to be picked up by players to unlock a green door.



Red Key – This needs to be picked up by players to unlock a red door.



Token – This needs to be picked up by the player to open token doors. Token doors may need certain amounts of tokens (from 1-9) to be able to open certain token doors.

## Doors



Blue Door – This can only be opened by a blue key.



Green Door – This can only be opened by a green key.

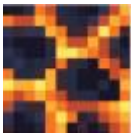


Red Door – This can only be opened by a red key.



Token Door – This will have a number associated with it, chosen by you. That number represents how many tokens are needed to be able to open the door.

## Environment



Lava – This kills a player if they walk on it without fire boots.



Goal – This is the tile the player must reach to finish the level.



Ground – This is a general floor tile for enemies and the player to walk on.



Teleporter – These tiles work in pairs and teleport a player from one teleporter to its pair.



Wall – This tile doesn't allow a player or an enemy to walk onto it.



Water – This kills a player if they walk on it without flippers.

## Moveable Entities



Blind Enemy – This enemy moves in random directions.



Dumb Enemy – This enemy moves towards the player but isn't very smart and can get stuck.



Line Enemy – This enemy moves back and forth in a straight line. When you select a line enemy, you must select whether it will move horizontally or vertically.



Player – This is who you will control.



Smart Enemy – This moves towards the player by the shortest route always.



Wall Following Enemy – This enemy moves by following a wall. You must place it next to a wall and decide its starting direction.

### My Plan

I initially plan to capture some quantitative information from the participant. This will consist of gaining some information on the participant's previous experience with mobile video gaming and desktop/console video gaming. Then I will ask the participant how long they play video games each day followed by a question asking them how often they use a computer system. Following on from receiving this information prior to the study, I will then ask the participants to answer a Likert style question where they will rate each feature in the game from a scale of 1 to 5. Where 1 represents 'poor' and 5 represents 'excellent'.

I then plan on asking some qualitative style questions. These questions will be 'If you answered 3 or below for any of these, please offer some feedback on how they can be improved', 'Are there any features specifically that you would like to see added to the game?', 'What did you particularly like about the game?' and 'What did you particularly dislike about the game?'. Finally, I will be hosting an unstructured interview the participant to try to gain some more information on the features they've suggested and how they'd like those features to be implemented. I will also ask the participant for their opinions on the game having a twitter share feature added.

### Sample Interview

This is a sample interview of some questions I will be asking participants regarding the feedback they gave in the questionnaire:

*How would you like to see this feature implemented?*

*Why do you think that this feature needs changing/needs to be implemented?*

*How would you like the change or feature to look?*

*Would a feature where a user could share their time for a level to Twitter be something that you'd like to see added to the game?*

## Survey – To be completed whilst playing the game

The following is a survey to be completed during the time taken to play the game. It's entirely up to you how you go about filling out the survey, you can fill it out whilst playing the game, you can fill it out after navigating through each feature of the game or you can fill it out after completing all the tasks specified above etc. Please know that no answer is wrong and it's entirely your opinion. This must be completed and is run alongside an optional diary study which you can also partake in. The diary study is used to keep track of exact feelings and opinions whilst exploring specific features of the game and can help to provide more accurate feedback and rich contextual information in the feedback interview.

The Survey:

**Name:** Click or tap here to enter text.

**Gender:** Choose an item.

**D.O.B. (DD/MM/YYYY):** Click or tap here to enter text.

**Date of Survey:** Click or tap to enter a date.

### Computational and Video Game Experience:

**How often do you play video games (Console/PC)?**

- ☐ - Less than once a week
- ☐ - Once or twice a week
- ☐ - A few times a week
- ☐ - Daily

**How often do you play video games (Mobile/Tablet)?**

- ☐ - Less than once a week
- ☐ - Once or twice a week
- ☐ - A few times a week
- ☐ - Daily



**How long do you play video games for per day?**

- ☐ - Less than 30 mins
- ☐ - 30 mins
- ☐ - 1 hour
- ☐ - 2 hours
- ☐ - 3 hours
- ☐ - More than 3 hours

**How often do you use a computer system?**

- ☐ - Less than once a week
- ☐ - Once or twice a week
- ☐ - A few times a week
- ☐ - Daily

**Retro Game Analysis:**

Please rate each item in the table by putting an 'x' in the column that most suits how highly you rate the specific feature of the game.

5 – Excellent

4 – Good

3 – Okay

2 – Underwhelming

1 – Poor

Feature	5	4	3	2	1
Main Menu					
Create User Function					
The Gameplay					
Level Design					
Save Level					
Load Level					
Overall Graphic Design					
Edit Level					
Create Level					
Delete Level					
Playing a Custom Level					
Leader board					

**If you answered 3 or below for any of these, please offer some feedback on how they can be improved:**

Click or tap here to enter text.

**Are there any features specifically that you would like to see added to the game?**

Click or tap here to enter text.

**What did you particularly like about the game?**

Click or tap here to enter text.

**What did you particularly dislike about the game?**

Click or tap here to enter text.

## **Participant Consent Form**

The purpose of this consent form is to check that you understand what the study is for, what will be required of you if you agree, what information we will be obtaining from you and how that information will be used for the purpose of the study.

- 1) I confirm that I have had the study aims explained to me and what the purpose of the study is.
- 2) I agree to participate in this study.
- 3) I agree that the information and answers I give during this study can be used for the purposes outline in the study aims and objectives.
- 4) I understand that any personal data I provide will be processed by the person conducting the user study in accordance to the UK GDPR.

**Participant's Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_