Deco 1800

Project Progress

Team Magikarp

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1. 0 Introduction

Our project is based around creating an educational free roam exploration game of Australia. Questions will be displayed at landmarks across the country and data will drawn from Trove to present the trivia and educate players. Many of the questions and information displayed throughout the game will be basic knowledge to many Australians. Consequently, the game caters towards primary students, discovering and educating themselves with Australian culture.

Considerable progress has been made towards the completion of the project and this paper will not only break down the project tasks and milestones but also depict the works complete, plan the work to be completed and explain all changes which have been made since conceptualisation.

2.0 Concept Changes

The primary change made from our initial proposal is the manner the game interacts with the Trove database. Initially, the questions, answers and relevant pictures were going to be drawn from Trove. However, we have now decided to present a factual paragraph after each question. This allows users who have previously answered incorrectly to sharpen their knowledge on that topic and to promote further growth after the correct answer. A few minor changes have been addressed across the games formatting also. This was to allow users to interact freely and progress throughout the game with ease and simplicity.

The majority of our work has been focused on providing quality improvements and additional functionality throughout the game itself. Novelties such as character selection and sound have been implemented to engage the target audience further and create a refreshing atmosphere within the game. Improved menu screens for customisation and functionality have been also constructed. Furthermore, many basic hotkeys have been integrated. This allows users to toggle sound, instruction menus and pause the game if necessary.

3.0 Implementation Scope

Our current process across our game has directed itself towards functionality primarily. However, our secondary and current focus is now on the Trove and social media integration. Login and endgame instances must be constructed and linked with relevant data to complete the game in terms of user interaction and progress within the game. This data must also be integrated within the game to provide education information and assist the questions throughout. Finally, our focus will be placed on the aesthetic aspect of the game. The game needs to be visually engaging, pleasing and comprehensive to allow users of our target audience and any atypical users to interact effectively and efficiently.

Group Member Roles:

- Ryan: Game creation
- Liam: Visual design
- Jack: Backend data acquisition (PHP/Trove)

These project roles are further broken down within 4.0 Progress and 5.0 Plan.

4.0 Progress

The main construction across our project has been placed on the game itself so far. The mapping of the game and default questions have been created, giving the game its basic form before any additional educational content is added. This includes a game map, a sprite player which appears to walk with the arrow keys and the game nodes which change colour depending if they are unlocked or not. Other game items include an incremental timer and a score.

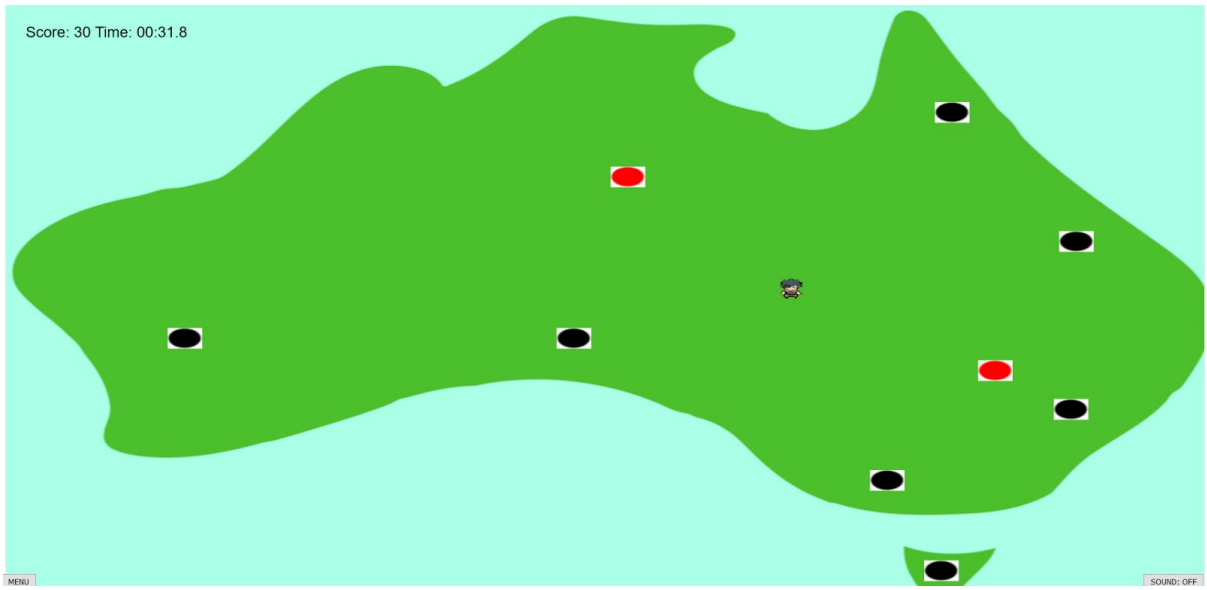

Figure 1.0 Current Game Layout

Unfortunately there is a bug with the game initialisation which required the browser to be refreshed once before the nodes and sprite are displayed , this will be fixed soon.

The score system increments for every correct minigame and decreases if the mini game is incorrectly solved. The current scoring method is as follows:

- increase: +10*modifier (where the modifier is the number of correct nodes in a row)
- decrease: -5

When a player moves over a locked node the game is paused and a mini game overlay screen is displayed. currently the game shown is a simple stock standard format of which the proposed information will be displayed.

Figure 2.0 Mini Game Overlay

From here the user will be able to select a hint (which will be achieved through trove - not yet implemented) or submit their solution. Regardless if the user is correct or incorrect another overlay screen appears, this will contain trove information (refer to section 5.0), however this is an empty container currently.

Many display and ease of access controls and features have been completed also. Setting menus and corresponding hotkeys have been created to display controls & instructions, the ability to pause, resume, restart or quit the game and toggle sound.

Finally a settings menu has been implemented before the start of play, this allows users to scroll through various player avatars, select the difficulty and choose to have the sound play or not. Currently there is only the one player spritesheet repeated three times however once the game's graphics is completed these avatars will be different (refer to 5.0).

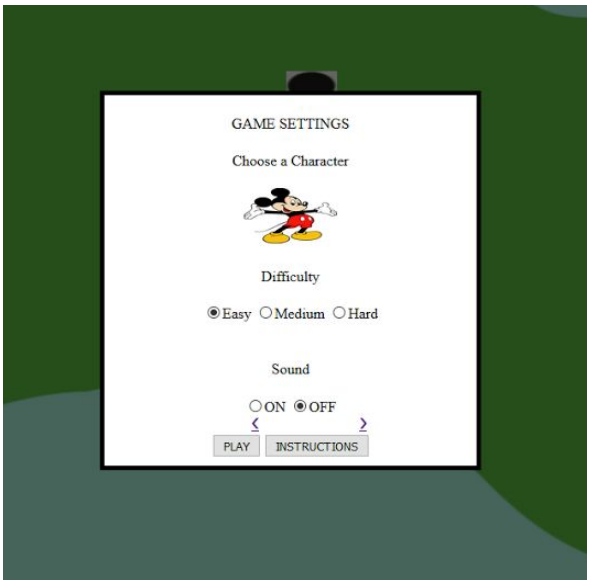

Figure 4.0 Settings Menu

There are three difficulties to choose from, Easy , Medium or Hard, currently this only affects the amount of time the user has to complete the game; 10 minutes for easy , 5 for medium and 2 minutes for hard difficulty. This difficulty functionality will however be increased, refer to section 5.0.

5.0 Plan

As discussed in section 4.0 , we have made considerable progress to the completion of this project however there are various tasks to complete before the final delivery. In order of importance and priority the tasks which are yet to be completed are:

Trove Information Screen

One of the largest concept changes was the introduction of an information screen which will be displayed after the user has completed a “mini-game”, this concept change is described in 2.0. The information screen will display relevant data to the preceding mini-game; for example the minigame could be about the Sydney Opera House, the proceeding information page will have images of the Sydney Opera House and an article on the history of the Opera House. This data retrieved will obviously vary depending on the previous mini game.

Mini Game Data

Upon completion of the mini games and the previous task the web page will be practically functioning and will meet the given specifications, anything completed in the later tasks is not essential however definitely worthwhile. Hence the mini game data task is prioritised highly.

The Mini Game data will now come from a php database rather than trove (see 2.0) there will be various game data for each node which will be chosen randomly. Currently the only game type implemented are trivia questions therefore the data obtained from php will be the question and some answers. This is all that is needed for a complete solution, however it does not match our audience of young students hence various other games will also be implemented.

Styling

Currently the web page is fairly generic and plain. styling will be implement to make everything look nicer and engage the user. This is very important for our younger audience who are very visually simulated through many elements [1]. This task is to develop or introduce aspects such as graphics, color and font themes, object shapes and sizes. Basically any visual effect.

Figure 5.0 Styling Concept

Instructions

Although windows open and there is already functionality to display instructions (4.0) no instructions have actually been written. The reason this has a low priority is because it is a simple and quick task in comparison, also by doing this task after the styling, screenshots of

inplay can be used to demonstrate instructions. The instructions will be easy to follow paying particular emphasis on visual aids.

Users

In the proposal it was specified that the web page would allow users to compete and compare their results to other users. This is important to keep the users interested and engaged in the ‘Australian Race’, striving to beat their mates. Again this will be done by storing the users & score on a php database.

There are additional and necessary tasks for this to be completed:

- Login Screen - Serves as an enticing home page and collects the user information

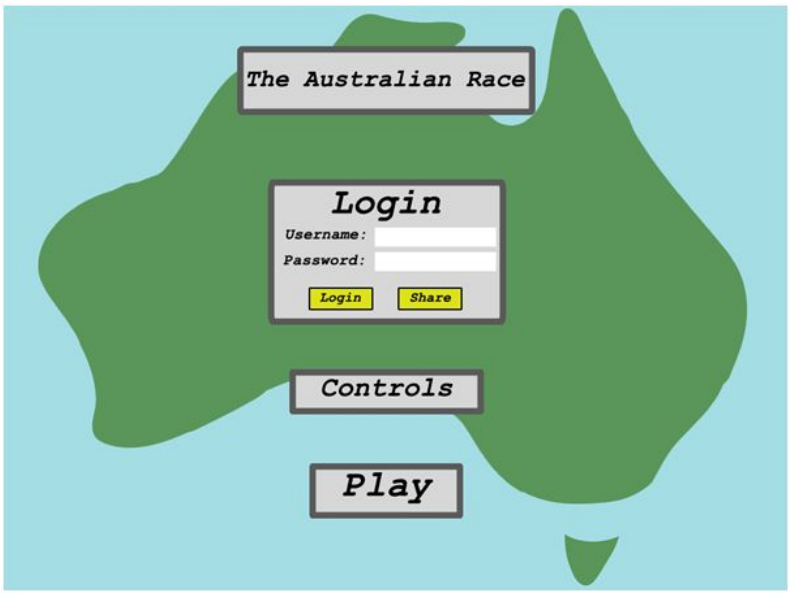

Figure 6.0 Login Concept

- Leaderboard - will display at the end of the game displaying the user's score and the highest scoring users.

Figure 7.0 Leaderboard

Furthermore social media sharing may be implemented so users can show a wider range of friends how well they played, this however is a low priority.

Game

The functionality of the game is at a respectable and deliverable state, however there are a few aspects which could be implemented to increase users interest and enjoyment.

Firstly the functionality of the difficulty levels will be increased; currently different difficulty levels only affect the game duration. Easy has 10 minutes, Medium 5 and Hard 2 minutes to complete the game. additional difficulty functionality will be allowing the user multiple attempts on a minigame, same idea as a game with a number of lives. Easy obviously having more attempts or 'lives' and Hard may only have 1.

Also the player sprite is fixed within the viewing window however this allows the player to walk through the ocean. Therefore the player will be fixed to australia (or the green sections in this map) and either a bridge, boat or similar will be implemented to access tasmania.

Figure 8.0 Sprite Restriction

Finally if all other tasks are complete a gave save mode will be implemented. This will allow a user to stop the game and come back and return to the same game state. This is different to the already implemented pause function because if the browser is closed a saved game will still return to the correct position upon re-visit.

The following Gantt chart illustrates the proposed timeline for completion of the tasks listed in this section.

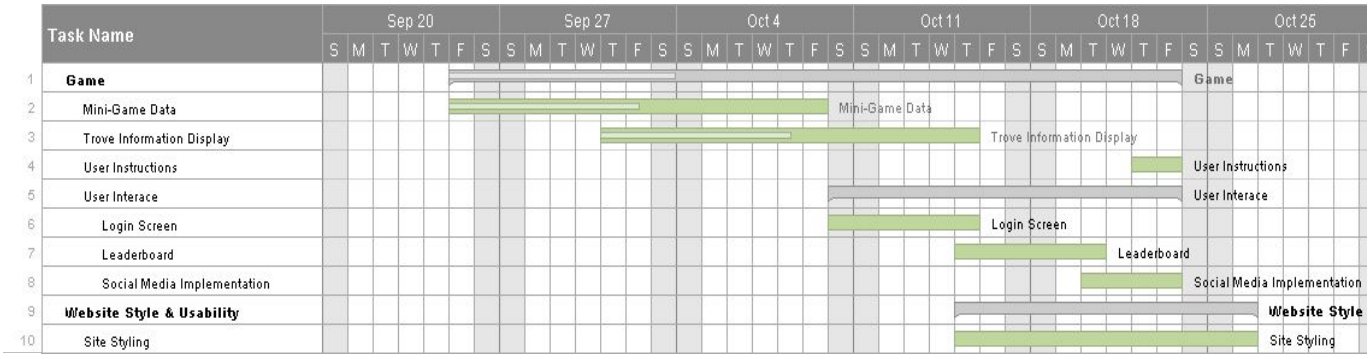

Figure 9.0 Gantt Chart of Task Completion

Risk Assessment

The main risk to completion of the tasks detailed in section 5 will be simply falling behind on time and failing to hit completion milestones detailed in figure 9.0. Due to this we have given a reasonably generous time frame for the tasks relating to the game which are most important. Secondary tasks (For example website style and tasks not crucial to functionality) have been designated a less generous time frame.

6.0 Demonstration Feedback

In addition to this progress report a demonstration was completed on monday from which informative and constructive feedback was received.

Originally the concept was to have the player move between nodes on specified paths this would limit the nodes the player could next reach and forced the user to unlock a node before being able to continue on that particular path (there would be multiple paths to bypass certain nodes). However upon implementation it was decided that free roam may be better, it allows full use of the map and gives the user more options to move, hopefully increasing the enjoyment. Since this was a concern we asked for feedback on the matter; both tutors agreed with our decision and therefore the player will now be free roam.

Another area for feed back was whether our game seemed clear and engaging for our audience. Since we are a lot older than the target age it is sometimes hard to judge what may or may not work well hence we appreciated feedback from tutors who affirmed our decisions.

The final feedback was the most constructive, it was in regards to the trove data we are going to implement. although much thought had gone into the game to make it engaging for the audience group, not much had gone into the trove data we would collect. the feedback was basically not to be too text heavy, to use more pictures and mix up the data displayed.

From this it has been decided that instead of having trove text data display after every question it will only display if a user walks over an unlocked node or an information point. Therefore we are relying less on text and can focus greater on the audience. Furthermore we are going to revert slightly back to the original concept of retrieving information from trove for the mini games. In particular any minigame which requires an image will be retrieved from trove.

Thanks to the feedback modifications to the web page will be much better suited for the target audience.

References

[1].
http://www.smashingmagazine.com/2009/11/designing-websites-for-kids-trends-and-best-practices/