CST 2120

Project Proposal for a game website.

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Project Proposal

Game Introduction

The game that I have proposed to develop is a Snake Game. I am going to develop this game inside a web browser which includes four webpages: **register, login, game and the scoreboard**. This game website has **four** webpages in total. The user needs to use the **navigation bar to navigate** to the different webpages across the website. The **navigation bar will be fixed on the top of all the webpages**. The footer bar is used for the user to access the social media links and see the copyright information. **The footer bar will also be fixed on all the webpages across the website**.

The user will first go onto the registration page and enter all the registration details in the registration form, which includes creating a username and a password, inputting user information **e.g. first and last name, email address, phone number, and the user has to also input their address details e.g. Address Line 1, Address Line 2, Post Code, City and the country**. After that the user needs to **press the register button** to get registered to this website.

After the user has registered, the user needs to go to the login page and **input their correct username and password** to login into the website, using the login form.

Once, the user is logged into the website they would navigate to the game webpage, and then they would start playing the game. There will be a game window inside the game webpage, inside the game window is where the snake game is going to be played.

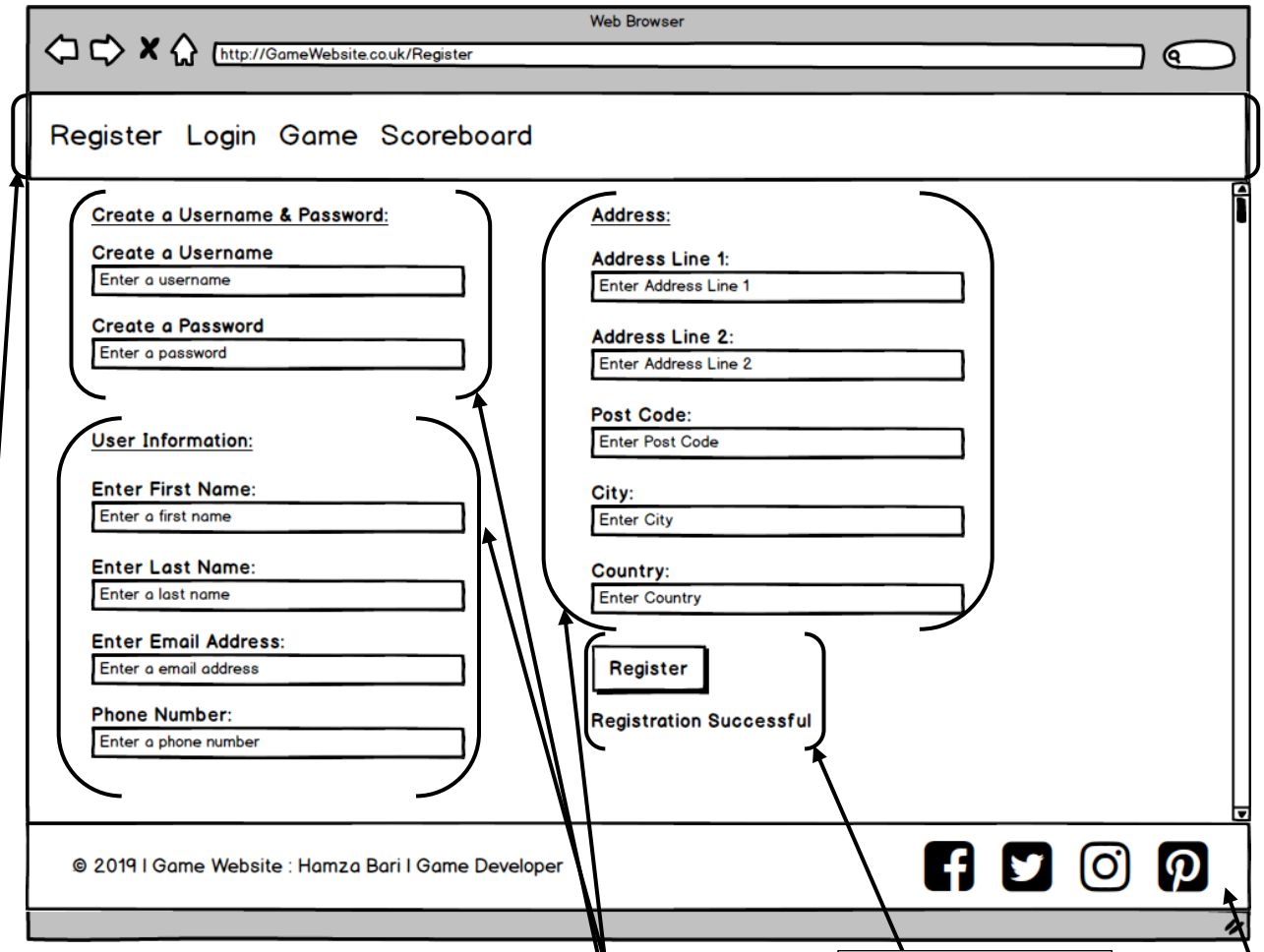
The user would need to press the key **"s**" on the keyboard to start the game, then the user needs to use the **directional keys e.g. left, right, up, or down to control the snake's movements**. Within the game window there will be a **block generated** anywhere in the game window, **the user needs to use the snake's movements to collect those generated blocks**, and once those blocks are collected they will be **added onto the actual snake's body, and a point will be awarded, per one collection of the block there will be one point awarded**.

There will be a **score label on the top-right corner of the game window** where the **score will be getting updated**. If there is a **loop in the snake e.g. the snake joins up together** then the game will end. The game will also end if the **snakes hits any sides of the game window**. After, the game has ended there will be a text appearing on the game window saying, **"game over"** and it will **list the users final score**. it will also give user an option to **press the "R" key character on the keyboard to restart the game from the beginning**.

Then the user can go onto the scoreboard webpage to see their scores listed with their username, which is located underneath the ranking title on the very top of the scoreboard webpage. **The user who scores the highest points will be on the top of the rankings**. The way rankings work for this game is, out of all the users who play this game and get a score will get listed onto the scoreboard webpage, where all the scores will be organised and then listed. **The way they will be listed is, the highest scores will start from the top, and the lower the scores get, you will see them below the rankings table**. The username and the score will be listed together.

I have shown the website design wireframes for all the webpages within this website. Using the wireframes, I have explained the design for all the webpages and how they are going to work **e.g. the registration form, login form, snake game, and the scoreboard (rankings)**. Very briefly, I have also explained some parts about the visual impairments in my wireframes/designs.

Wireframe for the Registration webpage



This is a website navigation bar where the user would click to go onto another webpage. E.g. if the user has registered, then the user needs to click onto the login link in order to login into the website.

The navigation bar will be fixed on top of the webpages, this applies to all the webpages within this website including **Login, Game** and the **Scoreboard**.

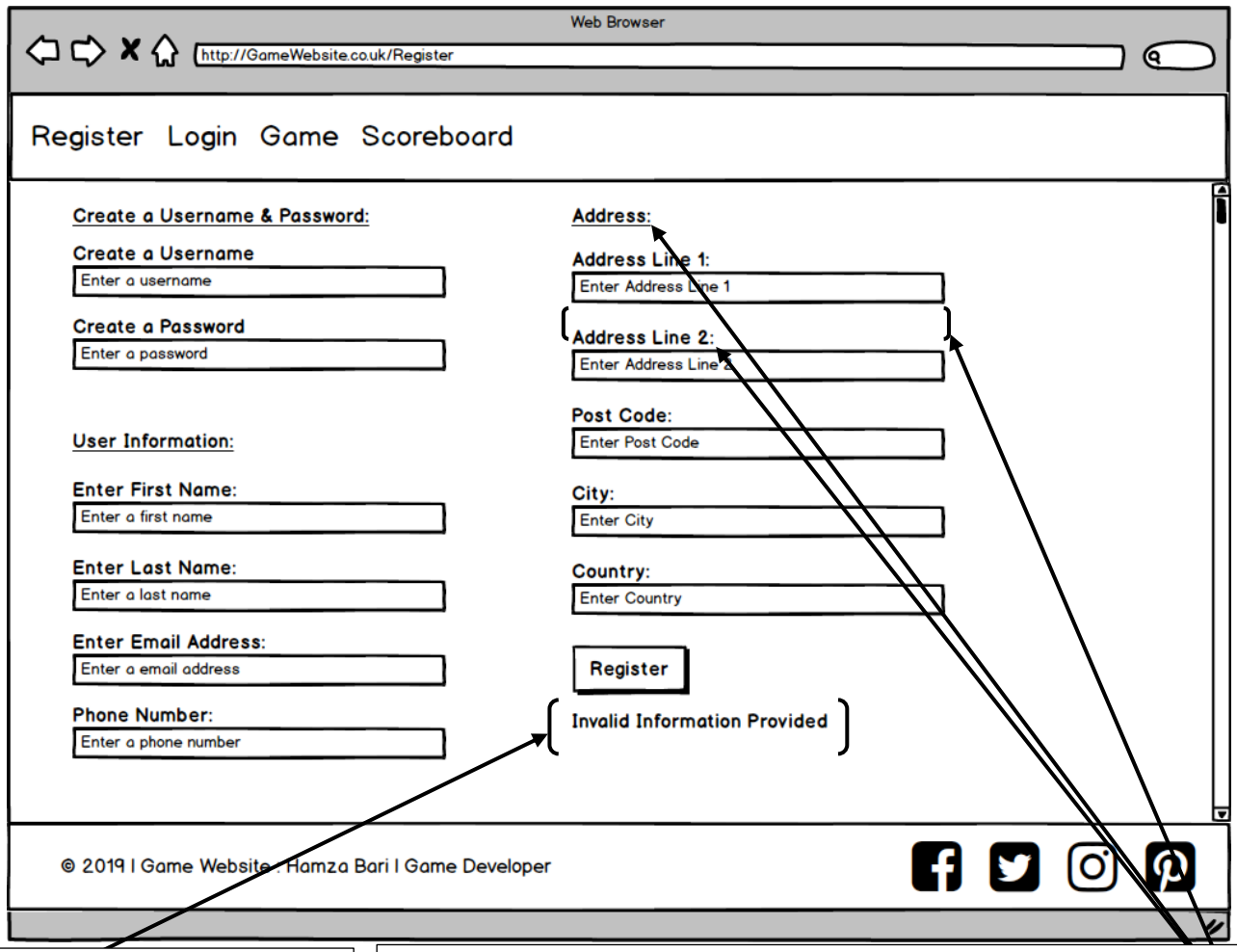
The registration page is separated into 3 sections: **Create username & Password**, **User Information** and the **Address**. Splitting it into three sections makes in clearer and easier for the user to understand what type of information they need to provide, and this way the user should not get confused while filling in this registration form.

There is also a heading above every text-field, and inside every text-field there will be a placeholder which shows the user what exactly they need to input inside the text-field therefore, the user knows what exactly they need to type inside the text-field.

After all the information filled in, the user needs to click onto this register button. If the information is correct it will show a message in bold text saying either **"registration successful"** or **"invalid information provided"**, this message shows the user, if their account has been registered or not.

This is a fixed-footer bar which is going to be inside all the webpages of this game website.

This includes links to the different types of social media webpages. It also displays the copyright and name feature.



This message will appear if the user enters the wrong information. This will indicate the user that their account has not been registered.

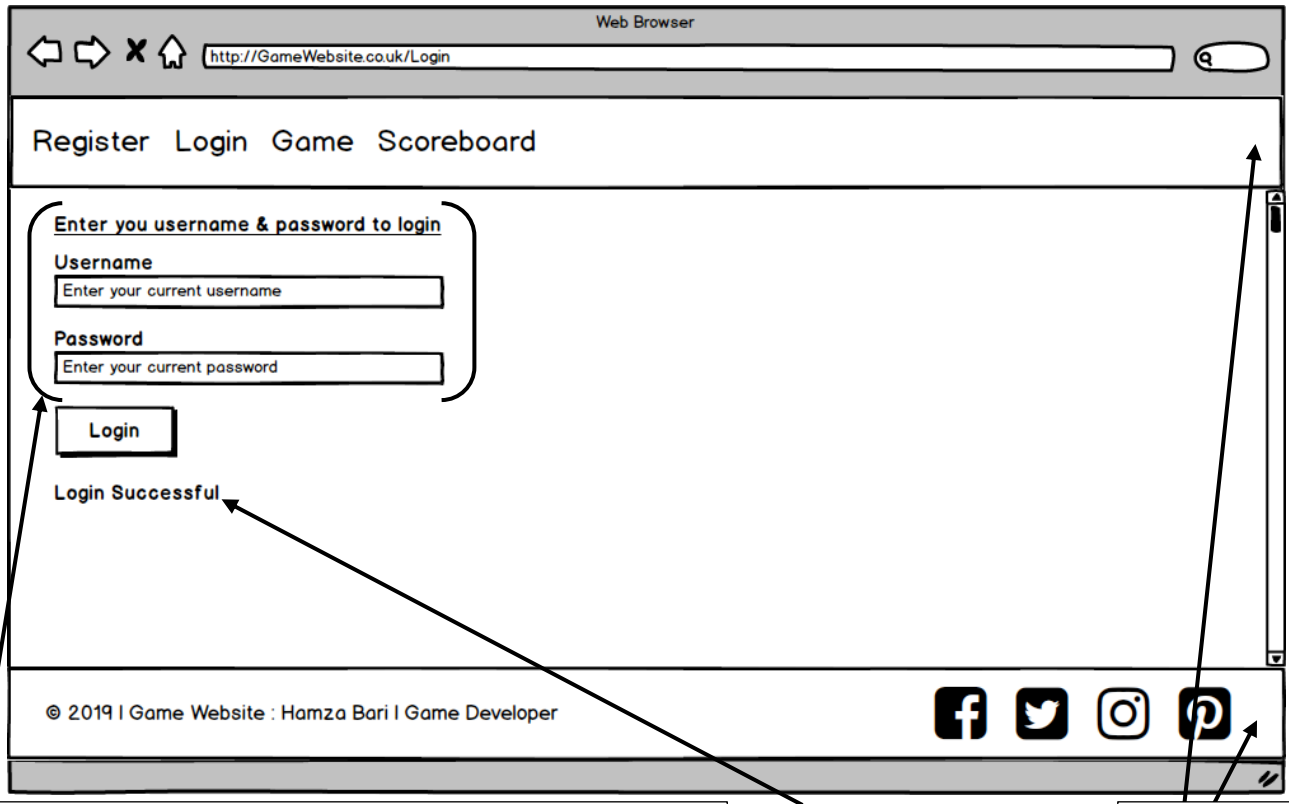
Each section has a title which is underlined to show where the section begins and underneath that there is a heading for each text-field, and the text is displayed in bold, as well as there are spaces between the text-field, therefore this makes it easier for the user to read the information on the form as, there might be some users who suffer from visual impairment such as dyslexia. This design will help visually impaired users, so that they can read the information clearly and fill the form in accurately.

Summary of the design

Above, is the wireframe for the registration page. The registration webpage is where the user is going to enter his details which includes **creating a username and password, entering user information e.g. phone number etc, and the address**. After that, the user would click on the register button in order to create an account. If all the information is entered in the correct format then, there will be a message saying **"Registration Successful"** which means, the user has successfully registered onto the website. If the user enters invalid information then there will be a message saying **"Invalid information provided"** which means, the user needs to recheck the information entered and his account has not been registered to the website.

Visual impairment has been taken into consideration in this registration webpage as the text is bold, and everything is spaced out therefore, it makes it easier for the user to read the information especially for the users who are suffering from dyslexia. Another important factor is that the user does not need to scroll down to access the information as it will be displayed directly onto the screen, and this will be useful for the people who suffer from **physical issues e.g. arthritis,** as they don't have to make an effort to scroll down and access the information.

Wireframe for the Login webpage



This is the login webpage where again the title is **bold and underlined**, and the heading above the text-field is **bold** and has a reasonably **decent font-size** therefore, it makes it easier for the user to read the information accurately, especially if they suffer from **visual impairment e.g. dyslexia**.

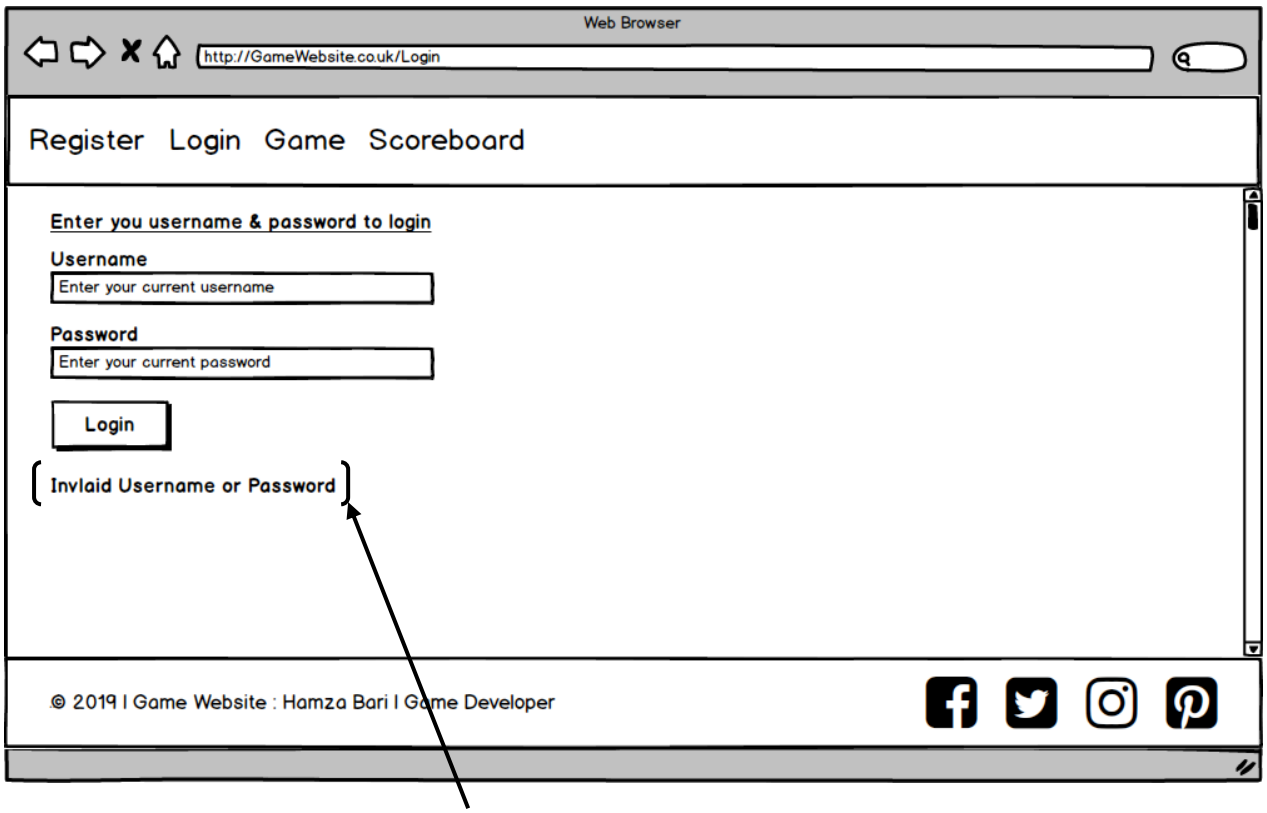
The login form is created into section such as: there is a title which is underlined, underneath the title there is a heading for a text-field, and then underneath that there is a text-field for the username and password with placeholders , which is explaining the users what they need to enter in the text-field, and there is a login button underneath the text-fields, and the message will be printed underneath the login button. Putting it into sections like this will make it easier for the user to understand how they need to use the login form. The users can login quicker, as they would need less time to think.

Another good reason is, not much space is used in this login webpage which means the user does not have to scroll at all while they are enter their login details. This is good for user who suffer from **physical issues e.g. arthritis**.

The placeholders are there to instruct the users about what they need to type inside the text-field. Therefore, this way it's very unlikely that the users are going to make a mistake when they are typing information inside the text-field.

Once, the user has registered their account they would need to enter their valid username and password. Then they need to press the login button. After that, their information will validate, after that they will receive a message saying, **"Login Successful" (In bold text)** which means, the user has successfully logged into the website using the login webpage.

The login webpage has a **fixed** navigation bar and a footer bar.



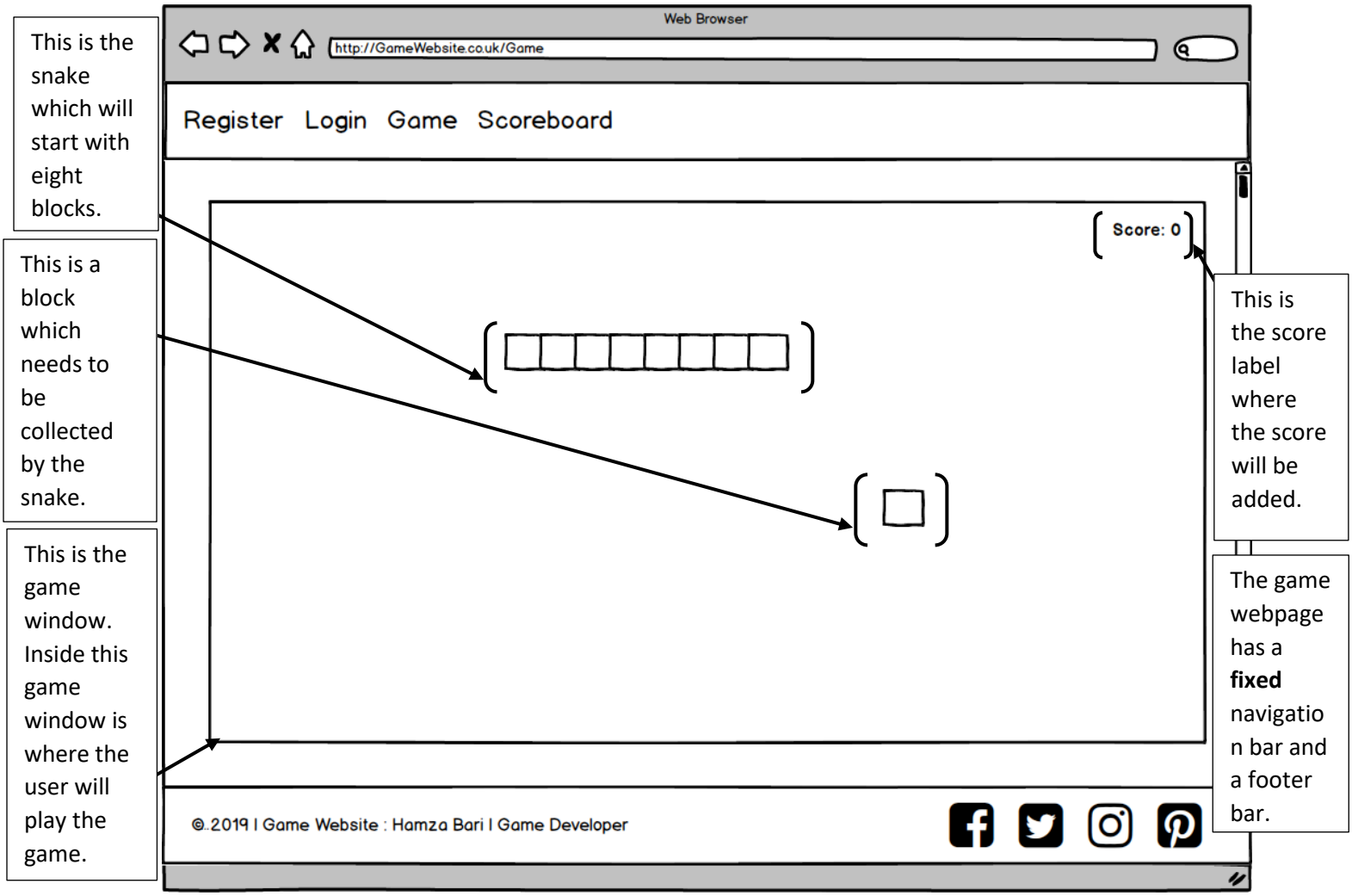
If the user inputs either an invalid username or password and then tries to login then, the user will receive a message saying, **"Invalid Username or Password" (In bold text)**. This way the user will instantly find out that they have made a mistake therefore, they are not logged into the website.

Summary of the design

Above, is the wireframe for the login page. This is the login webpage where the user will enter his registered username in the username text-field and the password in the password text-field, and then the user will click on the login button. If the username and password is correct the user would receive a message displaying "**Login Successful"** which means, the user in logged into the website. Once the user is logged into the website, they can progress to the game webpage and play the game. If the user enters an invalid username or password, they will receive a message saying, **"Invalid Username or Password"**, which means that the user has not been logged into the website.

Visual impairment has been taken into consideration in this login webpage as the text is bold, and the form is organised therefore, it makes it easier for the users to read the information easily, and especially if the users are suffering from reading difficulties. Another important factor is that the user does not need to scroll down to access the information as, it will be displayed directly onto the screen, this will be useful for the people who suffer from **physical issues e.g. arthritis** as, they don't have to make an effort to scroll down to access the information.

Wireframe for the Game webpage



This is that snake game which the user is going to play once the user is logged into the website. The user would have to press the **character "s"** on the keyboard to start the game. After that, the user needs to control the eight-block snake by using the **direction keys** which are following: **the up-key is used for making the snake move up, the down-key is for making the snake move down, the right-key is for making the snake move right, and the left-key is for making the snake go left**.

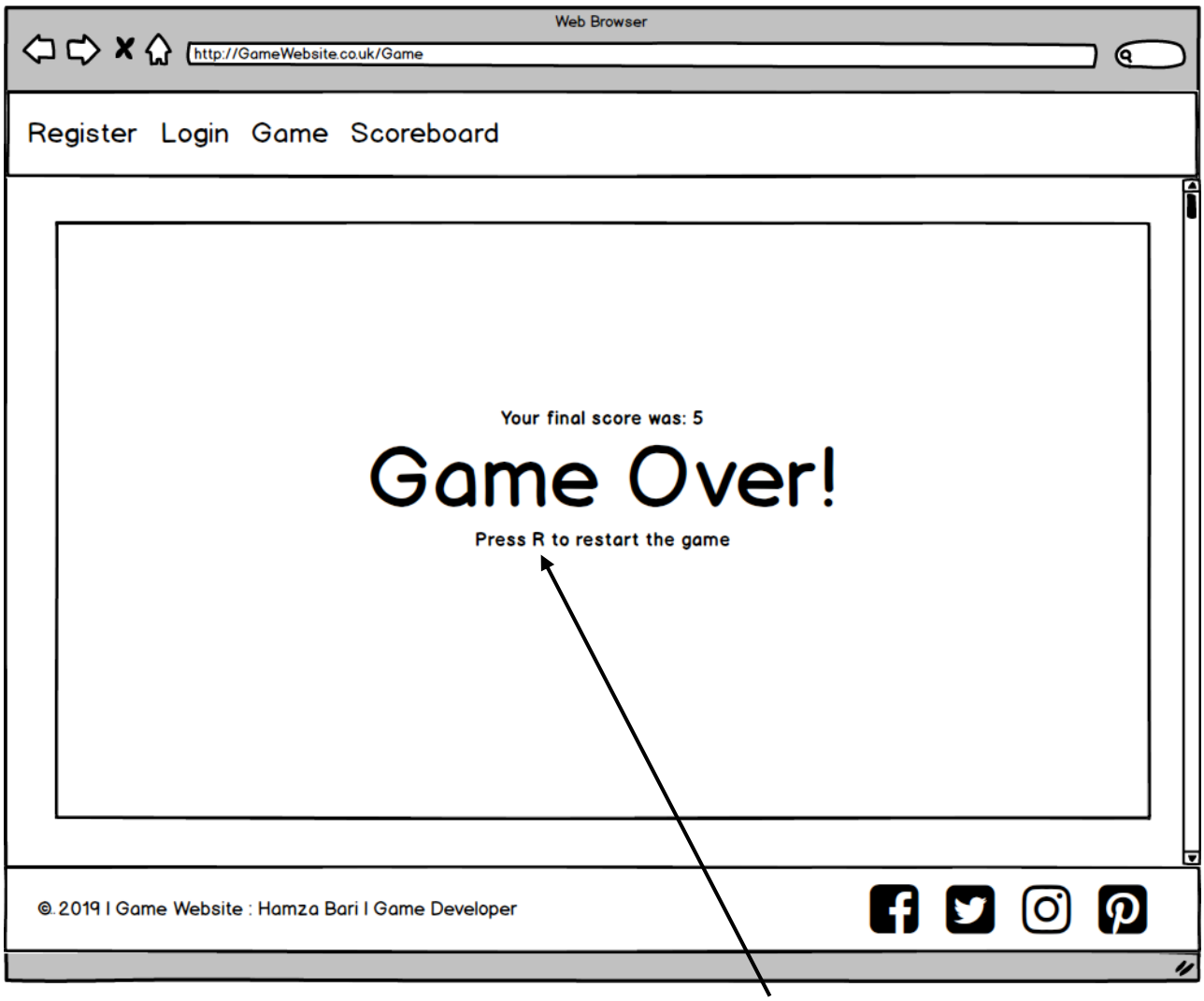
What the user needs to do is by using the **direction keys**, the user needs to try and collect the block, and as the user successfully collects one block, then a point will be added onto the score label which is located on the top-right corner of the game window.

Once, the user has collected one block then that block will be added at the back of the snake, such as the snake will have nine blocks. A new block will be generated in another position within the game window. The number of blocks collected by the snake will increase the size of the snake.

The user must try and collect the blocks using the direction keys, and each time a block is collected, then that block will be added at the back of the snake, and a point will be added to the score. The way scoring works is, **per one block collected one point will be added to the score label** e.g. if the user collects five blocks and the game ends, then the final score will be five.

If the user hits the snake on any sides of the game window, then that will be the end of the game. If there is a loop in the snake such as, the snake joins up together then that will also be the end of the game. Once, the game has ended another screen will appear saying, the final score and it will also say, **"game over!"**.

This is how the snake game is going to be played by the user.



Once the game has ended, then this is what is going to appear up in front of the user in the game window. It will show the users their final score e.g. how many points did they achieve. There is a big text saying, "Game Over!" therefore, the users realise that the game has ended. Finally, the user can press the **key "R" on the keyboard to restart the game**, e.g. if the user presses the **"R" key**, the game will restart where you can see the snake, block and the score label located on the top-left hand corner of the game window.

Summary of the design

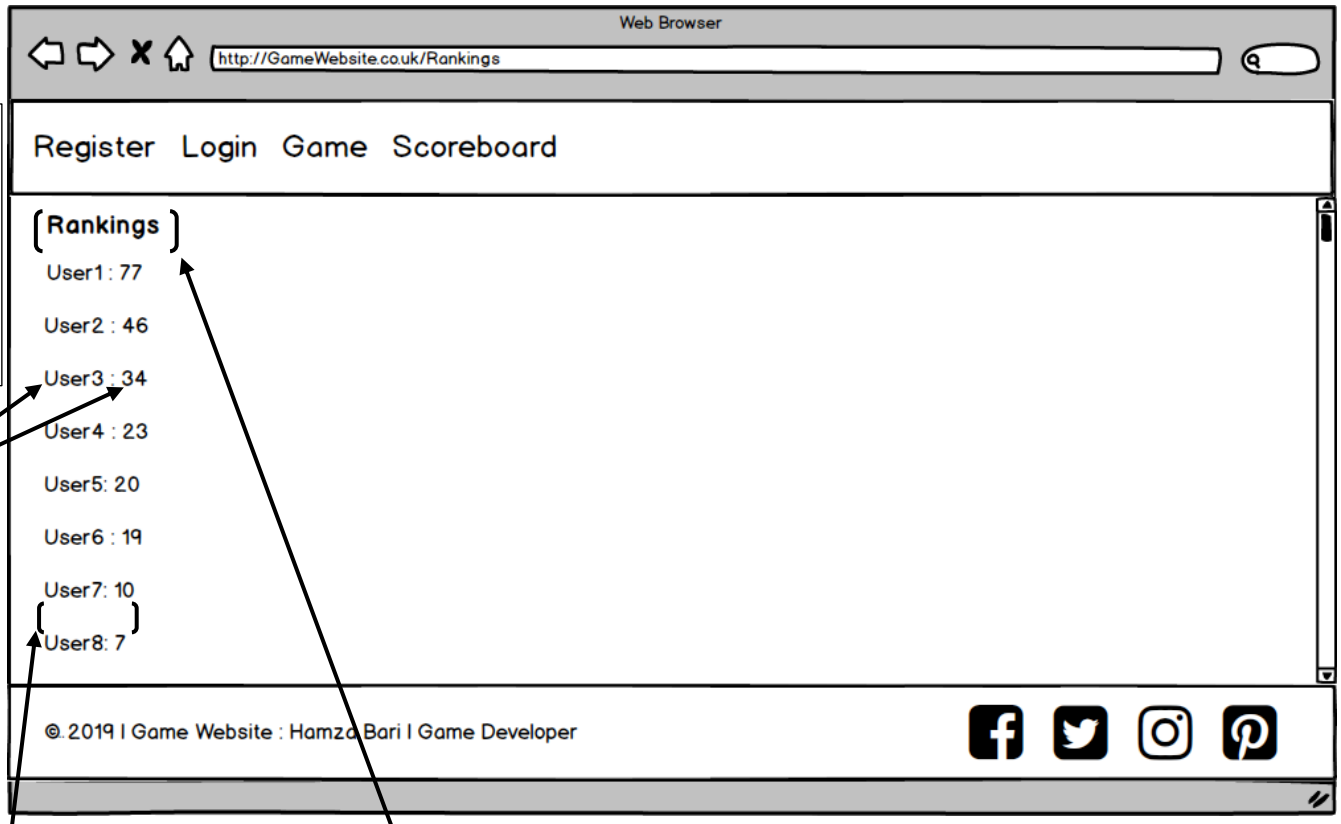
Above, is the wireframe of the game webpage and that is where the user is going to play his game. Inside the game window is where the user is going to play the snake game. The user will use the **directional keys** to control the snake's movements. There will be a generated block which the user has to collect using the snake. As, the user collects the block then, that block will be added at the back of the snake which is going to **increases the size of the snake**. Also, as a **block is collected a point will be added** and a **new block will be generated in another location inside the game window (not the same place)**.

If there is a loop in the snake e.g. **the snake joins up together** or the **snake hits the any sides of the game window** then the **game will end**, and you will see the **"Game Over!"** text, with your **final score** above the text. The user has an option to press the **"R" key** and restart the game beginning.

Visual impairment has been taken into consideration as all the text displayed within the game webpage is displayed using the bold text, which makes it easier for the users to read the text and the label. It's especially good for users who suffer from reading difficulties.

The users don't have to scroll up and down, they would just have to play the game, as the game window is adjusted from the beginning.

Wireframe for the Scoreboard webpage



The scoreboard webpage has a **fixed** navigation bar and a footer bar.

This is the name of the user and next to that it displays the users score.

I have put a space between the two users ranking the reason being, it makes it easier for the users to read. For example, if the user suffers from dyslexia or any reading difficulties then it will be difficult for them to read when everything is put together with no spaces. This can be difficult for any user when they are trying to check and read their score in the scoreboard webpage.

Therefore, I have given space between two rankings. So that the user can easily read his own ranking without getting confused with the other users rankings.

This is the title which is **formatted in bold text** which makes this scoreboard webpage look more organised.

The user will first look at the title which will attract them. This way the user will instantly know that underneath the title is where all the rankings of the user scores are placed.

The purpose of a scoreboard webpage is where the users can view their score after playing the game and check their ranking number with other users.

The way this works is the user plays the game and then, the game at some point will end, once the game has ended the score of the user will be printed out in the scoreboard webpage with their username.

Depending on how much the user scores, will depend on where the users username with score is going to be placed e.g. **if the user breaks the highest record, the username with the score will be placed right on the top, if the user comes last then the username with the score will be at the very bottom, and if they do okay then it will be printed somewhere in the middle**.

In the wireframe you can see that the rankings are displayed from **highest to lowest** by looking at the score numbers.

Summary of the design

Above, is the wireframe of the scoreboard webpage. This is where all the user scores are going to be added. When the user is playing the game then at some point it will end. Once the game has ended the user will receive a final score which is going to be printed out onto the scoreboard webpage underneath the rankings title. That is where the users can look for their username and scores and see what position they are standing at **e.g. top, bottom, or in the middle somewhere**. You will see in the scoreboard wireframe that the ranking is displayed from the highest to lowest.

Visual impairment has been taken into consideration while designing this scoreboard wireframe. As you can see that a space has been added between the rankings list the reason being, it makes it easier for the user to find their username and score. When its spaced out, then it makes it easier to read.

As, I mentioned earlier that this is good for users who suffer from reading difficulties because, they find it easier to read text which is nicely spaced out. If all the rankings were underneath each other without any spaces, then that would have made it difficult for many users to find and read their usernames and scores.