FULLSTACK-1 PROJECT

On

GAME

Submitted by

Name of Student: DIKSHA KHANDELWAL

Roll No: 181500217

Name of Student: MANSI VERMA

Roll No: 181500372

Department of Computer Engineering & Applications

Institute of Engineering & Applications

GLA University

MATHURA-281406, INDIA

2020

Department of computer Engineering and Applications

GLA University, Mathura

17 km. Stone NH#2, Mathura-Delhi Road, P.O. – Chaumuha,
Mathura – 281406

Declaration

I hereby declare that the work which is being presented in the Fullstack- project **"Stone Paper Scissor game",** in partial fulfillment of the requirements for Summer Training viva voce, is an authentic record of my own work carried under the supervision of Mr Pankaj Kapoor , Technical Trainer.

Signature of Candidate: Diksha Khandelwal

Name of Candidate: Diksha Khandelwal

Roll. No. : 181500217

Course: B. Tech(CSE)

Year: 3rd

Semester: V

Signature of Candidate: Mansi Verma

Name of Candidate: Mansi Verma

Roll. No. : 181500372

Course: B. Tech(CSE)

Year: 3rd

Semester: V

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The attributes required being a successful professional.

ABSTRACT

Stone paper scissor is a game in which there are five rounds between computer and players. In this game the players may count aloud to three, or click the name of the game (e.g. "Rock! Paper! Scissors!"), either raising one hand in a fist and swinging it down with each syllable or holding it behind their back. They then "throw" by extending it towards their opponent. Variations include a version where players throw immediately on the third count (thus throwing on the count of "Scissors!"), or a version where they shake their hands three times before "throwing". There are total five rounds between computer and user. It has only two possible outcomes: a draw, or a win for one player and a loss for the computer. A player who decides to play rock will beat another player who has chosen scissors ("rock crushes scissors" or sometimes "blunts scissors), but will lose to one who has played paper ("paper covers rock"); a play of paper will lose to a play of scissors ("scissors cuts paper"). If both player and computer choose the same shape, the game is tied and is usually immediately replayed to break the tie. **Stone Paper Scissors** is a fun ultimate classic **game**. It trains our mind and test our skills by competing against a smart Computer. In this project, players have to choose any one from rock, paper, and scissors. Then click on the play button will show the result of the game. The object of the rock-paper-scissor project is to build a game for a single player that plays with a computer, anywhere, and anytime. This project is base on the rules that rock blunts scissors so rock wins, scissors cut the paper so scissors wins and paper cover rock so paper wins.

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Introduction

Motivation and Overview

The "Stone Paper Scissor" project is an online game. This site enables the user to playing the online gaming by sitting with their friends or at homes through PC or laptop or mobile. This project is developed for online gaming where the user can play using this online website for gaming. User can play online according to their desire by accessing the website at any time. I think it is an starting point we make this online game for learning web development and web design. But even if you're a seasoned pixel wrangler or have a string of Pens under your belt, I hope user pick up one or two new uses for the platform. Thus today's time user can prefer online gaming instead of playing offline games with their friends. Because in offline game user have to convince his/ her friends to play with them first in which most of the time problem has been occurred.

Online gaming is the place where user can feel the sense of enjoyment for their game. In the Online platform, users can play and get the correspondence output for their gaming i.e win the game or lose the game. If user really want to get play the game, take this exercise one step further and try to play the game in which they produces result for the computer as well as user i.e either computer wins or user wins, using the original game as a reference. Now to keep the belief and trust of user, there is the positive need for the online gaming , which can handle all this with comfort and ease. Smooth and efficient platform affects the satisfaction of the gamers for playing games, indirectly.

Now a day's, managing a games to play with friends is very tedious job up to certain limit. So online platform that reduces the work is essential. Also today's world is a genuine computer world and is getting faster and faster day-by-day. Thus, considering above necessities, the online platform for gaming has became necessary which would be useful in managing the games more efficiently.

Features

In this game user can feel very satisfied to play this game.

- Platform-Independent:- It is online gaming that is free of cost for everyone, it is platform-independent users feel very enjoyable to play this game.

- Sound on-off - users can on-off the sound of the game according to their desire.

- Fullscreen on-off - users can change the screen to fullscreen.

- Laptop or mobile - users can also play game in laptop as well as mobile phone

- Free time - In their free time user can play a game.

Objective

The main objective of our project is to create a game in which user can play the original rock paper scissors game online. Go up against our computer robot and decide rock, paper or scissors. Rock, paper or scissors is a classic game that has been around for decades. You can entertain yourself virtually for hours with this game. It is also helpful for making important decisions based upon the outcome of winning or losing each game.

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1.<u>Main Goals</u>: Our motto is to develop a software program for providing the platform for the online gamers that is a application of front-end web page. In this project user can play a game very effectively and efficiently. Hereby, our main objective is the gamer's satisfaction considering today's faster in the world.

2.<u>Gamer's Satisfaction: Gamers</u> can play their game comfortably without any risk or losing of his privacy. Our software will perform and fulfill all the tasks that any coder would desire.

3. <u>Saving gamer's Time</u>: Gamer's doesn't need to their friends to play this game. They can play the game with computer.

4.<u>Protecting The Gamer</u>: It helps the gamer to be satisfied and comfortable in his choices, this protection contains gamer's time and his privacy

Technology Used

HTML

HTML is an acronym which Hyper Text Markup Language which is used for creating web pages and web applications. Let's see what is meant by Hypertext Markup Language, and Web page.

Hyper Text: Hyper Text simply means "Text within Text."A text has a link with in it, is a hypertext. Whenever you click on a link which brings you to a new web page, you have clicked on a hypertext. Hyper Text is a way to link two or more web pages with each other.

Markup Language: A markup language is a computer language that is used to apply layout and formatting conventions to a text document. Markup language makes text more interactive and dynamic. It can turn text into images, tables, links, etc.

Web Page: A web page is a document which is commonly written in HTML and translated by a web browser. A web page can be identified by entering an URL. A web page can be of the static or dynamic type. With the help of HTML only, we can create static web pages.

Hence , HTML is a markup language which is used for creating attractive web pages with the help of styling, and which looks in a nice format on a web browser. An HTML document is made of many HTML tags and each HTML tag contains different content.

HTML version: we use HTML5 version.

HTML5 : HTML5 is the newest version of Hyper Text Markup language. The first draft of this version was announced in January 2008. There are two major organizations one is W3C (World Wide Web Consortium), and another one is WHATWG(Web Hypertext Application Technology Working Group) which are involved in the development of HTML5 version, and still, it is under development.

HTML sub topics

HTML Tags: HTML tags are like Keywords which defines that how web browser will format and display the content. With the help of tags, a web browser can distinguish between an HTML content and a simple content. HTML content and a simple content. HTML tags contain three main parts: opening tag, content and closing tag. But some tags are unclosed tags. When a web browser reads an HTML document, browser reads it from top to bottom and left to right. HTML tags are used to create HTML documents and render their properties.

HTML Elements: An HTML file is made of elements. These elements are responsible for creating web pages and define content in that webpage. An element in HTML usually consist of a start tag <tag name>, close tag </tag name> and content inserted between them. **Technically, an element is a collection of start tag, attributes, end tag, content between them**.

HTML Headings: HTML heading or HTML h tag can be defined as a title or a subtitle which you want to display on the webpage. When you place the text within the heading tags <h1>……</h1>, it is displayed on the browser in the bold format and its size of text depends on the number of heading. There are total six tags which is <h1> to <h6>. h1 is the largest heading tag and h6 is the smallest one.

HTML Paragraph: HTML paragraph or HTML p tag is used to define a paragraph in a webpage. It is notable point that a browser itself add an empty line before and after a paragraph. An HTML <p> tag indicates starting of new paragraph.

HTML Image: HTML img tag is used to display image on the web page. HTML image on the web page. HTML img tag is an empty tag that contains attributes only, closing tags are not used in HTML image element.

HTML Tables: HTML table tag is used to display data in tabular form(row*column). We can create a table to display data in tabular form, using<table> element, with the help of <tr>, <td> and <th> elements.

HTML Lists: HTML Lists are used to specify lists of information. All lists may contain one or more list elements. There are three different types of HTML lists:

1.Ordered List (ol)

2.Unordered List (ul)

3.Description List (dl)

HTML Form: An HTML form is a section of a document which contains such as text fields, password fields, checkboxes, radio buttons, submit button, menus etc. An HTML form facilities the user to enter data that is to be sent to the server for processing such as name, email address, password, phone number etc.

HTML iframes: HTML iframes is used to display a nested webpage. The HTML <iframe> tag defines an inline frame, hence it is also called as an Inline frame. An HTML iframe embeds another document within the current HTML document in the rectangular region. The webpage content and iframe contents can interact with each other using JavaScript.

HTML Entities: HTML character entities are used a replacement of reserved characters in HTML. You can also replace character that are not present on our keyboard by entities.

These characters are replaced because some characters are reserved in HTML. HTML entities provide a wide range of characters which can allow you to add icons, geometric shapes, mathematical operators etc.

CSS- Cascading Style Sheets

Cascading Style Sheets, fondly referred to as CSS, is a simple design language intended to simplify the process of making web pages presentable.

- CSS stands for Cascading Style Sheets
- CSS describes how HTML **elements are to be displayed on screen, paper, or in other media**
- CSS saves a lot of work. It can control the layout of multiple web pages all at once
- External stylesheets are stored in **CSS files**

CSS is a MUST for everyone to become a great Software Engineer specially when they are working in Web Development Domain. I will list down some of the key advantages of learning CSS:

Create Stunning Web site - CSS handles the look and feel part of a web page. Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colors are used, layout designs, variations in display for different devices and screen sizes as well as a variety of other effects.

Become a web designer - If you want to start a career as a professional web designer, HTML and CSS designing is a must skill.

Control web - CSS is easy to learn and understand but it provides powerful control over the presentation of an HTML document. Most commonly, CSS is combined with the markup languages HTML or XHTML.

Learn other languages - Once you understands the basic of HTML and CSS then other related technologies like javascript, php, or angular are become easier to understand.

Applications of CSS

As mentioned before, CSS is one of the most widely used style language over the web. I'm going to list few of them here:

CSS saves time - You can write CSS once and then reuse same sheet in multiple HTML pages. You can define a style for each HTML element and apply it to as many Web pages as you want.

Pages load faster - If you are using CSS, you do not need to write HTML tag attributes every time. Just write one CSS rule of a tag and apply it to all the occurrences of that tag. So less code means faster download times.

Easy maintenance - To make a global change, simply change the style, and all elements in all the web pages will be updated automatically.

Superior styles to HTML - CSS has a much wider array of attributes than HTML, so you can give a far better look to your HTML page in comparison to HTML attributes.

Multiple Device Compatibility - Style sheets allow content to be optimized for more than one type of device. By using the same HTML document, different versions of a website can be presented for handheld devices such as PDAs and cell phones or for printing.

Global web standards - Now HTML attributes are being deprecated and it is being recommended to use CSS. So its a good idea to start using CSS in all the HTML pages to make them compatible to future browsers.

CSS Selectors

CSS selectors are used to "find" (or select) the HTML elements you want to style.

- The CSS element Selector
- The CSS id Selector
- The CSS class Selector
- The CSS Universal Selector
- The CSS Grouping Selector

CSS Colors

Colors are specified using predefined color names, or RGB, HEX, HSL, RGBA, HSLA values.

- CSS Background Color
- CSS Border Color
- CSS Text Color

CSS Links

With CSS, links can be styled in different ways.

- Styling Links
- Text Decoration

CSS Margins

The CSS margin properties are used to create space around elements, outside of any defined borders.With CSS, you have full control over the margins. There are properties for setting the margin for each side of an element (top, right, bottom, and left).

CSS Padding

The CSS padding properties are used to generate space around an element's content, inside of any defined borders.With CSS, you have full control over the padding. There are properties for setting the padding for each side of an element (top, right, bottom, and left)

CSS Layout - The position Property

The position property specifies the type of positioning method used for an element (static, relative, fixed, absolute or sticky). Elements are then positioned using the top, bottom, left, and right properties. However, these properties will not work unless the position property is set first. They also work differently depending on the position value.

CSS Borders

The CSS border properties allow you to specify the style, width, and color of an element's border.

CSS Border Style: The border-style property specifies what kind of border to display.

The following values are allowed:

- dotted - Defines a dotted border
- dashed - Defines a dashed border
- solid - Defines a solid border
- double - Defines a double border
- none - Defines no border
- hidden - Defines a hidden border

The border-style property can have from one to four values (for the top border, right border, bottom border, and the left border).

CSS layout- float and clear: The CSS float property specifies how an element should float. It is used for positioning and formatting content e.g. let an image float left to the text in a container. The CSS clear property specifies what elements can float beside the cleared element and on which side.

2.31 JavaScript

JavaScript is a light-weight object-oriented programming language which is used by several websites for scripting the webpages. It is an interpreted, full-fledged programming language that enables dynamic interactivity on websites when applied to an HTML document. It was introduced in the year 1995 for adding programs to the webpages in the Netscape Navigator browser. Since then, it has been adopted by all other graphical web browsers. With JavaScript, users can build modern web applications to internal directly without reloading the page every time. The traditional websites uses js to provide several forms of interactivity and simplicity. Although, JavaScript has no connectivity with Java programming language. The name was suggested and provided in the times when Java was gaining popularity in the market. In addition to web browsers, databases such as CouchDB and MoongDB uses JavaScript as their scripting and query language.

Features of JavaScript

1. All popular web browsers support JavaScript as they provide built-in execution environments.
2. JavaScript follows the syntax and structure of the C programming language. Thus it is a structured programming language.
3. JavaScript is a weakly typed language, where certain types are implicity cast.
4. JavaScript is an object-oriented programming language that uses prototypes rather than using classes for inheritance.
5. It is light-weighted and interpreted language.
6. It is case-sensitive language.
7. JavaScript is supportable in several operating systems including, Windows, macos, etc
8. It provides good control to the users over the web browsers.

2.32 JavaScript sub topics

JavaScript Variables: JavaScript variables are containers for storing data values. Before 2015, using the **var** keyword was the only way to declare a JavaScript variable. The 2015 version of JavaScript(ES6 – ECMASCRIPT 2015) allows the use of the **const** keyword to define a variable that cannot be reassigned, and the **let** keyword to define a variable with restricted scope. Because it is a little complicated to describe the difference between these keywords, and because they are not supported in older browsers.

JavaScript Arrays: JavaScript arrays are used to store multiple values in a single variable. An array is a special variable, which can hold more than one value at a time. An array can hold many values under a single name, and you can access the values by referring to an index number. Using an array literal is the easiest way to create a JavaScript Array.

JavaScript Conditions: There are following condition.

1.If statement is use to specify a block of JavaScript code to be executed if a condition is true.

2.else statement is use to specify to block of code to be executed if the condition is false.

3.else if statement is use to specify a new condition if the first condition is false.

4.Switch statement is use to perform different actions based on different conditions.

JavaScript loops: Loops can execute a block of code a number of times.

There are different kinds of loops:

1.For - loops through a block of code a number of times.

2.For/in - loops through the properties of an object.

3.For/of - loops through the values of an iterable object.

4.While – loops through a block of code while a specified condition is true.

5.do/while - also loops through a block of code while a specified condition is true.

But mostly we use **for and while loop.**

JavaScript Regular Expression: A regular expression is a sequence of characters that forms a search pattern. When you search for data in a text, you can use this search pattern to describe what you are searching for.

Syntax of Regular Expression:

/pattern/modifiers;

jQuery

The purpose of jQuery is to make it much easier to use JavaScript on your website.

jQuery is a lightweight, "write less, do more", JavaScript Library. The purpose of jQuery is to make it much easier to use JavaScript on your website. It takes a lot of common tasks that require many lines of JavaScript code to accomplish, and wraps them into methods that you can call with a single line of code.

jQuery also simplifies a lot of the complicated things from JavaScript, like AJAX calls.

The jQuery library contains the following features:

- HTML/DOM manipulation
- CSS manipulation
- HTML event methods
- Effects and animations
- AJAX

There are lots of other JavaScript libraries out there but jQuery is probably the most popular, and also the most extendable.

Many of the biggest companies on the Web use jQuery, such as:

- Google
- Microsoft
- IBM
- Netflix

Some important topics

Adding jQuery

There are several ways to start using jQuery on your web site. We can:

- Download the jQuery library from jQuery.com
- Include jQuery from a CDN, like Google in head section

jQuery Selector

jQuery selector allow you to select and manipulate HTML element(s).

jQuery selector are used to "find" (or select) HTML elements based on their name, id, classes, types, attributes, value of attributes and much more.

jQuery Animation

The jQuery animate() method is used to create custom animations.

This means that if you write multiple animate() calls after each other, jQuery creates an "internal" queue with these method calls. Then it runs the animate calls **ONE by ONE**.

jQuery AJAX

AJAX is the art of exchanging data with a server, and update parts of a web page - without reloading the whole page.

jQuery Event

All the different visitor's actions that a web page can respond to are called events.

An event represents the precise moment when something happens.

Examples:

- moving a mouse over an element
- selecting a radio button
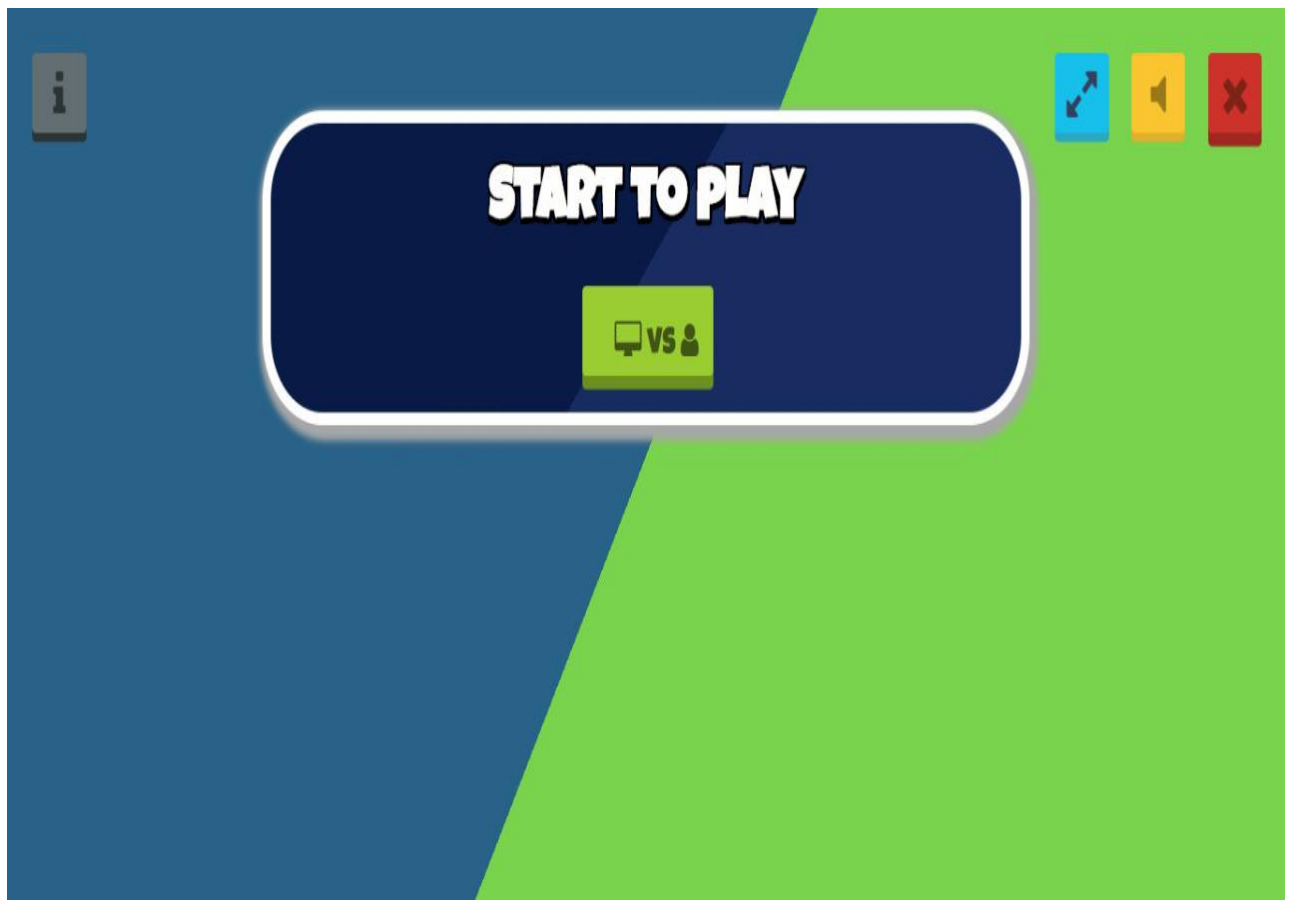- clicking on an element

jQuery Fading

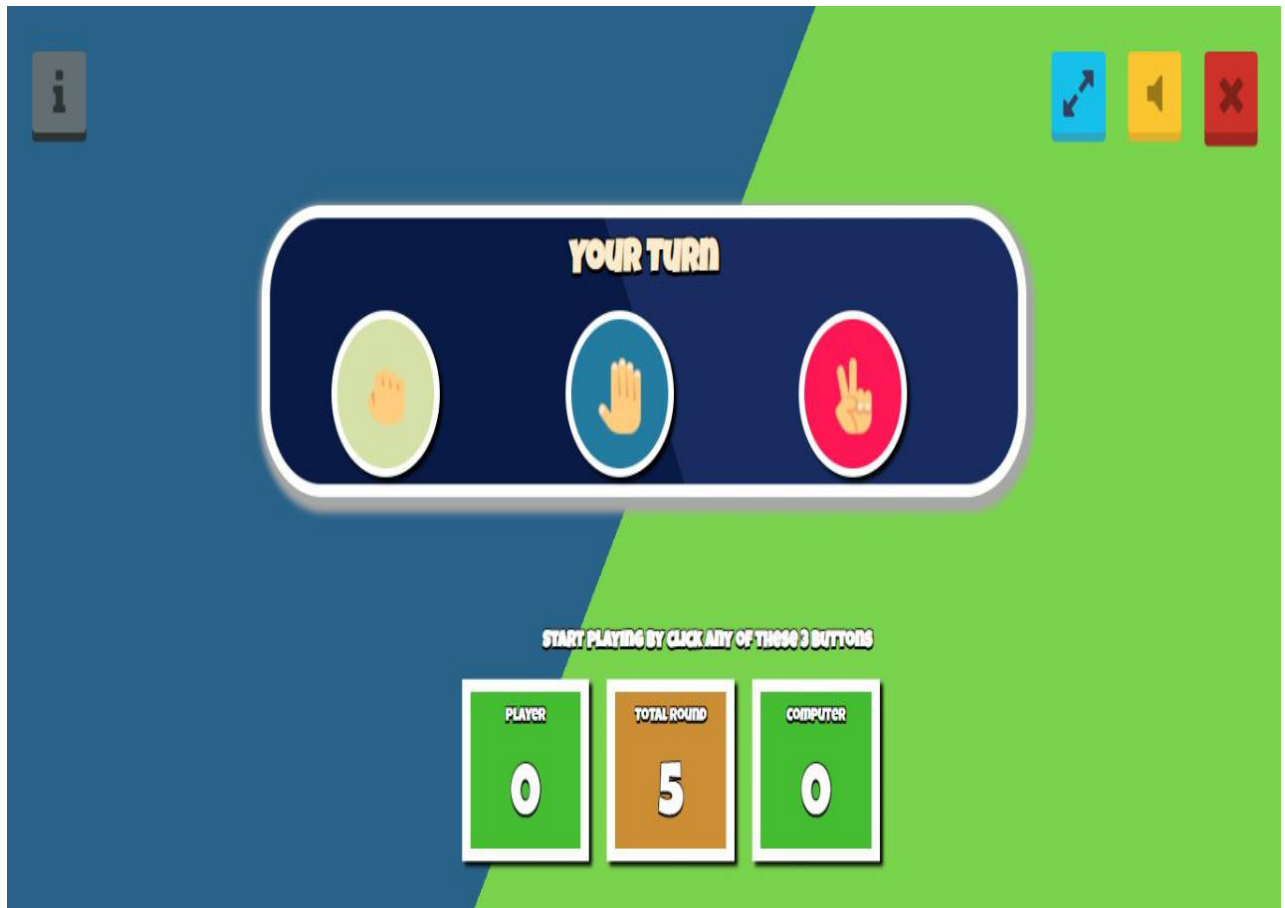With jQuery you can fade elements in and out of visibility.
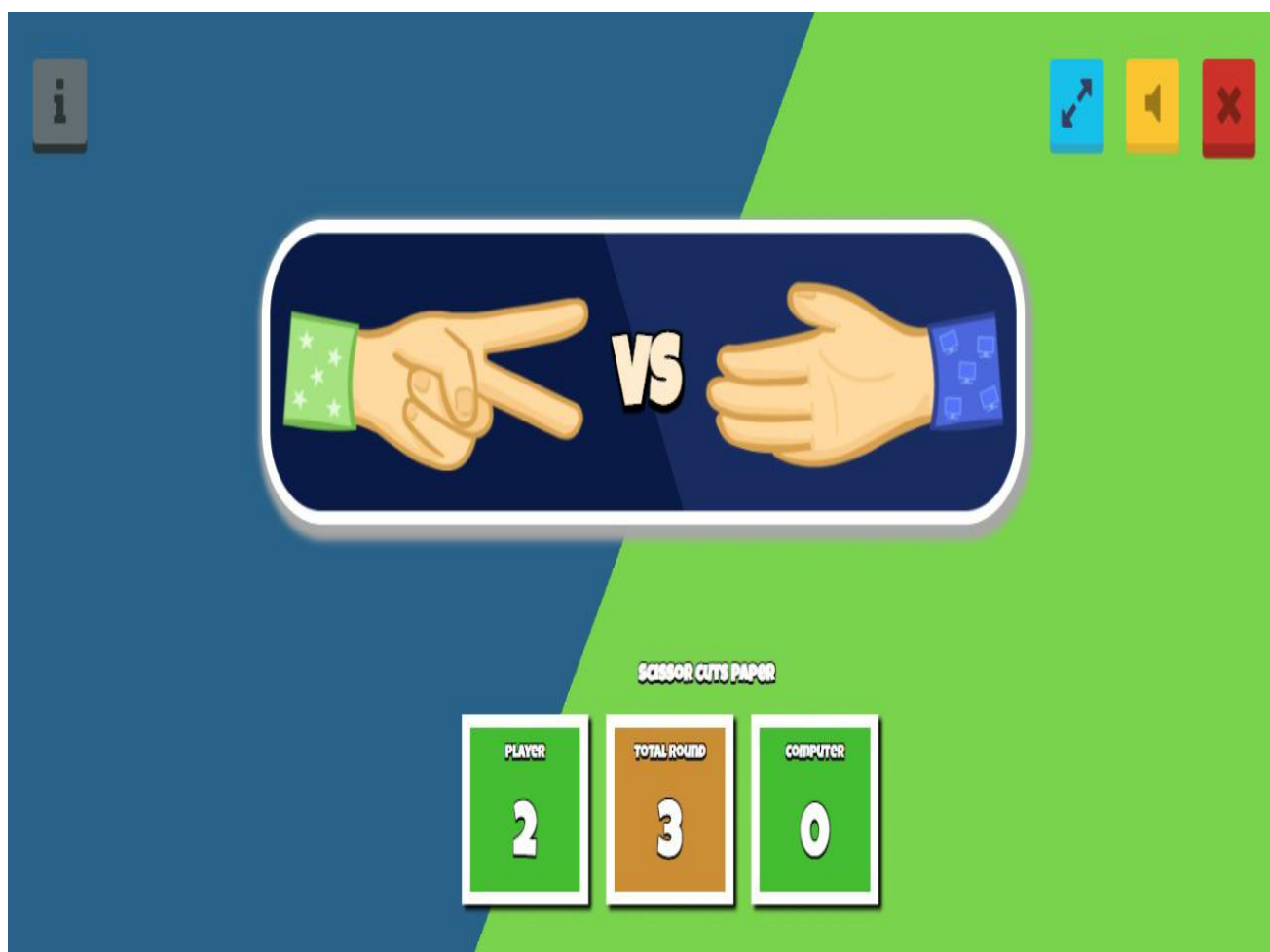
jQuery has the following fade methods:

- jQuery fadeIn()
- jQuery fadeOut()
- jQuery fadeToggle()
- jQuery fadeTo()

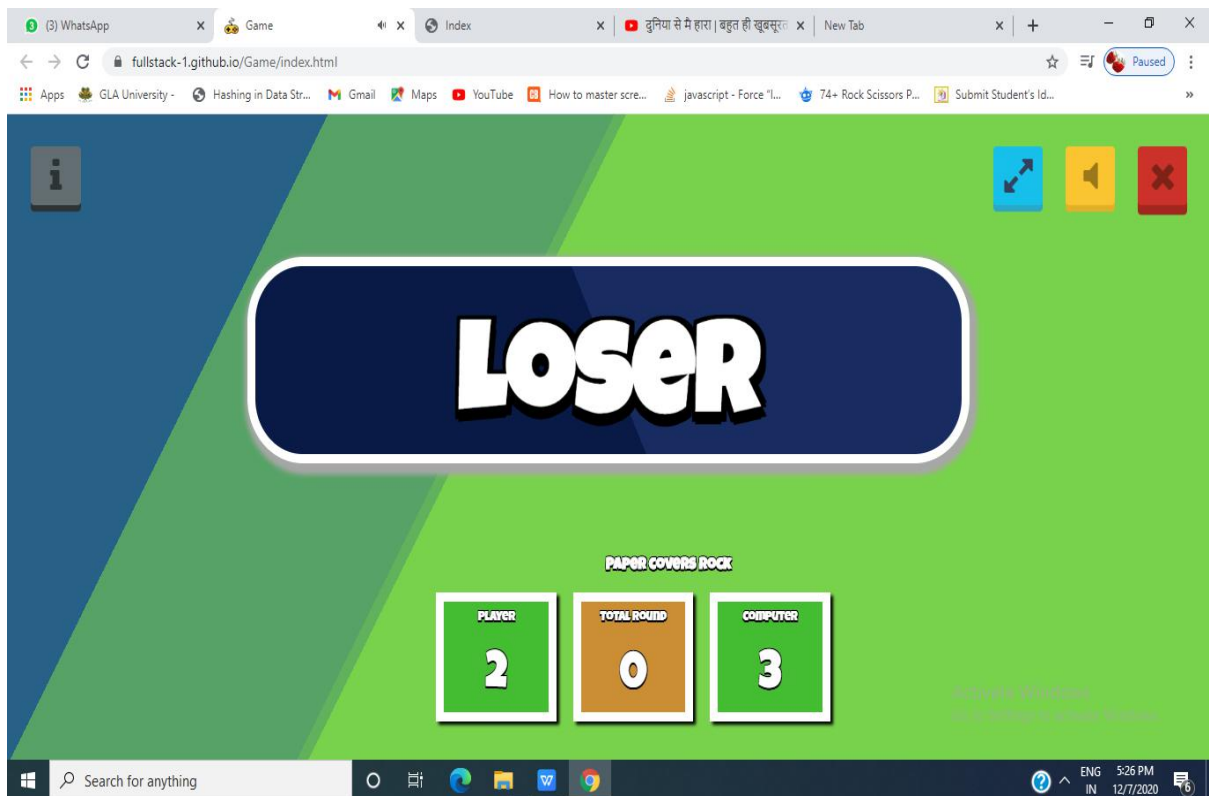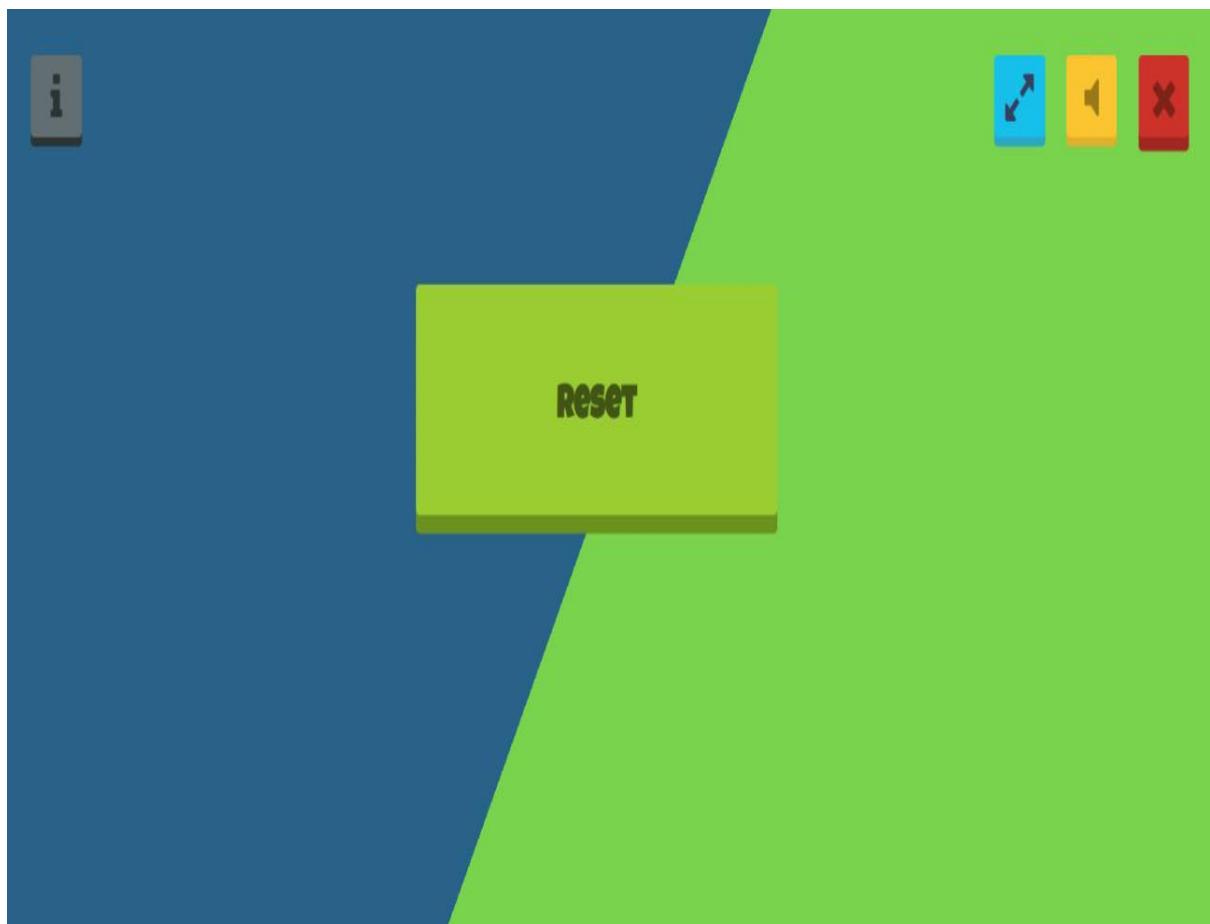# Here are some screenshots of the game :-

Hardware Requirements Specification

Processor :-Minimum 1 GHz ; Recommended 2 GHz or more ;

Wireless adapter(Wi-Fi) ;

Hard Drive :- Minimum 32 GB ; Recommended 64 GB or above ;

Memory(RAM) :- Minimum 4 GB OR above ;

Software Requirements Specification

Front End/Language : HTML, CSS, JavaScript, jQuery

Editor : visual studio code , notepad++ ;

Web Browsers :Chrome, Mozilla Firefox, Safari

FUTURE SCOPE OF THE PROJECT:-

This project can be handled in future by doing various modifications like: -

➢ We can go further for Online gaming.

➢ We can establish and start various online platform for gamers and available help for gamer's .

➢ We can also deal through internet by creating web pages and a online website for internet dealing.

➢ We can also deal in various types of Online gaming.

➢ To have more and more gamer satisfaction we will emphasize more and more on our gaming.

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