



Arcade Games Website

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Abstract: Arcade Games Website is an online website where seven arcade games are brought together on a webpage, also it has a chat box feature for communication. In the high score part, one can find the global lead board of games hosted on the website. There is also a covid stats chart where 202 countries' live covid stats are displayed.

Keywords: Online, Game, Website, Arcade Games

I. INTRODUCTION

According to a recent study on the internet, it is found that over 2.7 billion people spent 8 hours 27 minutes weekly playing games. This number is growing continuously at a rapid speed. But among those people, 87 percent of people find the process of downloading games frustrating. Due to slow internet speed or high ping, this number is around 94 percent in India. Hence, this online game website has been developed. It has less than 1 second loading speed on desktop and it can be accessed via any device like mobile, laptop, tablet with an active internet connection. The main objective of the project is to deliver a joy and gladdening experience to the user by providing free fun games.

II. BENEFITS OF PLAYING GAMES

- **Boost to the reading skills:** Studies show that video games playing kids get a small boost in reading skills. According to researchers, it is due to text instructions or rules that are displayed while playing games. Also, kids who are uneager for traditional open book reading most of the time tend to read the articles or forums published on their favorite games.
- **Problem solving:** Challenges are the most important part of video games. Puzzle games offer chances to kids to find a solution that develops the problem-solving attitude in kids.
- **Conversation:** Some kids face lots of problems in making friends in the real world. But games offer virtual playdates with real-life friends. Also, games are the mainstream topic of conversation for kids, just like sports, music, and movies. Also, these games give something to talk about at school.
- **Career:** The winner of the first Fortnite World Cup, a 16-year-old boy, received \$3 million. The remaining 99 solo finalists received prizes ranging from \$50,000 to \$1.8 million each. The odds of becoming a professional video gamer are extremely slim, just like the chances of becoming a professional athlete. The computer games industry, on the other hand, is expanding at a much faster rate than conventional sports and entertainment. There are numerous occupations available in this sector. This rapidly expanding industry offers a variety of job opportunities, including coding, marketing, and event management.
- **Improve reflexes:** Arcade games are simple looking but hard to master. They improve reflexes and hand-eye coordination which is very useful in day-to-day tasks like driving, typing, etc.

III. PROPOSED SYSTEM

On an online game website, anybody interested in playing games, chatting with friends can simply enter the link of the website in the web browser. Players can access the games from the games tab where the site offers seven games inspired by fun arcade games. For chat box, the user needs to click on the chat box menu where the prompt box will be popup, after entering the name user can chat with anyone using the chat box. After breaking the record of the previous high score, the prompt box will ask the name of the user and it will instantly update the high score chart. Covid stats are shown based on the user's location and the user also can view stats of any country by simply entering the name of the country in the search box.

IV. ACTUAL IMPLEMENTATION

Online game website hosts the seven games. Which are developed from scratch using HTML, CSS, and JavaScript.



Mario Jump: In the Mario jump game, users have to save Mario from upcoming pipes. The size of the pipes continuously changes and after specific scores, speed also increases. For detecting the collision of Mario and pipes `getPropertyValue()` method is run inside the `setInterval()` function of JavaScript. It is connected with google firebase. Refer to Fig 1 for more clear understanding of the game algorithm. It is something similar to chrome's dino run.

DumbCharades: In this game, you have to guess the name of the movie based on the emojis. After clicking the ready button, JavaScript will choose a random name from the given movie name list using the `Math.random()` function. Movie names are stored inside an array. According to the movie name, a set of emojis will be displayed on the user's screen. If the user can't guess the name of the movie user has to simply click on the pass button and the answer will be displayed.

JavaScript Keyword Scramble: This game's algorithm is quite similar to dumb charades. From the array of keywords, a random keyword will be selected. Then selected random word will be converted to an array by `split()` and `join()` methods. Then using `Math.random()`, index of each letter will be shuffled randomly. And then scramble word will be displayed on the screen and similar like Dumb charades users have to guess the name.

RockPaperScissor: It is based on our traditional real-life rock-paper scissor. The computer will randomly choose his moves, and you have to choose the move by clicking the button labelled with moves, then beautiful animation of the moving hand will be played and then the result of the match will be displayed. If the user wins user score will be increment by 1 and the same for the computer.

Stack: In this game, you have to build the building of 24 blocks by stopping the moving blocks at the right position. As you go to higher floors the overflowed part will be removed from the block and the block moving speed will also increase. Block moving speed depends on the block's width. This game is also connected with google firebase where the current score and high score will be compared every time.

Driving Car: Driving car is a simply a car driving game where user's car will be in the wrong lane and the user has to keep his/her car safe from the upcoming cars. The road has three lanes where upcoming cars can come from any lane, and user can simply switch lane by using arrow keys or by tapping on the side (obviously on touch screen devices) where he/she wants to move the car. This game is also connected with google firebase where the current score and high score will be compared every time.

Flappy Bird: Flappy bird is a recreation of the popular flappy bird game but using only simple JavaScript. In this game, players have the controls of flappy, player have to help flappy to fly between columns of pipes without hitting them. Fig 2 is the algorithm of the game.

Most of the Webpages are built from scratch. For some elements, the bootstrap framework has been used. The website is hosted on github.com. For the chat box, node.js and socket are used and it is hosted using Heroku. The scoreboard is based on Google Firebase and covid stats use covid19api.

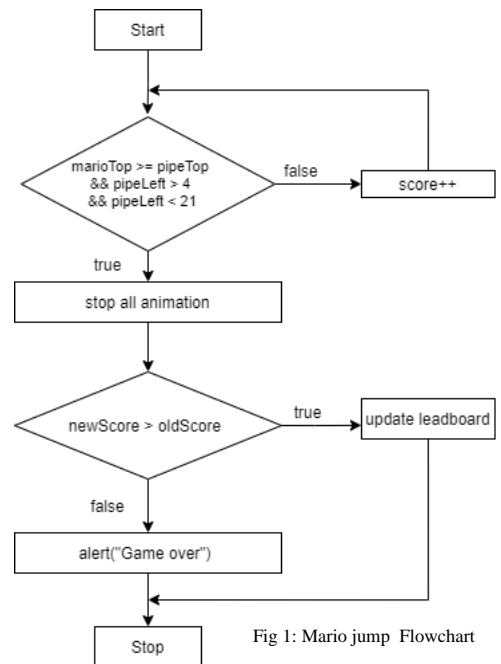


Fig 1: Mario jump Flowchart

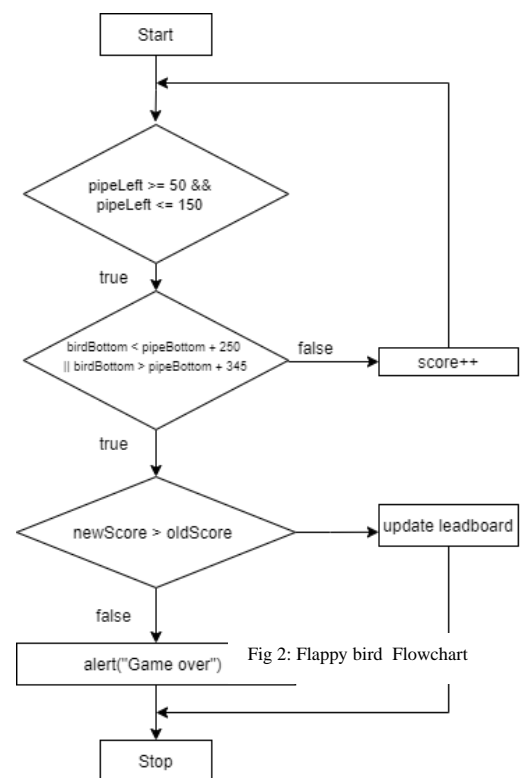


Fig 2: Flappy bird Flowchart

V. PROBLEMS WITH AN EXISTING SYSTEM AND ADVANCEMENTS

- Current gaming culture is highly influenced by violence, competition which is not suitable for the mental health of young minds. It can develop the feeling of the loser to the young ones. However, the online gaming website only features enjoyable games that do not encourage violence.



- Playing games on certain websites is restricted to people of a certain age. These games are not suitable for all age groups. But Online games website's games can be played by anyone. No age limit.
 - The main problem is most of the websites are not properly optimized due to which it takes more time in loading the content. Whereas the online game website has less than 1 second of load time on the desktop.
- Also, the culture of online gaming sometimes faces criticism for an environment that can promote cyberbullying, violence and xenophobia. Fun arcade games can never promote hate they are for fun.

VI. CONCLUSION

Websites are becoming increasingly critical in the advancement of a company's operations. Because of their eye-catching visual effects, 70 percent of the population uses immersive and interactive websites. The 'Online Game Website' is a website that aims to make gaming and communication more convenient. In further enhancement Login and register system will be considered where the user can keep his data and individual high scores track. Also, there is always a possibility of enhancing UI/UX and Responsive Design.

REFERENCES

- [1] StuDoc, Positive & Negative Effects of Gaming on Student Performance, January 2020.
- [2] www.gamersreviews.com, An Introduction To Online Gaming & All The Ins & Outs Of It, November 2016
- [3] Adrian Shortlidge, The Introduction Of Arcade Gaming, September 2013
- [4] Alicia Blanda, The Unexpected Health Benefits Of Arcade Gaming, January 2018
- [5] Silvern, S. B., & Williamson, The effects of video game play on young children's aggression, fantasy, and prosocial behavior. Journal of Applied Developmental Psychology, (1987)
- [6] Shotton, M. Computer addiction? A study of computer dependency. London: Taylor and Francis, (1989)
- [7] Shimai, S., Masuda, K., Kishimoto, Y. Influences of TV Games on Physical and Psychological Development of Japanese Kindergarten Children. Perceptual & Motor Skills, (1990)