

# Web Technology Lab Innovation

## *Simple Mario Game*



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## **Abstract :**

This report is based on the Lab Innovation done in the Web Technology subject. We have tried to create a simple mario game (replica of old and famous video game : Mario) . Our mario game is quite simple and is in development stage . Our game is in starting level of development but it will make you experience the fun and joy as you have experienced playing the original game . In the game , there is a character called “Mario” who is in a rescue mission to save his princess . During the journey , he faces several obstacles in form of cactus . These cactus are not normal cactus, these are deadly cactus having the poison of life. If our hero Mario touches that cactus , he will die and will lost his life. Once lost, he will start his journey from starting point again. So, the player or the user has to keep in mind that mario don't touch that deadly cactus. In order to pass safely from cactus, mario will jump . This game is a server based game , so user from any corner of the world can play this game by going to the game url . It requires Internet connection for connecting with the server. Replicating the same experience of fun, excitement , joy is our motto through this game .

## **Summary :**

This lab innovation or mini project is about creating a fun game called Mario Run. It is a server side game which means it runs on a server. For testing purpose , we have implemented this game on Apache Server. For playing server side game , players will connect to the server and the game will begin automatically . No Sign Up , nothing. Just go to server and play the game and have fun . So, talking about the game , the game is a mission game . In this game there is a character called mario whose princess is kidnapped by a monster named MOJO from his kingdom. So, in order to rescue his princess , he is on a journey to

reach to the villian's castle where his princess is kept. His journey is not easy .

The whole game ideology is based on the different levels of various difficulties that mario needs to cross for reaching to the villian's place. During the journey , he will face cactus, birds and other animals which are sent by the villian MOJO . He has to pass them safely else will losse his life and will has to start again . The only way to pass them safely is jump as high as he can . The player playing the game will press SPACE BAR to make the Mario jump . Single press will make the Mario jump once and double press will make the Mario to jump twice means a more higher jump . But the player also need to take care of his jump because enemies of Mario can also come from sky also . So at which time, how mny time the SPACE BAR should be press is on the game situation . The only control key is :

SPACE BAR : Makes the mario jump as many times as key is pressed.

No other control key is there in game to control mario . Mario will run automatically . He just need control for jump and that control will be provided by the user from SPACE BAR . Mario will jump and pass the obstacles. At each level Mario will face some obstacles new or older but the difficulty will be increasing from the first level to the last level. We have given only one 1 life per game . If lthat life lost , Mario has to start from beginning .

For playing the game , User needs an Active Internet Connection . Connection of Low Bandwidth will also work , For playing the game , user will go to the browser and type the ip address or url : 127.0.0.1 / localhost. That's the adress of the server of the game. After this , game will start Rescuing the princess from the enemy MOJO is the only mission of this game . This game is made from the intention

of fun, excitement , joy. Player will also experience these emotions when they will play. At present the game is in development but sooner it will be available for the rest of the world for play.

## **Technology Stack :**

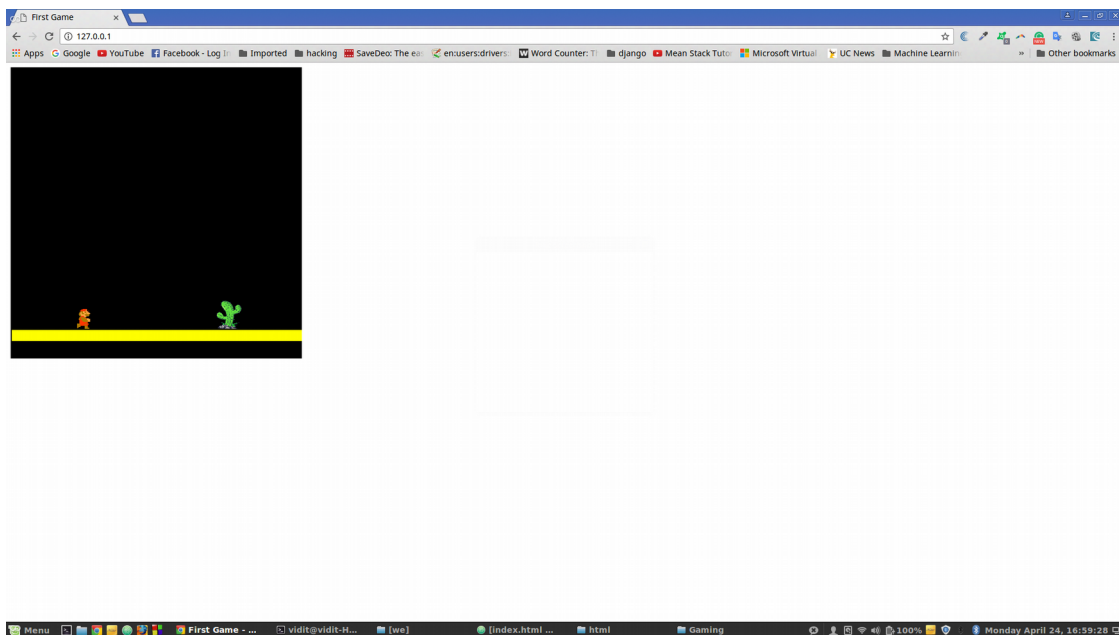
This server based game is created using mainly HTML, PHP and Javascript only . The game is designed for server based. i.e. the game will run on a server so that it will allow more number of users to simultaneously play the game .

**HTML :** HTML is the standard markup language for creating Web pages of the game . HTML stands for Hyper Text Markup Language .It describes the structure of Web pages using markup HTML elements are the building blocks of HTML pages .HTML elements are represented by tags HTML tags label pieces of content such as "heading", "paragraph", "table", and so on .Browsers do not display the HTML tags, but use them to render the content of the page .

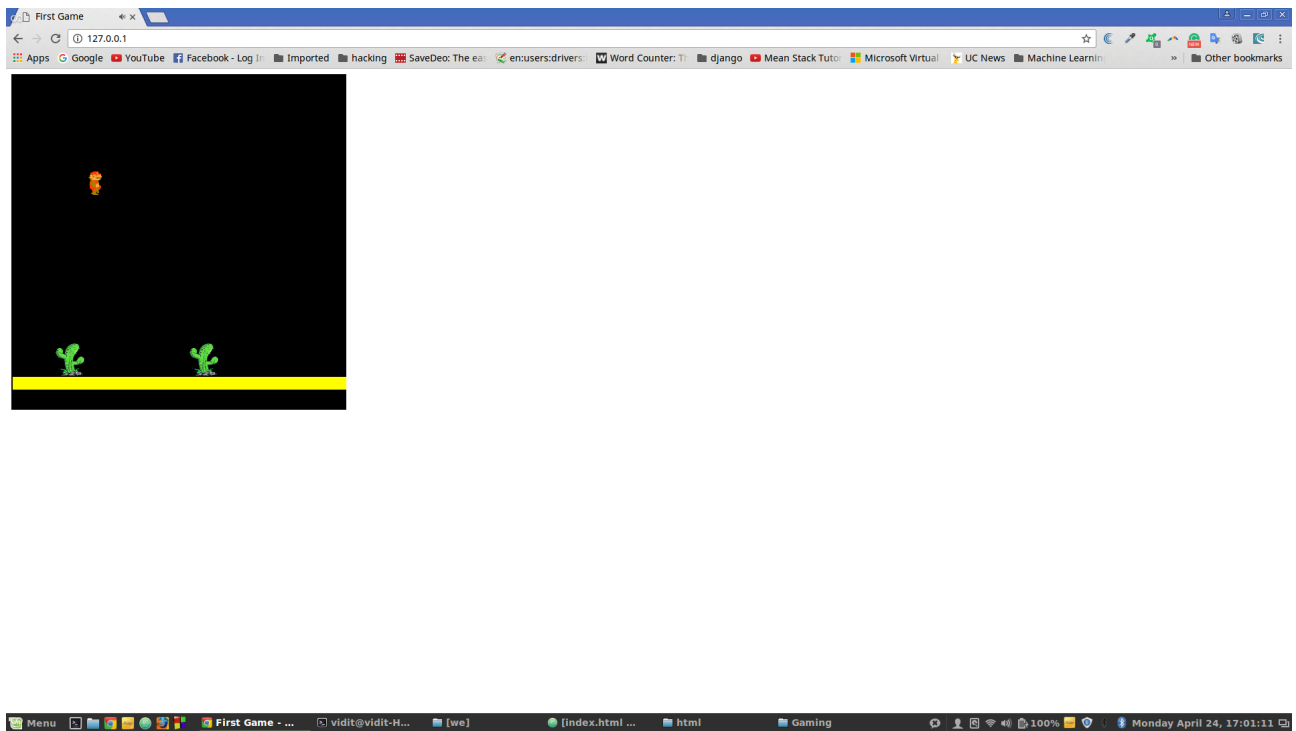
**JavaScript :** Javascript is a dynamic computer programming language. It is lightweight and most commonly used as a part of web pages, whose implementations allow client-side script to interact with the user and make dynamic pages. It is an interpreted programming language with object-oriented capabilities. JavaScript was first known as **LiveScript**, but Netscape changed its name to JavaScript, possibly because of the excitement being generated by Java. JavaScript made its first appearance in Netscape 2.0 in 1995 with the name **LiveScript**. The general-purpose core of the language has been embedded in Netscape, Internet Explorer, and other web browsers. Client-Side Javascript has been used in the project which provides some advantage over traditional CGI Server-Side scripts. The scripts are referenced by HTML document for the code to be interpreted by the browser. It means that web page need not to be static .

**P5.js :** P5.js is a javascript library that start with the original goal of processing to make coding accessible for artist , designers, educators, and beginners. It is a JS Client-side library for creating graphics and interactive experience based on the core principles of processing. The graphics and the designs of the game has been created using P5.js library .It has an upper hand on processing.js P5 is a direct JS port of the processing language .Processing.js is a converter which interrupts pure Processing code into js on the fly.The latter requires user to learn Processing but not JS and vice versa. These two can be think of as live compilation vs language translation

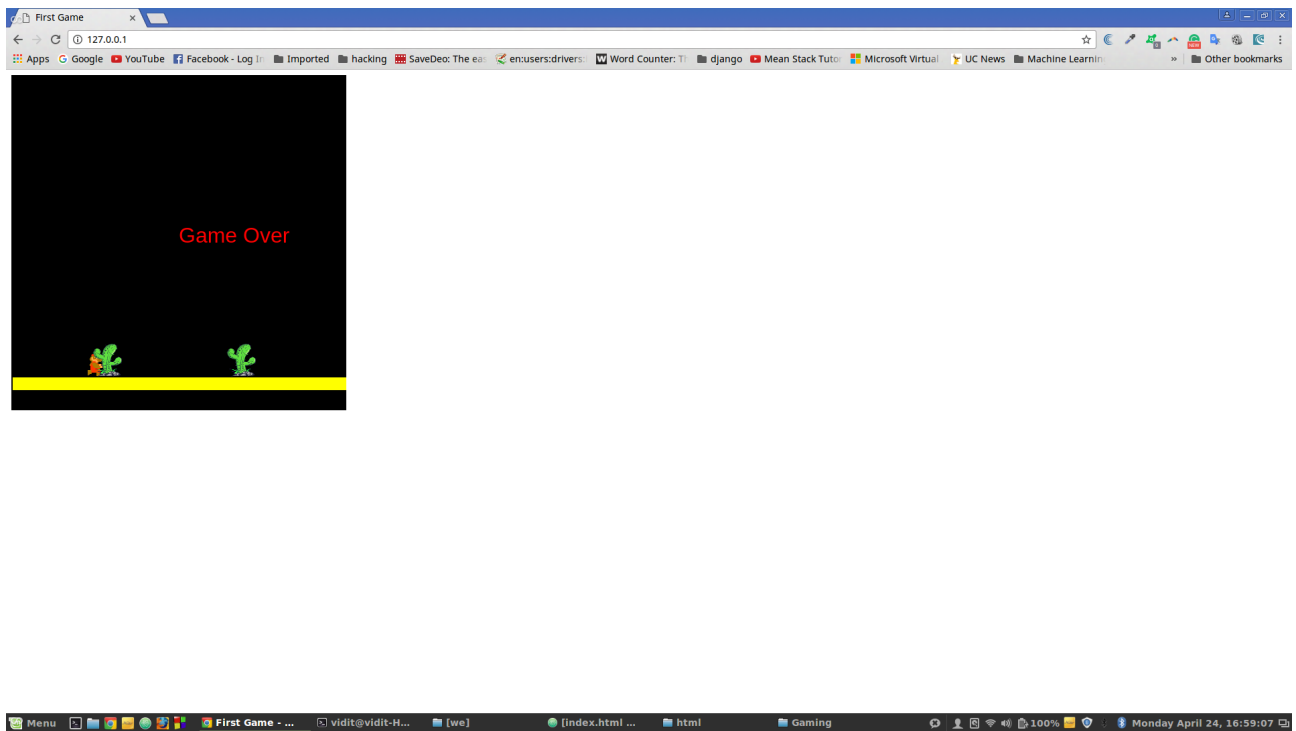
## Snapshot :



*Fig : This figure shows Mario running and there is a cactus ahead of him from which he has to jump*



*Fig : This figure shows Mario jumping to avoid the cactus (obstacles)*



*Fig: This figure shows that Game Over means Mario dont succeed in jumping to avoid the deadly cactus and has lost his life.*

**Other :**

For more information and detailed look at the project , visit the following url given below :

<https://github.com/vidit-agarwal/Mario-Game>