CLIENT SIDE MODULE

CONTENTS

This module has the following files:

1. MODULE_CLIENT_SIDE.doc
2. MODULE_CLIENT_SIDE_MEDIA.zip

INTRODUCTION

You are asked to develop a game called **BOMBSKUY** using HTML and CSS and develop client-side programming using JavaScript. Some media files are available to you in a zip file. You can create more media and modify anything in the media if you want. Your game needs to be developed in a tablet resolution (1000 x 600 pixels). In bigger resolution, the game must be centred in the screen both horizontally and vertically.

DESCRIPTION OF PROJECTS AND TASKS

You can create the layout using HTML/CSS and create the functionality of the game using JavaScript that allows the game to work correctly in different web browsers. EcmaScript 6 / Javascript Modules not allowed for this module. This module will be marked with directly opening the index.html page using Google Chrome.

BOMBSKUY game screen should have meet these requirements below:

1. Player Name
2. Gameboard
3. Character
4. Player Lives
5. Total Items
6. Timer

Game functionalities

1. Game should be on a **single page application** (index.html). No refresh / reload page and additional html page for any action.
2. **Display a welcome screen** in the centre of the page when the game loads.
3. **Players can Start the game** after filling the username field and click the “Play Game” button at the bottom of the welcome page.
4. **The “Play Game” button should remain disabled** until a username is entered..
5. After entering a username and clicking **"Play Game"**, the player should choose one of three difficulty levels: **Easy**, **Medium**, or **Hard**.
6. After selecting a difficulty level, show a countdown in the centre of the screen for 3 seconds before the game starts.

7. Provide an **"Instruction"** button that, when clicked, displays the game instructions.
8. Users can close instructions after clicking the **“X”** button.
9. **Players will get 3 hearts** when the game starts.
10. The number of dogs (computer-controlled opponents) is determined by the difficulty level:
    a. **1 Dog** for Easy
    b. **2 Dogs** for Medium
    c. **3 Dogs** for Hard
11. **the dog's position** will be random
12. **The player’s character starts** in the top-left corner of the game map when the game begins.
13. **Place brick walls randomly** around the game map to act as obstacles that players cannot pass through.
14. Place stone walls according to the given game maps as follow:

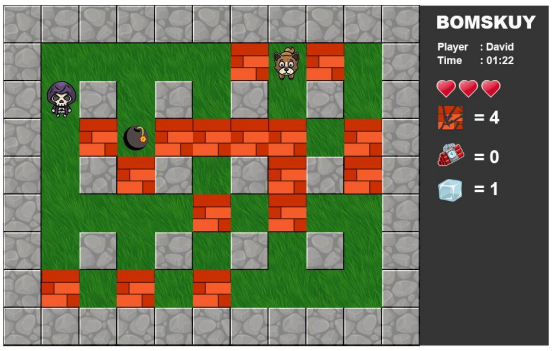


Image 1. Stone walls placement.

15. **The player can move** their character using the following keys:
    a. “A” or “Left arrow” to move left
    b. “W” or “Up arrow ” to move up
    c. “D” or “Right arrow” to move right
    d. “S” or “Down arrow” to move down
16. **Pressing the Space key** allows the player to place a bomb.
17. **The bomb will explode** 5 seconds after being placed.
18. **Bomb explosions affect one box** in each direction: up, down, left, and right..
19. **The wall will destroyed** after hit by a bomb explosion
20. **Items are hidden inside walls** and appear when walls are destroyed.
21. The items that will be there are as follows:
    a. **Broken Heart**: Decreases the player’s hearts.
    b. **TNT:** Doubles the bomb’s explosion range
    c. **Ice cube**: Freezes the player for 5 seconds.
22. **The item disappears** after being touched by the player.
23. **When a player gets an item**, the player's character will have a mark of that item.

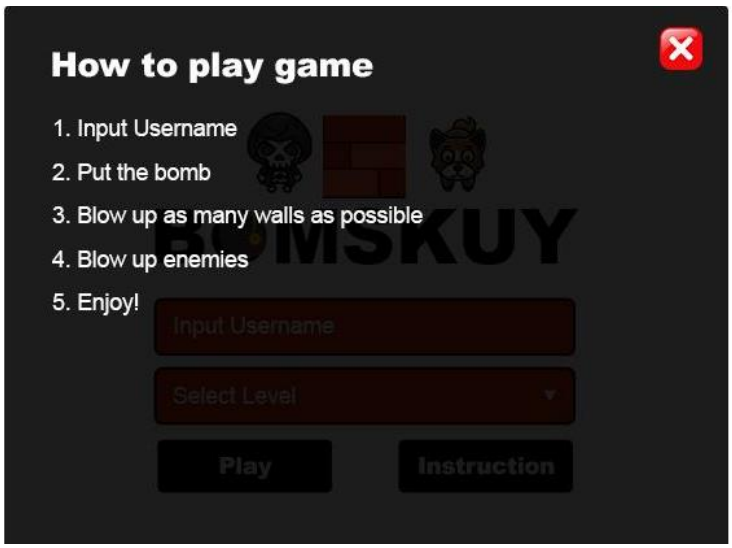
24. **Each items that player gets** will be increase are as follows:
    a. Destroyed walls
    b. TnT earned
    c. Ice box obtained
25. **Walking animation** when the character is moving must be shown.
26. **The dog (computer) can move as needed** and
27. **The dog (computer) must search** for players.
28. **Hearts decrease if the player** is hit by a bomb explosion or touches a dog.
29. **Show animation on the character** when the player touches the bomb explosion and dog.
30. Players can pause the game by pressing the **Esc** key.
31. **When paused, display a popup,** and the game should stop until **Esc** is pressed again or the **Continue** button is clicked.
32. **Game Over** when the heart reaches 0.
33. **Show popup after game over** to display the player username, time elapsed, total score, Save score button and Leaderboards button.
34. **Match history should be saved in local storage** after the player clicks the **Save Score** button.
35. P**layers can see the leaderboards** after clicking the Leaderboards Button.
36. Clicking the **Leaderboard** button displays a leaderboard sorted by:
    a. Total walls destroyed
    b. TNTs collected
    c. Ice cubes obtained
37. **The game needs to work correctly on Google Chrome.**

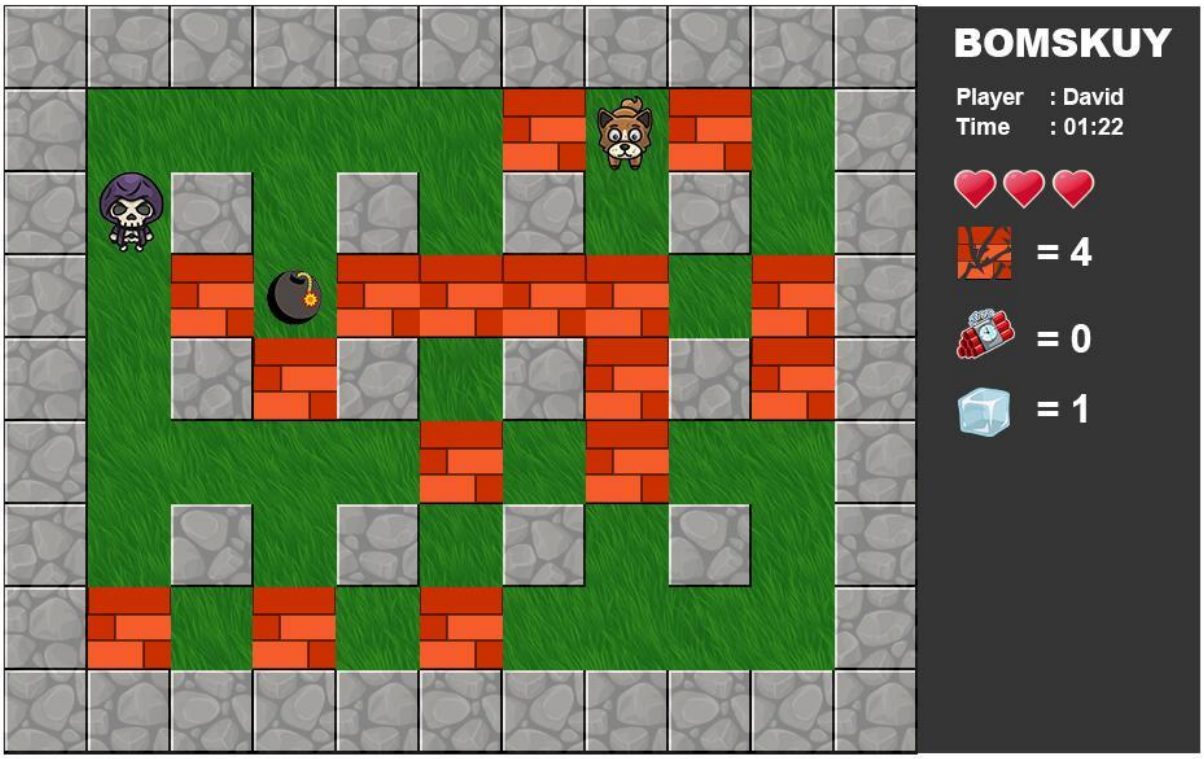
INSTRUCTION FOR COMPETITORS

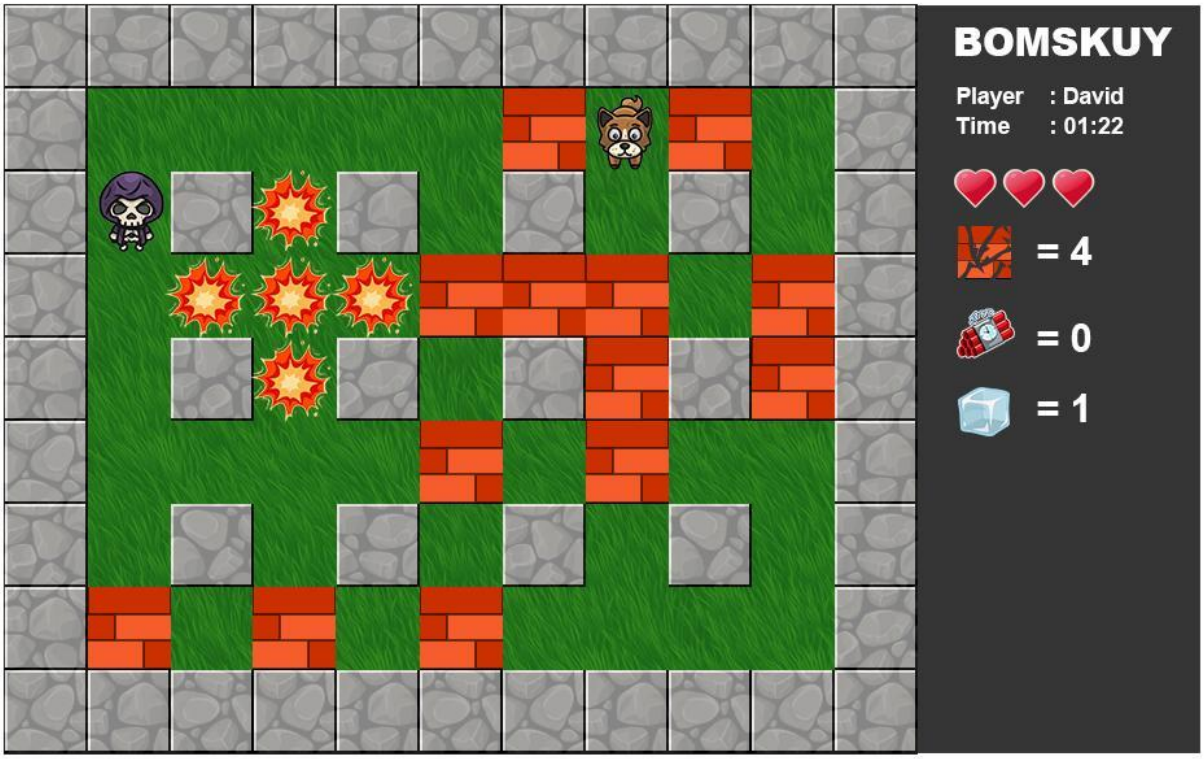
1. Create a root folder called **XX_CLIENT_MODULE** in your local computer, where **XX** is your computer number.
2. Place your works inside the root folder. Make sure your works are working well when directly opening the **index.html** file.
3. Zip your root folder **XX_CLIENT_MODULE** and submit to the submission page

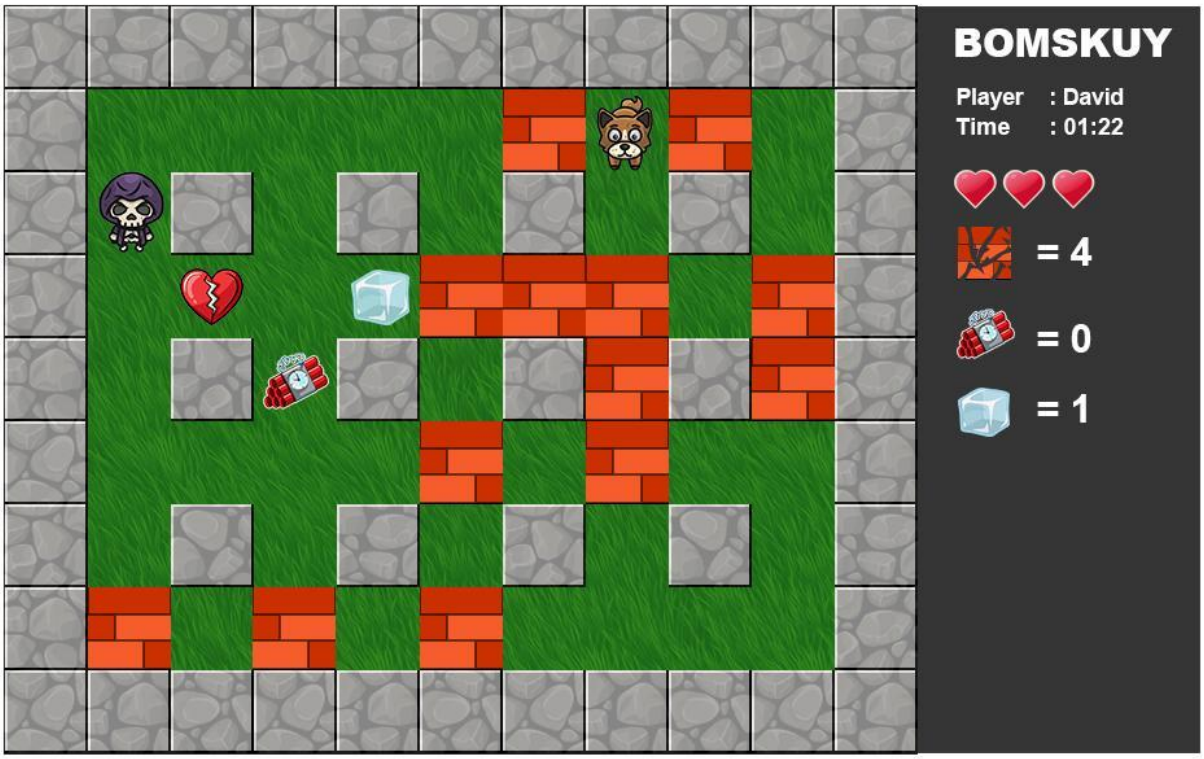
Example

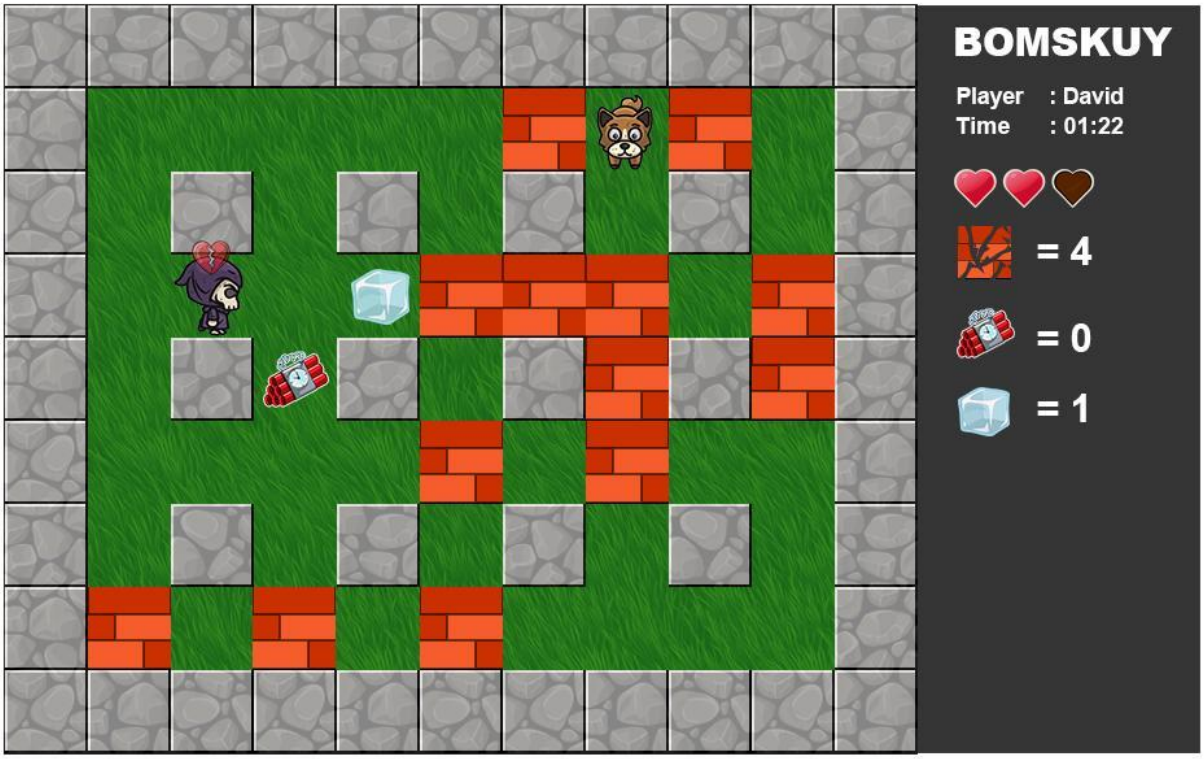
These following images are for example purposes only. You may design your own game layout.

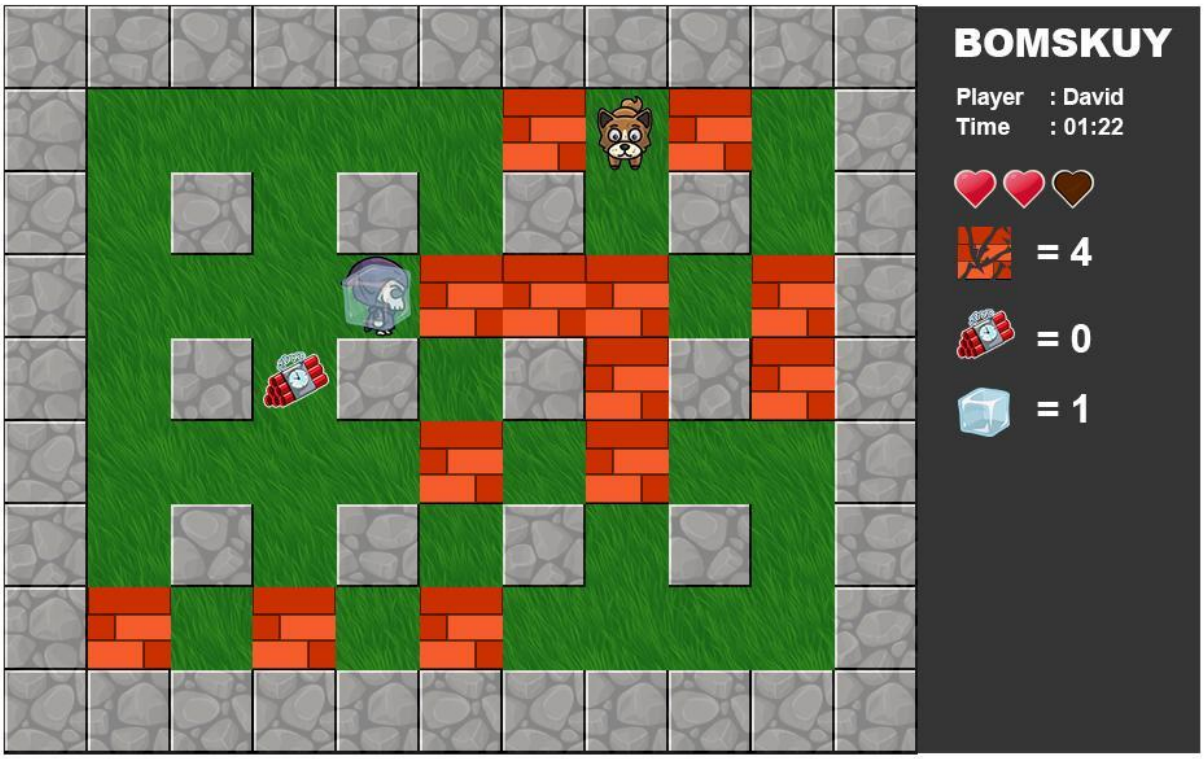


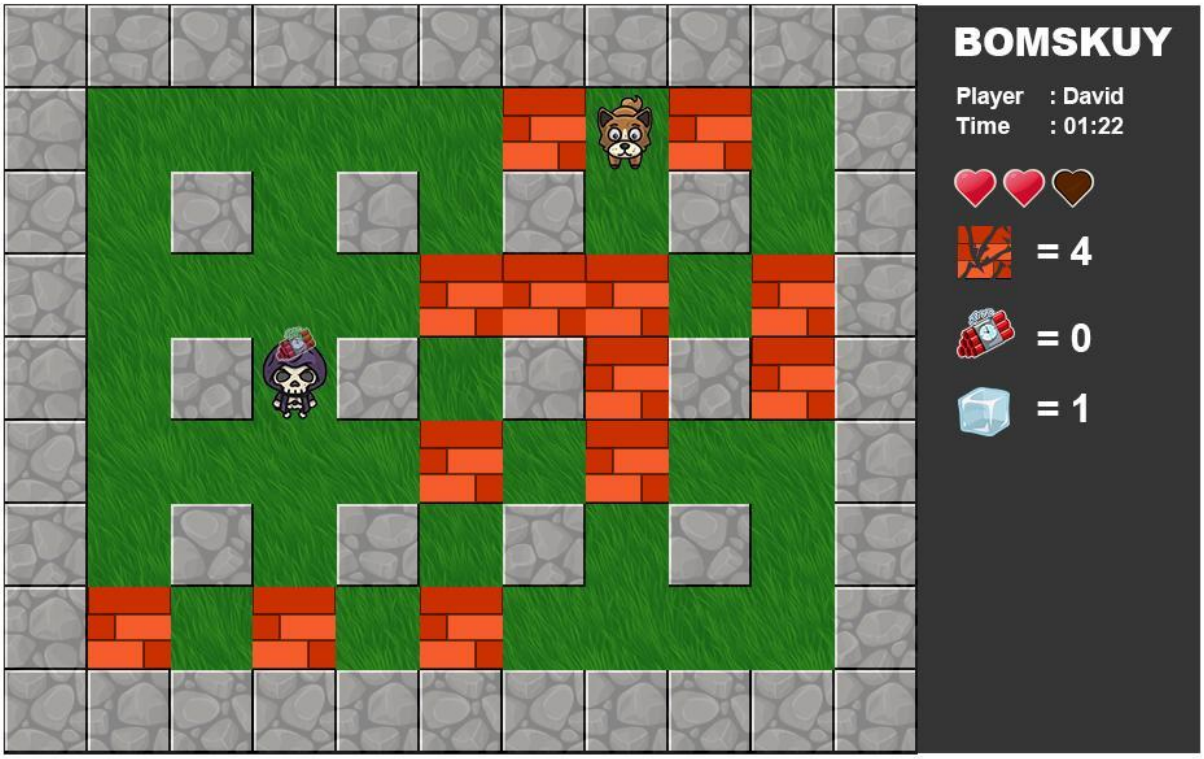

BOMSKUY
Player : David
Time : 01:22
= 4
= 0
= 1


BOMSKUY
Player : David
Time : 01:22
= 4
= 0
= 1


BOMSKUY
Player : David
Time : 01:22
= 4
= 0
= 1


BOMSKUY
Player : David
Time : 01:22
= 4
= 0
= 1


BOMSKUY
Player : David
Time : 01:22
= 4
= 0
= 1


BOMSKUY
Player : David
Time : 01:22
= 4
= 0
= 1

Game Over!

Good job David! your time 01:22 with results:

= 4 = 0 = 1

Save Score | Leaderboards

Leaderboards

Player Name	Time			
David	05:30	9	1	1
Joni	01:20	4	0	1
Hikmat	00:50	1	2	0

Play Again | Reset