**CLIENT SIDE MODULE**

# CONTENTS

## This module has the following files:

1. MODULE\_CLIENT\_SIDE.doc
2. MODULE\_CLIENT\_SIDE\_MEDIA.zip

INTRODUCTION

In recent years, people are intrigued to know about playing games on their devices. A lot of people play the game that has a gameplay of plants against zombies.

You are asked to develop a game called **Seleknas PVZ** 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 (1000x600 pixels). In bigger resolution, the game must be centred in the screen both horizontally and vertically.

# DESCRIPTION OF PROJECTS AND TASKS

This is a module of **4 hours**. Your first 2 hours must be used to create the initial layout using HTML/CSS. Your layout should follow the design that you created. The final 2 hours you will create the functionality of the game using JavaScript that allows the game to work correctly in different web browsers.

**Seleknas PVZ** game screen should have meet these requirements below:

1. Player Name
2. Gameboard
3. Plants Character
4. Zombie Character
5. Total Score
6. Total time elapsed
7. Leaderboards

**Design and Initial layout**

1. **Develop the initial markup (HTML + CSS) of your game application.** Overall screen must be within 1000x600 pixels and centered on the screen.
2. **The design should be delivered in dark mode color.** You are free to choose dark color as long as it has the user convenience.
3. **You are free to decorate** the game screen design as long as it meets the requirements.
4. **The HTML and CSS** code must be valid in the W3C standards for HTML5 and CSS3 rules in accordance with the WCAG and standard ARIA (Accessible Rich Internet Applications Suite)

**Game functionalities**

1. **Show the game “Welcome Page”** in the centre after the page is loaded.
2. **Players can go to the game** after filling the username field and click the “**Play Game**” button at the bottom of the Welcome Page.
3. **The “Play Game” button should be disabled** if the user has not input the username.
4. Players can choose one out of three levels available (easy, medium, and hard).
5. Players can open instructions after clicking the **“Instruction”** button.
6. Players can close instructions after clicking the **“X”** button.
7. **Show countdown for three seconds in the centre of screen** after the user clicked the play button before the game started playing.
8. When the game starts, the player will get **50 suns**.
9. Timer will **start from 0**.
10. Game has a random **four** plant cards.
11. **Zombies should move left from** the border horizontally at the exact given time.
12. **Zombies can eat plants** when zombies are beside plants.
13. **The plant will be destroyed** when the zombie bites it 3 times by default.
14. **Zombies should show randomly** every 5 seconds.
    1. ‘1 zombie’ for easy level
    2. ‘2 zombies’ for medium level
    3. ‘3 zombies’ for hard level
15. **Suns drop randomly** every 3 seconds.
16. **Players retrieve** suns by clicking the suns drop.
17. When the game starts, **there will be 2 random suns**.
18. **To set the plants in the field**, the user can click the plant card then click the location to be placed.
19. Players can only set the **plant in an empty place**.
20. Players can remove plants by clicking on the **shovel icon** and **selecting the plants to be removed.**
21. Player can set **four plants** with the following :
    1. **Sunflower** to produce sun every 10 seconds
    2. **Walnut** can be destroyed after 5 zombie bites
    3. **Pea** can destroy zombie in 5 shoots
    4. **Ice Pea** can destroy zombie in 7 shoots and slow zombie movements
22. **Walking animation** when the zombies are moving.
23. **The score will be increased** if the player destroys zombies.
24. **Zombies will have animation effects** when hit by pea and ice pea.
25. **When the zombie touches the left border**, Lawnmower will move to the right and hit zombies.
26. **Zombies hit** by a lawnmower will have the effect of falling and disappearing.
27. **Players can pause** the game.
28. **Press Esc to open the pause popup**. The game should be in a paused state when opening the popup.
29. Press **Esc** again to **continue** or click the **continue** button.
30. **Game Over** if the zombie can pass the left border and no lawnmower.
31. **Show popup after game over** to display the player username, time elapsed, score, save high score button and restart button.
32. **Highscore should be saved** in the database after the player clicks the **Save high score** button.
33. **Players can see the leaderboard** on the right of the game board and see details of players on the leaderboard by pressing the **details** button.
34. **The leaderboard can be sorted** by score and username.
35. **Show popup detail** to display the player username, time elapsed and score after the player clicks the **Detail** button.
36. **The game needs to work correctly in Google Chrome.**

# INSTRUCTION FOR COMPETITORS

1. The media files are available in the ZIP file. You can modify the supplied files and create new media files to ensure the correct functionality and improve the application.
2. The entry file should be ‘**client-side/index.html’**
3. You should create additional images for each of the requested resolutions to highlight hidden elements, animations, interactions, or any additional information that will assist in the presentation of the game design.
4. Save any image source files to a folder named "**source**" inside the "**client-side/design**" folder. The source files are the files that contain the design layers, development files, i.e. xd, fig, psd, ai, or svg.
5. Save the working game to the directory on the server named "**client-side**". Be sure that your main file is called index.html.
6. You are responsible for the time management in your development. If you finalize some tasks you can continue to other tasks.

**Example**

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

