# Introduction to Web Programming Project Game

**Project Overview**

**This document provides an overview of a JavaScript-based game created using the Phaser framework. The game features player-controlled movement, boss encounters, power-ups, health pickups, and a scoring system. Below are details regarding the implementation and tools used.**

In this document, I will go through the details of my JavaScript-based game that uses the Phaser framework. I will discuss about the features that are in the game and roughly how they were implemented.

**Game Description**

**Objective**

The game is a 2D “side-scrolling" (there isn’t any scrolling but the perspective is the same) fighting game where the player controls a character and needs to defeat the boss by shooting it. There are also power-ups that help the player succeed in defeating the boss.

**Core Features**

**Player Movement:** The player can move left, right, jump, and fall down quicker using the keyboard controls (WASD). Player movement is animated by using a spritesheet.

**Shooting Mechanics:** Players can aim with the mouse and shoot bullets by clicking the mouse.

**Boss Mechanics:** The boss moves around randomly on the screen and shoots the player in patterns.

**Power-Up Pickup:** Pickup that increases the players damage.

**Health Pickup:** Pickup that restores the players HP.

**Scoring System:** Keeps track of the player’s best time to beat the game.

**UI Elements:** Boss health bar, player HP, elapsed time and Power level.

**Tools Used**

**Phaser Framework:**

A popular HTML5 game framework used for creating 2D games. It makes game development more accessible and easy with built-in physics, rendering and animations.

**Phaser Features:**

Physics: Arcade physics engine for platformer-like gravity and movement.

Animations: Spritesheet frame animations for the player and the boss bullets.

**Point proposal chart:**

|  |  |
| --- | --- |
| **Feature** | **Max points** |
| Well written PDF report | 3 |
| Application works on Firefox, Safari, Edge and Chrome | 3 |
| The application has ok clear structure | 1 |
| Animation for player character using spritesheet | 2 |
| Animation for boss projectiles using spritesheet | 2 |
| There is a clear plot in the game: You have to defeat the boss as quickly as possible | 3 |
| User can set a new record time for beating boss | 2 |
| There are different (more than 1) objects to collect | 2 |
| Gamer needs to use both keyboard and mouse to meaningfully control the player character | 3 |
| Game uses physics engine, so that there are falling parts / enemies / players | 2 |
| There are enemies that can hurt the player | 3 |
| Boss has visual health bar | 1 |
| Boss has two different attack phases | 2 |
| Player becomes immune shortly after getting hit (no instakills) | 1 |
| Boss moves in a randomized matter | 2 |
| The game is easy to play but still has a high skill ceiling | 2 |
| The game has a good foundation for more features like new boss phases etc. | 2 |