CRITICAL HIT STUDIOS

**Requirement Specification**

for

Plants Vs Zombies Game

Presented By:

Aman Garg

Avanti Dorle

Apurva Surve

Mayank Nagpurkar

Purva Ekatpure

Shivkumar Patil

**Contents**

1. Problem Statement
2. Introduction
3. Description
4. Purpose
5. Requirements

5.1. Functional Requirement

5.2. Non-Functional Requirement

5.3. External Interface Specification

5.4. Technical Specification

1. **Problem Statement:**

Creating a clone of Plants vs Zombies game, which is a desktop application. The aim of this project is to protect user’s house from zombies using different plants.

1. **Introduction:**

Plant vs Zombies is a tower defense game where you protect your backyard from hordes of zombie using magical plant.

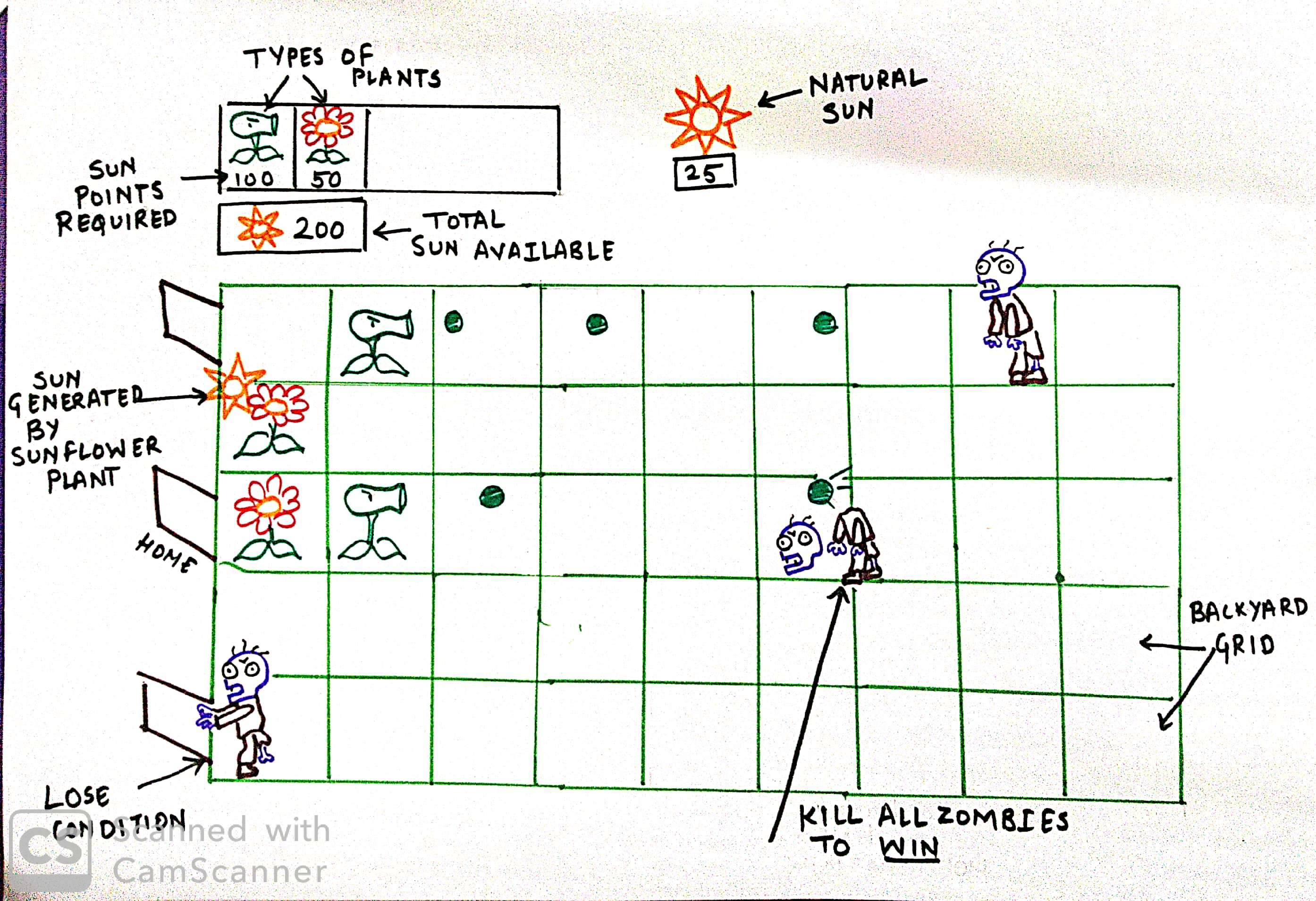
1. **Description:**

A desktop application in which the user uses different plants and objects to fight zombies which try to attack the house. He must acquire maximum sunlight to buy different plants and form tactical army formation that fight the zombies.

1. **Purpose:**

Game should be fair, rewarding and entertaining.

1. **Model Diagram:**



1. **Requirements**
   1. **Functional Requirements:**

|  |  |  |
| --- | --- | --- |
| Sr. No. | Requirement | Required/Desired |
| 1 | Start UI Screen will have Play Button | Required |
| 2 | Start UI Screen will have Quit Button | Required |
| 3 | 5 x 9 layout grid | Required |
| 4 | Panel to select different plants | Required |
| 5 | Panel to display sun count | Required |
| 6 | Placing Plants on grid | Required |
| 7 | Zombies should enter from one side of layout | Required |
| 8 | Sun should drop | Required |
| 9 | User uses sun to place plant in grid | Required |
| 10 | Sunflower plant should generate sun regularly | Required |
| 11 | Different type of plant should attack zombies | Required |
| 12 | Zombies take damage on projectile impact | Required |
| 13 | Zombies die when health is zero | Required |
| 14 | Zombies will destroy everything in their path including plants | Required |
| 15 | Level completion Bar | Required |
| 16 | Win condition is when all zombies are killed | Required |
| 17 | Lose condition is when a zombie reaches the home line | Required |
| 18 | Background music | Required |
| 19 | Minimum 1 level:  Scope-   1. 2 types of plants:    1. Pea shooter plant      * 1. Sunflower plant      1. 1 types of zombie    1. Regular zombie     Time of play – 10 min | Required |
| 20 | Two levels  Scope-   1. 4 types of plants:    1. Pea shooter plant      * 1. Sunflower plant      * 1. Freeze plant      * 1. Walnut plant      1. types of zombie    1. Regular zombie      * 1. Football zombie     Time of play – 15 min | Desired |
| 21 | Start UI Screen will have Pause Button | Desired |
| 22 | Start UI Screen will have Resume Button | Desired |
| 23 | Start UI Screen will have Credits Button | Desired |
| 24 | Info Tooltip | Desired |

* 1. **Non-Functional Requirement:**

|  |  |  |  |
| --- | --- | --- | --- |
| Sr. No. | Parameter | Requirement | Required/Desired |
| 1 | Reliability | Should not hang/crash | Required |
| 2 | Availability | Should be available offline | Required |
| 3 | Usability | User friendly,  Interactive | Required |

* 1. **External Interface Specification**

External Interface specification are not present for this project.

* 1. **Technical Specification**
     1. **Hardware details**

|  |  |  |
| --- | --- | --- |
| Sr. No. | Requirement | Required/Desired |
| 1 | Efficient space utilization. Approximately 500mb HDD and 2GB RAM. | Required |

* + 1. **Operating System**

|  |  |  |
| --- | --- | --- |
| Sr. No. | Requirement | Required/Desired |
| 1 | Desktop application should support Windows 7 and above | Required |

* + 1. **Performance**

|  |  |  |
| --- | --- | --- |
| Sr. No. | Requirement | Required/Desired |
| 1 | Should not lag, Give quick responses. Around 0.25 sec for each event. | Required |