**SRI LANKA INSTITUTE OF INFORMATION TECHNOLOGY**

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**Game Design Document**

**Fruit Collector**

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**Overview**

**Introduction**

Fruit collector is a 2D game which will be developed using Unity software. Unity is a gaming engine which supports to develop quality games. This software support different languages such as java, C# etc. Developer can select one of these languages to implement the game. While all the programming, animation parts are being done in the Unity software, the graphics will be produced using Adobe Photoshop and Illustrator.

In order to progress in the game, the player must ensure that he/she collects all the fruits in the basket during a specific time period.

There are two characters, a shooter and the catcher. We will give a specific time period to the player and also limited number of arrows. Both shooter and the catcher is been controlled by the player.

**Game Structure**

**Control**

Before starting the game it displays the main menu to the player. It consists of four parts, they are “New Game”, “Highest Scores”, “How to Play” and “Exit”. Player can get an idea about the game by going through the instructions given in How to play section. Also the player can view the high scores of previous players by selecting Highest Scores. When the player select the New Game it will display another menu. Also the player can enable or disable sounds.

When a new game starts, the game timer will be started immediately with the game. There are two characters, a shooter and the catcher. We will give a specific time period to the player and also limited number of arrows. Number of arrows that we give to the player is less than the number of fruits that we able to pass. Fruits are going from one side to other side horizontally in the upper part of the screen. There are five different fruits. We assign five different values for them. And also corked fruits are going randomly. Also user can collect the stones he/she shoot and those stones can be reused to shoot back at the fruits.

In the next level number of stones will be reduced (ex:- level 1 – 40 stones , level 2 – 20 stones, level 3 – 6 stones, level 4 – 1 stone). And the speed of moving fruits is much faster than the previous level.

**Scoring**

**Task Points**

Shooter should shoot the fruits and catcher should collect them in to his bucket. Both of these characters should control by the player at the same time. If shooter shoot to corked fruit marks will be reduce from the total marks. There is a boundary line, the catcher can’t go beyond that. Shooter can change the angle of the bow to get the aim and also catcher can move here and there. If catcher miss the fruit, marks will not be added. When the player catch the fruit we display the marks according to the fruit and add it to the total marks.

**Actions**

**Movement**

Catcher - Fruit collecting basket can be moved along the window. The controls allow the basket to move forwards and backwards.

Shooter - shooter can shoot the fruits by aiming towards the fruit objects.

**Benefits**

Players can get lot of benefits by playing this game. There are hand and eye coordination, planning, resource management and logistics, quick thinking making fast analysis and decisions, multitasking, simultaneous tracking of many shifting variables and managing multiple objectives, developing math skills and estimating skills, pattern recognition, problem solving skills improve and become intelligent. Finally player can relax his mind and enjoy the game.

**Rules**

* If the user shoot at the enemies then the marks will be reduced.
* If the user miss the target then the number of stones will be reduced.
* If the user takes a delay of 5seconds to shoot at fruits then the game is over.
* A bird will move randomly on the game screen and that bird will provide some additional stones and fruits. User is supposed to collect them.
* The game finishes once the time period is over or when the number of stones are over.

**Reference**

* Unity3d Official Website - http://unity3d.com/
* Tutorials - http://gamedevelopment.tutsplus.com/