National University of Computer & Emerging Sciences
Karachi Campus

PROJECT TITLE: “FALLING STARS”

Project Proposal
Programming Fundamentals
Section: G

Group Members:
25k-0668 Esh Tu Raazia
25k-0691 Anseeba Ali Jivani

Project Proposal

1. Introduction

"Falling Stars" is a 2D console-based game idea, where the player needs to collect the falling stars in a container to win. In case the player misses to catch a falling star, a life/chance is lost. The player has a maximum of three chances, after which the player loses and has to start again.

This game is aimed to be designed in a way that not merely engages and entertains the player, but also aims to help the player improve their hand-eye coordination and quick decision-making skills, while playing.

2. Existing System

This project idea is inspired by numerous existing games that follow the same concept of catching the falling objects. While the type of object that must be caught varies from game to game, such as falling fruits, balls, raindrops, etc, the underlying concept remains the same, i.e. the success or failure of the player is determined by their ability to consistently control the container in order to catch the falling object within the given chances or lives. In our project, the focus is on catching stars, represented by the asterisk (*) symbol.

3. Problem Statement

Although a lot of existing games about catching falling objects have excellent graphics to grab the user's attention, some of them still fail to keep the balance between the speed of the falling object and the speed of the moving container at the bottom. In such cases, the container at the bottom moves very slowly in comparison to the falling object, making it nearly impossible for the player to catch the object in time. Consequently they run out of chances/lives too quickly and are forced to restart the game. This often leads to frustration and annoyance, causing players to lose interest and not want to play the game again.

Moreover, the games available online and on mobile app stores constantly flood the user with unwanted ads to watch after each level. This also causes the player to become irritated and not play the game instead.

4. Proposed Solution

In our project, it will be ensured that the relative speed of the falling stars and the moving container aligns well with each other, allowing the player to smoothly play and enjoy the game. While addressing this issue, we will also make sure that the difficulty level is not compromised, rather a fair balance between playability and hardness is kept.

5. Salient Features

- Asterisks (*) as stars
- Gravity (falling mechanism of stars)
- 3 maximum lives/ chances
- Beep sound if fails to catch a star or if loses the game.
- Balanced relative speed between falling stars and container.
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6. Tools & Technologies

Programming language: C language
Framework: <stdio.h> , <stdlib.h> , <conio.h>, <windows.h>, etc.
Operating System: Windows