

Project Overview

Develop a software application for the dice game called Cosmic Wipeout.

Project Terms

The following terms and acronyms are defined and used within this document.

Term/Acronym	Definition
cube or die	A six-sided cube that may be rolled. Each side of the cube has an equal probability of landing on top.
flaming sun	Represents the number 1 on a side of a cube.
flash	Rolling three of a kind.
freight train	Rolling five of a kind.
lightning bolts	Represents the number 4 on a side of a cube.
stars	Represents the number 6 on a side of a cube.
swirls	Represents the number 2 on a side of a cube.
triangular glyphs	Represents the number 3 on a side of a cube.

Project Requirements

The project requirements include a description of the way in which the game is played and processing requirements. Please note that all of the project requirements are numbered so they can be referenced in your project plan (more on this after increment 3 is completed).

Cosmic Wipeout Game Description

Equipment

- 1) The game is played with five dice that are referred to as cubes.
 - a) Four cubes have face values of two *swirls*, three *triangular glyphs*, four *lightning bolts*, the number 5, six *stars* and the number 10.
 - b) The fifth cube has a single *flaming sun* in place of the three triangular glyphs.
 - c) For purposes of simplicity, the faces of the:
 - i) Four cubes have the numbers 2, 3, 4, 5, 6, and 10.
 - ii) A fifth cube have the numbers 1, 2, 4, 5, 6, and 10.

Rules

- 2) A player starts their turn by rolling all five cubes and adding up their score.
 - a) Any 5 or 10 rolled is worth that amount, unless three fives or three tens are rolled (see next scoring rule).
 - b) Rolling three of a kind of any number, or a pair and a 1 (flaming sun), is called a *flash*. A flash scores ten times the number on one of the cubes in the flash. For example, rolling three twos is worth 20 points, rolling three fives is worth 50, and rolling two threes and a 1 is worth 30.
 - c) Rolling five of a kind is called a *freight train*. A freight train scores one hundred times the number on one on the cubes. A freight train may be rolled for twos, fours, fives, or sixes.
 - d) When a 1 (flaming sun) has been rolled and:
 - i) There are no other scoring cubes, the flaming sun must be scored as a 5 or a 10.
 - ii) There is a pair, the flaming sun must be used with the pair to create a flash.

- 3) When a player rolls scoring cubes, they must set them aside. At this point, the player may choose to:
 - a) Keep the points they have and end their turn. Play would continue with the next player rolling all five cubes.
 - b) Roll the non-scoring cubes and try for more points.
 - i) For scoring purposes, the non-scoring cubes that are re-rolled **cannot be combined** with the scoring cubes (that were set aside) for purposes of scoring a flash or freight train.
 - c) There are three exceptions that will force the player to roll again:
 - i) When all five cubes have been set aside as scoring, a player must reroll all five cubes.
 - ii) When a player has less than 35 points overall, all non-scoring cubes must be rerolled.
 - iii) When a player rolls a flash, they must then *clear the flash*. That is:
 - (1) The player rolls all remaining non-scoring cubes until none of the cubes match the Flash.
 - (2) When a reroll to clear the flash does not produce scoring cubes, the player's turn is over and the player has lost all points accumulated in that turn.
 - (3) For example, a player rolls 3, 3, 3, 2, and 1. The cubes showing 2 and 1 are rerolled.
 - (4) If the reroll produces 5 and 1 – the 5 scores five points and the player may choose to end their turn.
 - (5) If the reroll produces 5 and 10 – both cubes scores points and the player must roll all five cubes (to continue their turn).
 - (6) If the reroll produces 6 and 2 – neither cube scores any points so the player loses the accumulated points for this turn.
- 4) The first player to score 500 or more points wins.