Dangerous Racers

Video Game Arhitecture & Optimisation Assignment 1

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1. About Game

Dangerous Racers is a racing game that can be played on computers. The player, after selecting a car and a track, can try to beat other cars (computer-controlled). Dangerous Racers was a very popular game at the time when it was launched; after several years appeared other games that look like this game or have the same mechanics.

This game has many levels and many playable cars; while you are on a race if you enter into another car then you will take an amount of damage from the car that you were involved in a crash with. If the 'health' of that car reaches 0, the car will explode and remain on track as an object – if you enter into the crashed cars you will collide with them.

The original game also had some pick-up objects dropped on the race track. If you take one of these items while you are racing you get the power of the item that you picked (nitro gets you extra speed, health increase your health). Also, while you are on a race you can not exit the race track – if you attempt to exit the race track you will collide into the objects that are near the track and your speed will decrease.

In my version of the game, there are only 3 levels – this means 3 racetracks and 3 playable cars. Also, my version of the game is a little bit different than the original because you can exit the track without any problems (you won't collide into the racetrack margins) but your speed will be decreased. Also, there are some checkpoints added on the racetrack and if you are driving anywhere but not on the racetrack your current lap will be marked as skipped.

2. Game Objectives

In the original version of the game and in my version, the objective is to win the race – this means that you need to end up in the 1st place. Whenever you attempt to race with the other cars you begin the race in the last place; this means that you have to manage to reach the 1st place. If you finish the race in another place than the 1st, that race will be marked as a lost one.

Beside the main objective that is to end the race on th first place, another objective is to play as new racetracks and win them in order to unlock different vehicles.

3. Game Mechanics

Dangerous Racers can be played by only one player. In my version, the player can choose from a range of 3 playable cars (a red one, black one and yellow one) – each car has a different health. In every race, the automated cars (the computer-based ones) are driving automatically by going to the next checkpoint from the track.

Also, there are some obstacles added on the level, but the obstacles are not on the racetrack. So if the player while driving outside the track hits an obstacle, then its speed will be decreased. The obstacles can be of different types: vehicles (ambulances, police cars) or even tires.

4. Screen flow diagrams, Characters, NPC, Background design

-check future version-

5. Pseudo design

-check future version-

6. Implementation of game

The game contains:

- a background / graphical character
- the character moves by keyboard entry
- NPC are included
- the main character interacts with other NPC
- scoring system
- full interaction with NPC
- all NPC move
- the main character has an animated staying position
- victory status - each level has a target score
- a total of 6 levels
- 5 playable characters
- animated menu screen in-game

7. Testing

-check future version-

8. Alghorim Optimisation Strategy

-check future version-

9. Evaluation and future developments

This game can be improved by createing a header for different objects like for the cars, tracks, objects from track and power ups.

10. Reference List

//wallpapers

//racetracks

//cars