Software Workshop Team Java

Project Specification

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Dark Matter

Dark Matter is a multi-game we will work on. The concept of this game is ones devour the small. At the beginning of game, there are different sizes of "matters" on the map. Player can control one of them to move anywhere by click mouse. NPC matters move random and absorb each other include the players' matters. When different sizes of "matters" touch each other, the bigger one can absorb the smaller one and then get bigger (if two matters have exactly same size, these two matters just rebound). So in the single play, player should absorb all the matters to win the game, which means at end of game, there will be a big matter which is paly himself. In the multi-game, player should make himself bigger than another player firstly, and then absorb another player's matter to win the game or hope NPC can finish another player. The player can also use his size get ability which can slow down other matters or get accelerate.

About game control

Player controls the matter only by click mouse. The matter can get an accelerate point to where the mouse clicks. The more times the mouse clicks, the bigger accelerate matter can get. The hard part is player should loss their overall mass to get accelerate, which is a key thing in the game. You can get a fast speed but you will be smaller that will be much easily be absorbed by other bigger matters.

About GUI design

We will use java swing for the game interface. We have learned swing last term, which is more powerful than awt, and will be easier than openGL for us. In order to make game smooth we will use explorer the ideas such as Double Buffering and Page Flipping. The game will be full-screen game. But in behalf of the fair for players, we have to make two screen exactly same rather than the player who has a big screen can see more map than other one. So if the two players have different resolution screens, the bigger one will get black bar on the side of screen. And when game in full screen mode, there should a menu bar on the top of screen (or anywhere else) to let player quite the game, change play mode or do something they need. Also it should work to quite full screen mode by press "Esc" button.

To make the game nice and easy play, we will do two main things. First, we will add a color information function. All the matters which are bigger the player will be displayed red and the smaller matters will be displayed blue. So the player will easily distinguish where is dangerous where has food. The second part is we will use images and rotation for animating the characters. We checked other games find the game files contents the images and these images make up the animation in the game. So we thought maybe we can use this way to make game nice.

The network

We have talked about network, however we don't know much about network. Hopeful we can make a p2p network.

The project plane

We will implement waterfall model with incremental model. The whole project splits mini-project such as network, interface. Everyone work together for every mini-project. And we plane to release a total new version every week. Every week we have a group meeting to talk about the progress of project and decided the goal for current week. We also have pair programming. Everyone have three pair programming so that make sure each one meet team members one by one at least one time per week. And we will fully use Subversion and Maven to link up everyone's works and test them at sandbox.