Game Maker - Project Proposal

Overview

For my project I am going to make an RPG game making tool so that a user can easily sit down with my tool and make a simple RPG game. I plan on implementing the game so that it runs on a PC via the java platform.

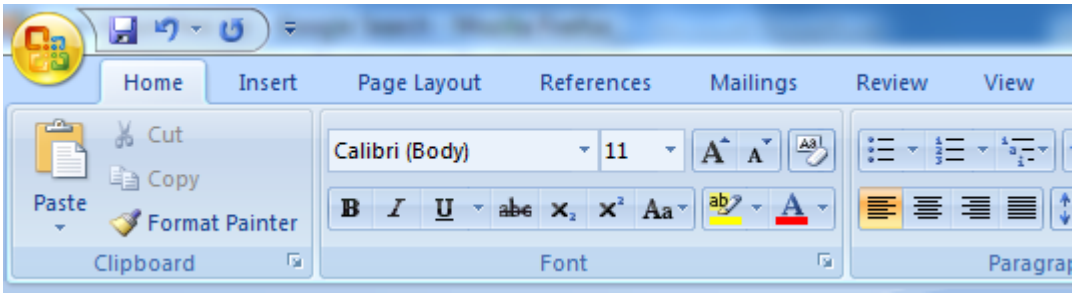
The games that will be made by the user will be event driven, events in the game will happen as a result of triggers being activated as opposed to games that operate within a while loop with the concept of order. Triggers could include: Opening a chest; stepping on a certain area of the map; the player hits a certain key; etc. This is very similar to the way that existing game development tools work.

After looking at what is already out there (RPG Maker XP) I have decided that my unique selling points will be:

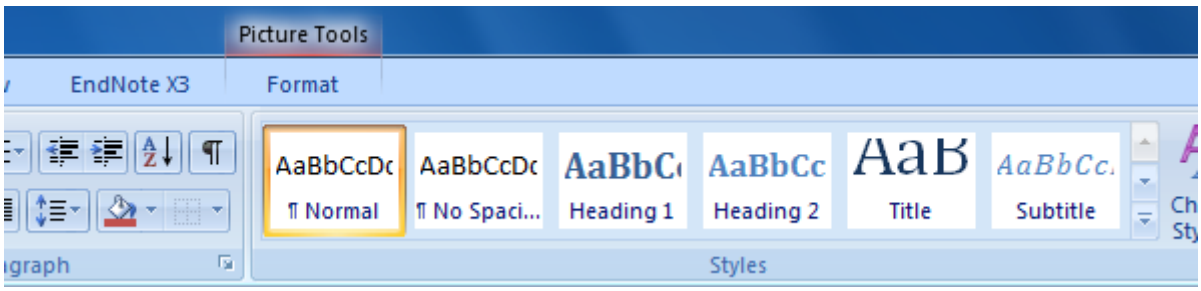
- Usability
- Map creation.
- Sprite (in game character) movement around map.
- Sprite interaction with objects and events.

Though the game makers that currently exist give the maker a great deal of control over how they want their game to work, it is also fairly complex and time consuming to make a polished game using them. I want to make my game making tool very simple to use. I want to have a good balance between customisability of the game and ease of creation.

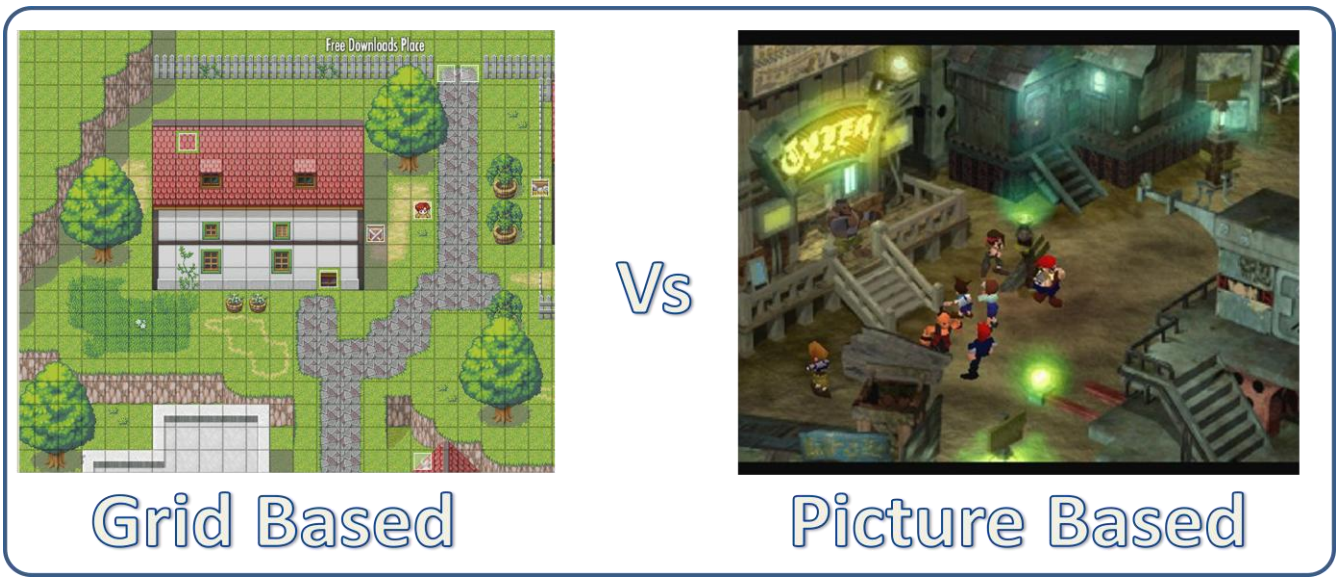
I would like to implement a ribbon interface to display development tools. The Ribbon is the new toolbar concept implemented by Microsoft in their Office 2007 package. E.g.:



...



The game makers at the moment rely on a grid based system to create maps and to put objects on the map. I want to have a system where the game creator can use any image as the entire map. For example:



This would allow the user to use any image (photo, drawing, 3D render) to create a level where a sprite can walk around in. Allowing the user to use an image gives the illusion of 3D and allows levels to be much more custom and interesting.

In grid-based makers events and objects are constrained to grid coordinates making them easy to manage, as with my proposal the level is now not constrained to a grid I will have to rethink of how to deal with this.

At the most basic level I want the user to be able to create multiple maps that a sprite can walk around on. I also want all of these events to be implementable by the game maker:

- Teleport sprite to a new map at a set location
- Display a message to the player
- Implement a switch (like a light switch or button)
- Have events that are only active if the switch is active (e.g. can only teleport if the button has been pressed)

To further develop the project I could add in a range of different events that the game maker could use:

- Open a chest
- Collect and store an item
- Use an item
- Have a dialogue with a character where you choose yes/no. Event triggered based on decision
- Change how the map looks
- Alter what parts of the map can be walked on
- Teleport between two points on the same map.

- Alter any layer on the map.
- End the game (Game Over)

Requirements/Functionality

Here is a list of the key functionality that I want the game development tool to definitely have. These will be considered to be the core of the program as extra functionality can be added once this has been implemented:

1. User can create a map from an image
2. User can define what areas of the map can be walked on
3. User can select a sprite that will walk around the map.
4. User can define the depth of the map
   4.1. The sprite must change size depending on where they are positioned on the map to give the illusion of walking into the distance
5. The user must be able to define which areas of the map that the sprite can walk underneath (higher level areas).
6. Areas of the sprite must be hidden that are within a boundary of the map that have been defined as higher level areas.
7. Images must be able to be placed on top of the map.
8. User can create events that happen after certain triggers.
   8.1. Teleport to a coordinate on any map.
   8.2. Display a message.
   8.3. Win the game.
   8.4. Game Over.
9. Create actions that trigger events
   9.1. Sprite walks onto a certain coordinate.
   9.2. Button is pressed whilst the sprite is within a certain coordinate.
   9.3. Some evens must have a boundary
10. Development tools are displayed on a ribbon and/or a side pane.
11. The game development must be able to save and load their game development progress.
12. The game should be able to be saved in a way that it can then be played via the tool.
13. When the game is played by a player, they should not be able to modify anything unless it is via events. The experience of playing the game should be abstract to the experience of making it.

Here is a list of the functionality that I could add to the core at a later point:

1. User can add music to a level from a repository of midi files or from an mp3 file.
2. Music must play in the background
3. Items can exist within the game
   3.1. User can create a list of items that can be obtained by the character.
   3.2. The character could pick up the items from a chest
   3.3. Or buy them from a shop using in-game money
   3.4. Some events may/may not be triggered based on if an item is held
4. Event triggers could be expanded to give new ways in which an event is triggered.
   4.1. Choose yes or no when having a dialogue with an in game character (NPC).

4.2. Collecting an item.
4.3. Using an item
4.4. Sprite interacts with an object(s) a set amount of times.

5. Events could be expanded to give the user more options when creating a game.
   5.1. Change the map background music.
   5.2. Change the map image.
   5.3. Have a dialogue with an NPC where you chose what to say from a list of options.
   5.4. Change the walk able area on a map.
   5.5. Add, remove or change an image overlaying part of the map.
6. The Model – Control – view framework could be expanded to work within a servlet. This would allow the game maker to be used via the internet.
   6.1. A repository of games could be set up on a server so that friends can share games between one and other.
7. Game maker and game player tools could be separate. This would allow you to be able to play the game without needing to have the tools to make one.
8. Functionality could be added that allows a character to have battles in a similar way to the battles on the old final fantasy games.
   8.1. Experience could be gained from battles which lead to a character gaining levels and becoming more powerful
   8.2. Monsters/enemies would have to have stats as well as the character that is fighting them
   8.3. Items could be purchased that increase the characters stats.
   8.4. Items could be equipped to increase the characters stats.

Project Planning:

Week Start	28/09/2009	05/10/2009	12/10/2009	19/10/2009	26/10/2009	02/11/2009	09/11/2009	16/11/2009	23/11/2009	30/11/2009	07/12/2009	14/12/2009	21/12/2009	28/12/2009	04/01/2010	11/01/2010	18/01/2010	25/01/2010	01/02/2010	08/02/2010	15/02/2010	22/02/2010
Achievement Targets																						
Project Proposal	1																					
Construct Dissertation Template	1																					
Introduction Draft		1																				
Background Information		1																				
Analysis and Specification		1																				
Core Class Structure outline		1	1																			
Core Interface Design			1																			
Data structure Specification			1	1																		
Remaining Design Spec				1	1																	
Core Interface Design						1																
Map Creation Code						1	1															
Sprite-map interaction						1	1	1														
Event Triggers								1	1													
Event Handlers									1	1	1	1										
Save/Load Code						1	1	1	1	1	1	1		CHRISTMAS								
Map Music Player																1	1					
Game Playback Code							1	1	1	1	1	1				1	1	1				
Refine Code & interfaces																		1				
Independent Game Player																			1			
Testing																				1		
Appraisal																					1	
Introduction and Abstract																					1	1
Conclusion																					1	1

Note: This Plan does not take into account the development of functionality that it outside of the core project. I plan to use all additional time after core completion to further develop the project.