FBLA 2014 script

Yi Zhao, Jack Phillips

1. Hello, my name is Jack Phillips. In case you haven’t heard, I am a member of the Mamaroneck High School FBLA Computer Game and Simulation team. My teammate, Yi Zhao, could not make it due to other obligations.
2. My team was assigned to task of creating a game geared towards middle school students. The purpose of the game is educating potential FBLA members about the corporate world. This game will help players develop competent business skills, and along the way, improve their financial literacy.
3. Some challenges we faced when developing the game was making the game fun while preserving the educational content. We also tried to design the game with a unique and engaging theme that would be appealing to middle school students.
4. Our game design process was as follows:
   1. We started with the content, the business challenges the player would face.
   2. The next thing we did was to decide on the art style. We also storyboarded the concept to make our ideas more concrete.
   3. The third step was to select the appropriate platform to publish to.
   4. Then, we began our actual design and development.
   5. To make sure our game ran smoothly, we debugged our game before release.
5. To educate a middle school student about the business world, we focused on 5 main business challenges. A player must address each of these challenges to progress to a higher level
   1. Number 1: Charisma. To move up the business ladder, a player must inspire devotion in others.
   2. Number 2: Negotiation. An aspiring business leader isn’t always going to get his way. He must learn to compromise.
   3. Number 3: Leadership. A successful business man must be able to lead others to greatness.
   4. Number 4: Time management. One important skill that is crucial not only to business is to make the most out of limited time.
   5. Number 5: Learning. An efficacious business leader is always learning.
6. Here is our storyboard, representing basic game flow.
   1. A player must address all 5 business challenges
   2. (Point to red guy) Charisma: a player must shake hands with the required number of people
   3. (Point to yellow guy) Negotiation: the student must learn to deal with an angry coworker.
   4. (Point to orange guy) Leadership: the player must lead a fellow coworker to a predetermined location.
   5. (Point to time) Time management: a student must finish each level in under a minute
   6. (Point to word) Learning: a player must learn 3 new words.
   7. After completing all challenges, the student will head to the elevator to progress to the next level.
   8. An end of level quiz is given to make sure that the players are tested on the meaning of the words they learned throughout the level.
7. We primarily used two tools for the project, Adobe Flash and Github.
   1. We used Adobe Flash for our design and development. We chose this tool because we could publish flash files, which are available to 99% of computer users. We also chose this tool because of its ability to produce vector graphics and an object oriented programming language.
   2. We used Github for version control and collaboration. It provided a central database, similar to Google Drive that all team members could access and modify. We could also rollback changes if they broke the program.
8. We wrote our scripts in Actionscript 3, an object oriented language provided by Adobe. We designed our own API, instead of a prebuilt one, because we enjoyed the challenge and wanted to learn from the process. We focused on the paradigm of inheritance when building our API. Team members wrote up an extensive documentation and followed a strict commenting style (point to code segment) that gave an overview of a class’s methods and members.
9. Here is our UML inheritance diagram.
   1. At the top of the hierarchy is the environment base class, which contains essential methods, such as collision.
   2. Inheriting off Environment, we have the Entity class, a core class that contains built in methods to handle physics, primarily gravity. Examples include a FallingSpike or the Player class
   3. The Spawner class is a special helper class that is used to create Entities.
   4. The Sensor class provides a detection system. It throws an event every time an Entity collides with it. An example is the fire obstacle.
   5. We also created our custom event class, EntityEvent, to make improve communication between classes.
10. We wanted to create a fluid design that would be appealing to middle school students. In the end, we settled on a hand drawn, doodle style theme. A real world working place is still a scary thought for middle school students so we chose this theme to lighten the atmosphere, and it was one students can relate to. The style of our game was a puzzle platformer, one that emphasized the skill of exploring and getting used to a new environment. One way the game reflects on this is that the backgrounds become more and more concrete. This represents a progression from the abstract thinking of an intern to the structured thinking of an experienced business man.
11. One good example of how we applied our theme is this, some sample art from our game.
12. Users navigate through the game through a series of well-designed menus. We tried to make navigation as intuitive as possible, with big, easy to click buttons. Two special interactions are the guide and the end of level quiz. At the start of each level, it’s necessary for a player to go to the guide to receive their FBLA competition. The guide states the relevant competitions and gives the user a choice between the two. At the end of the level, an end of level quiz reinforces the words the player has learned throughout the level.