**Conner Joseph Brewster Computer Science I**

**~~Tuesday, January 22th, 2013~~ Revised: Monday, February 11th, 2013 Walter – 2**

**Super Mario Bros.**

Since I am unable to use my Space Commander game for this project, I will begin on a new project: Super Mario Bros. I plan on re-creating at least the first level (World 1-1) of the original NES/Famicom game using the programming program called Game Maker 8 (Lite). **Worlds 1-2 and 1-3 were also able to be implemented.** From Chapter 10 (Tank Wars), using views I learned how to create a scrolling level. I will import Mario, Goombas, Power-up blocks, floor, and ordinary bricks, but I plan on drawing out the level first. I ~~might~~ use a controller object for the Timer and the Score. Sound effects and background music will probably be imported too.

The first power-up will be the mushroom. These will double Mario’s current size. It will allow him to break brick blocks and take a hit from an enemy. Upon being hit, he will be reverted to small Mario, **he will also have a small amount of invincibility frames to prevent further harm for a brief time**. The next power-up would be, of course, the Fire Flower. This will allow Mario to shoot fireballs at his enemies. He will lose this ability upon being struck by an enemy.

I will probably draw out the level first, and then set the sprites to their appropriate positions. I will then add costumes to the various sprites to make them look animated. I plan on giving Mario 3 lives~~, set to repeats.~~ I will also place a force-reset button combination in case there is a major malfunction. ~~The starman (invincibility) will probably be implemented last, as it will be an entirely different script, and might mess up other scripts.~~ The title screen will only have 1 Player ~~to start, if I have time, I’ll add 2 Player~~. Once Mario runs out of lives and the Game Over is displayed, a ~~credits~~ **score** screen will come into play.

I will tie the controller for score to enemies, adding 100 to the scoreboard when Mario jumps on one, 50 points upon breaking a brick. ~~The score added from the flagpole is probably going to be added last.~~ I will play Super Mario Bros. on my Nintendo 3DS XL to be able to compare and to see how the game works. I might even get it for my NES emulator so I can see the internal files of the game (this is where I’ll probably get the sound.)

If I happen to have a massive amount of time remaining after I implement everything I know, I’ll add the other ~~3~~ **2** levels applied to the world (1-2, 1-3~~, and 1-4). If I do manage to get as far as 1-4, I’ll implement Princess Peach at the end of the level to end the game.~~ Game Information will also be added, containing similar text to this document.

Similar to the conflict with my Donkey Kong Scratch Project, I believe animation for ALL of my sprites would be virtually impossible. ~~Another conflict I can find is the timer. In the games, the timer is not set perkily to seconds, more like 1/3 of a second. I will just have to adjust the time to get around this factor.~~ **Conflict with the timer was eventually solved.**

I will avoid the scripting language for Game Maker 8 Lite at all costs, primarily because I have no idea how to operate it. I will also avoid timelines and paths although I do know how to operate those; I fear that I have not mastered those techniques at this time in the class.

I do not plan on inserting the Famicom game booting screen, nor any third-party game enhancers (Game Genie). I will also not insert Emulation functions (auto-saving, speed up ~~and inserting cheats~~). **Various cheats (moon jump, invincibility, suit change, extra lives, and rapid fire mode) were implemented at the end of the game.**

Overall, I will find this a fun project to tackle, and it may even teach me a few things about Game Maker 8 Lite edition.

**Many things were added that didn’t exist in the original idea. Such features include a master toggle for all cheats, coins that can be collected (100 for an extra life), a title screen with buttons for Starting the game, a help menu, the high score table and quit option. There is also a world select screen.**

**Invisible blocks exist in the first level that contains hidden goodies (1-UPs). Also in said level, there is an open pipe that may be entered for some extra coins.**

**I tried to implement moving platforms, but they were far too buggy to release into the main game. Flagpoles were also avoided, as paths were messing up for me a lot.**

**Probably the most missed feature here is the Koopas. I was able to place them in as an enemy, but their shell physics completely screwed up the game, leading to their extinction.**