The goal of my program is to provide a fun and challenging dirt bike racing game similar to games such as Max Dirt Bike or Winter Racing which can be found at the following links.

Max Dirt Bike: <http://www.maxdirtbike.org/>

Winter Racing: <http://www.addictinggames.com/car-games/winter-racing-game.jsp>

My program features three different modes instructions, the game, and a level editor. The instructions menu simply informs the player of the controls, how to properly play the game, as well as the objective of the game. Another mode of the game is the game, which allows the player to play the game. The game features two dirt bikers a red and a black one. The black one is controlled by the player and the red one is controlled by the computer. The goal of the game is for the player to reach the end of the level before the computer controlled red biker does. In order to do this the player has to face several different obstacles. Each obstacle will have a different effect on the player’s biker and the biker has to use the arrow keys and the space key in order to adjust for these effects. The player uses the up and down arrow keys to accelerate and decelerate/reverse. The player can also use the left and right arrow keys in order to rotate their biker to the left and right respectively. The player wants to keep the dirt biker on his wheels otherwise he may rotate too far and if the player comes into contact with the ground with a body part that is not the wheels the player will lose. Lastly, the player can use the space bar to brake, and this is highly recommended before the player reaches the speed bump obstacle type. A big red warning pops up if a player is not pressing space and is riding on a speedbump.

The last game mode is a level editor. This allows a player to make their own level and then play it later. The player is able to choose from one of 5 premade obstacles and can increase or decrease the length of the level. The player is able to choose from 1/5th the size of a normal randomly generated level to a level 20 times the size of a randomly generated level.

Lastly, the game also allows the player to choose the speed that they would like to play at. The game was originally designed and created in the normal speed, and this is where the physics likely looks the best and feels the most natural. This is because in the other two game modes the height increase and forces of gravity are not proportional to the speed. In fact, the biker’s height increases the same amount when coming off of ramps in all three game modes even though logically the biker should go higher when the speed is faster. The code was written in both ways, however I decided to make the height increase the same to add difficulty to the game. If height increases proportional to speed than the player would gain a lot of height and at the very fast speed the game becomes very easy to play.

There were also some suggestions that I got from other people but did not have time to implement with the deadline that the term project is due. One that I did not have time to implement that I would have liked to is keeping track of the difference from the player to his opponent. This would work so that when the opponent is offscreen the game would display a distance from the opponent so that the player would know how they are doing in comparison to the AI when the AI is off screen. Another feature that I was not able to implement was a start timer. The game immediately starts after the player hits play. I got the suggestion to create a timer that would delay the game start a few seconds however I did not have time to implement this. The last suggestion I got that I did not have time to implement was to change it so that a player could rotate on the ground. I did not have time to do this because it would require the editing of quite a few rules that prevent the player from going underground. A few features that were suggested that I did get to implement that were suggested were adding a warning when players are approaching a speedbumps so that they know if they should hit the brake, and I changed the speed boxes so that they show what speed has been selected by highlighting it gray.