**Proposal**

For my 15112 Term Project I plan to make a game similar to *Max Dirt Bike* which can be found at the following link <http://www.maxdirtbike.org/>. For this project, I will be using PyGame. My game will allow the player to control a dirt bike going over premade obstacles placed at randomly generated locations. The player will have to use the left and right arrow keys in order to change the orientation of the dirt bike. The goal of the game will be to successfully get to the end of the level without crashing. Crashing will occur if a player’s head or other parts of the body besides the two wheels collide with a part of the ground. The game will be made challenging because the player will have to counter forces that will change the orientation of the dirt biker. For example, if a player is climbing up a ramp at a high speed then the dirt bike will naturally lean backwards. If the dirt bike leans backwards too far then they will start falling and will hit the ground, and the player will lose the game. Additionally, if the player attempts to hit the ground at too large of an angle then the dirt biker will bounce back up into the air and the angle will be adjusted accordingly, possibly not in the player’s favor.

Additionally, as an additional challenge to the player I will implement an opponent that will race the player to the end of the game. Before the game starts the player will be able to choose the skill level of this opponent which will affect how fast the opponent reaches the end of the level.

Lastly, I will also create a simple menu and options menu that will allow the player to change the difficulty of the level. I would like to allow the player to choose the length of the level and alter the frequency that each obstacle will occur. Finally, I would like to allow a player to store and save a level and go back and play it another time.

**Competitive Analysis**

Obviously because my game is based on Max Dirt Bike it will share many of the same mechanics. For example, my game will have the player rotate a dirt biker using the left and right arrow keys in order to prevent the dirt biker from crashing. However, some things that will be in my game but not max dirt bike are randomly generated levels and an opponent that races the player to the end of the level. Additionally, in my game I will allow players to store a randomly generated map and play it again which is also something that max Dirt Bike does not allow a player to do.

Another example of a similar game to what I will be making can be found at the link <http://www.addictinggames.com/car-games/winter-racing-game.jsp>. This game has other cars controlled by the computer which is a feature that I would like to implement into my game. However, this example does not end the game when the player flips their vehicle over. For example, in this game if you flip your car over onto its roof then you will be able to flip it back over and keep going. Additionally, this game gives a bonus to speed if the player does tricks such as flipping their vehicle all the way over. This is not something that I will do with my game.

Lastly, a third similar game to what I will be doing can be found at the link <http://www.freewebarcade.com/game/adrenaline-challenge/> . This game is very similar to max dirt bike in that you rotate the dirt biker by using the left and right arrow keys, and you fail by having a part of the biker collide with an obstacle besides the wheels, however it is different because it has the player collect green bubbles before they can finish the level. This allows the game to have non-linear levels. I will also not do this because it would be very difficult to randomly generate levels that are nonlinear in the same way that they are in this game.