**ECSE 321 – Implementation Notes**

**1) Describes any behavior that you did not have time to implement**

Our game has all the core features asked by the client (the instructor, Prof. Zeng). Our game has the following core features:

* Our game has a User Interface which is the *Main Menu* and allows the user to select the game mode (single player or multiplayer), options, and high scores.
* Our game has the Graphical implementation that includes several monsters, power-ups, explosion animation, Bomberman’s sprite animation and destructible crate and walls.
* Game controls to allow the control of the Bomberman
* We also have a sample AI that moves randomly around the map. They can also pick up/deny the power-ups dropped on the ground.
* 2 player mode (alternating turn)
* Different levels of difficulty

Unfortunately, our team did not have time to implement some additional features beside the core ones. Our team would like to design a smart AI by implementing the Dijkstra’s algorithm. Since our map is composed with a 1-D array, it is very difficult to implement the pathfinding libraries/tutorial because most of them are provided for two dimensional arrays.

Also, since our game has 3 monsters of different colors (green, yellow and red), we wanted to grant them different special powers. For example, the yellow monsters move quicker, the green monsters have 3 lives and the red monsters could also drop bombs.

**2) Describes any improvements that you would make to your program if you had more time. This file is written for the Instructors.**

Here is the list of improvement that our game could have if our team had a greater time budget.

* Having 4-player mode
* A story mode
* Un-lockable powers and dresses
* Make bomberman a 3-D game
* Adjust the video settings in the Option Menu