***Readme File: Pehelwan Liberal Goth: Cleanup***

**Story:**

The game is built on the hot issue of rising neo-liberalism in the post-modern world. In such scenario, some students of University are taking their liberal arts knowledge in the wrong direction and using it for their own satisfaction. The story line in the story screen of the game depicts the above scenario, where a messiah plane fighter is sent to destroy all the neo-liberals at Habib University.

**Controls:**

Press up, down, right and left arrow keys to move the player. Press space bar to shoot the bullets. Shoot at the middle of the enemies to destroy them.

**About the Game:**

Player has a special powerup, as long as it doesn't move enemies cannot see the player, hence there is no collision, boss enemy is powerful and can see the player, even when the player is not moving. The player, enemy and boss cannot exit the dimensions of the game screen, if they do, they die.

**Acknowledgements:**

The project has some re-used code of that provided by Dr. Umair as a demo of how enemy planes can be rendered on the screen.

**Progress Videos and Demo Video:**

Link to the youtube channel:

https://www.youtube.com/watch v=K5h5Mcv2gTM&list=PLeKvDo0UHS7z6NUyueHYk5CGgIxccX19-

**Total time taken:**

It took me a total of 48 hours to complete the project.

**Modifications and Contributions:**

The project has no bugs and glitches, which were present on the demo day. I was alone in this project and made hundred percent contribution towards it.

**Technical and Thematic requirements:**

*Polymorphism* - Screens abstract class having 11 inherited screens.

- Unit abstract class having 3 inherited units

*Design Patterns* - Unit Player is made singleton class.

- Units Enemy and Boss are called by using an enemy factory design pattern.

*File I/O* - Game is saved perfectly in any state in the csv file, and can be loaded/reloaded from the same state it was last saved in.

*Operator Overloading -* Overloaded assignment operators of button, text, and alphabet classes.

*Interaction* - A story line on story screen and different music on different screens.

*Context* - The game is set in the context of Habib University, as seen through the sprites and story line.

*Programming style* - Made modular functions.

*Memory Management* - All allocated memory is deallocated.

*Menu and buttons* - Contains a lot of menus with buttons.