Credit Hours System
CMPN102
Data Structures and Algorithms

Cairo University
Faculty of Engineering

Castle Battle

Submitted to: Doc. Magda Fayek

Team Members:

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Team members work distribution:

1) Youssef Mahmoud Zakaria:

   Castle Actions
   Simulation and Drawing
   List Management

2) Mahmoud Mohamed Ezz Eldin:

   Priority Queue
   Stack
   Freezer action

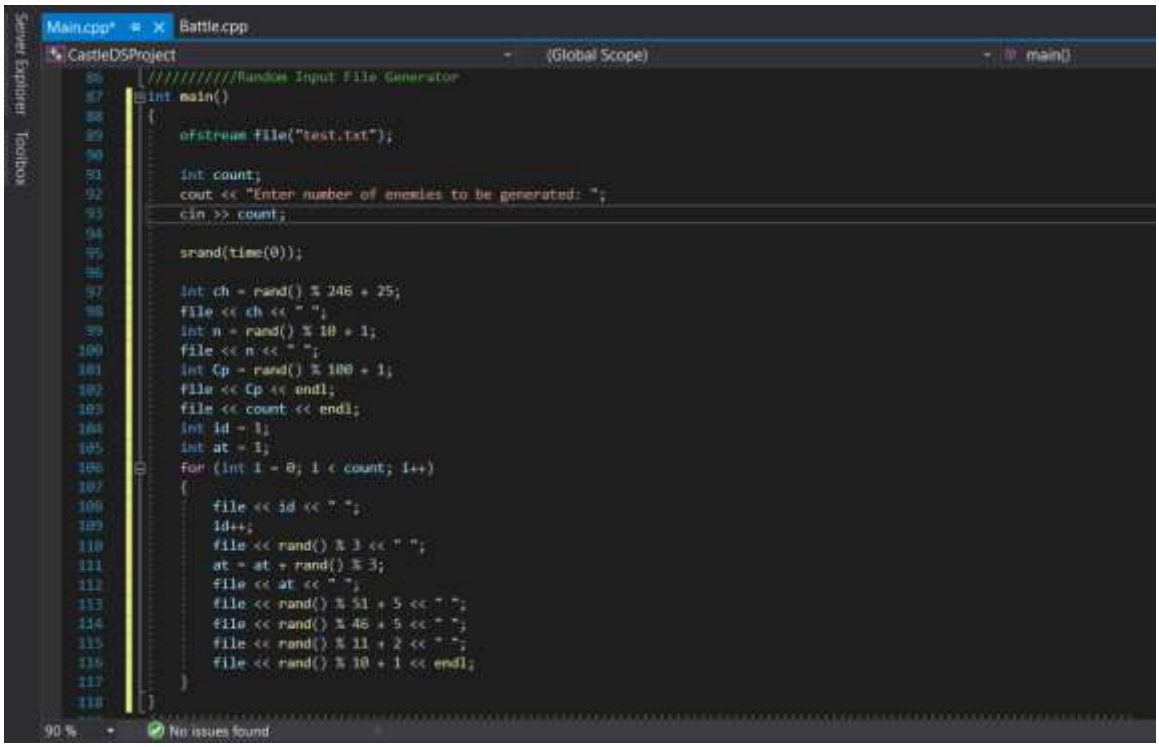
3) Kareem Ahmed Shawky:

   Input File
   Output File
   Random Input File Generator

4) Youssef Ibrahim Ahmed:

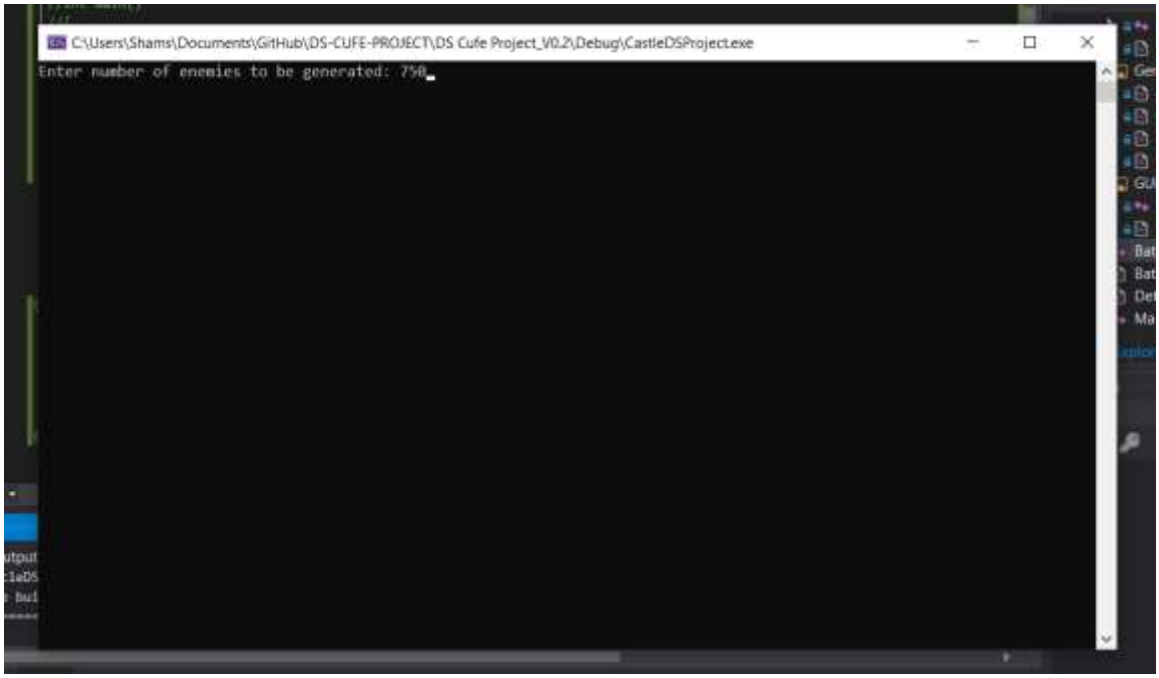
   Fighter Action
   Healer Action
   Enemy Movement in General

Random Input File Generator:

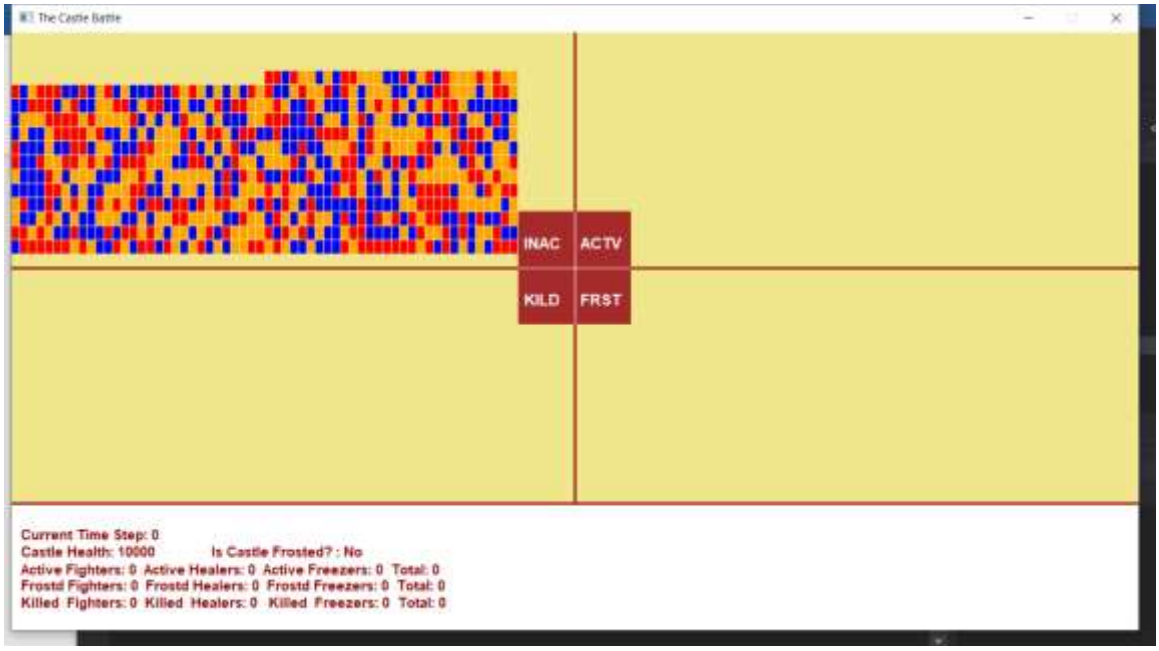


We implemented this random input file generator to make sure that everything is randomized to perfect testing our project in all possible conditions, as it simulates the battle in everyway possible, using different combinations of fighters, freezers, healers regarding their number and their power, also randomizes the increase of their arrival time. Regarding the castle, it also randomizes the castle health and its attack damage.

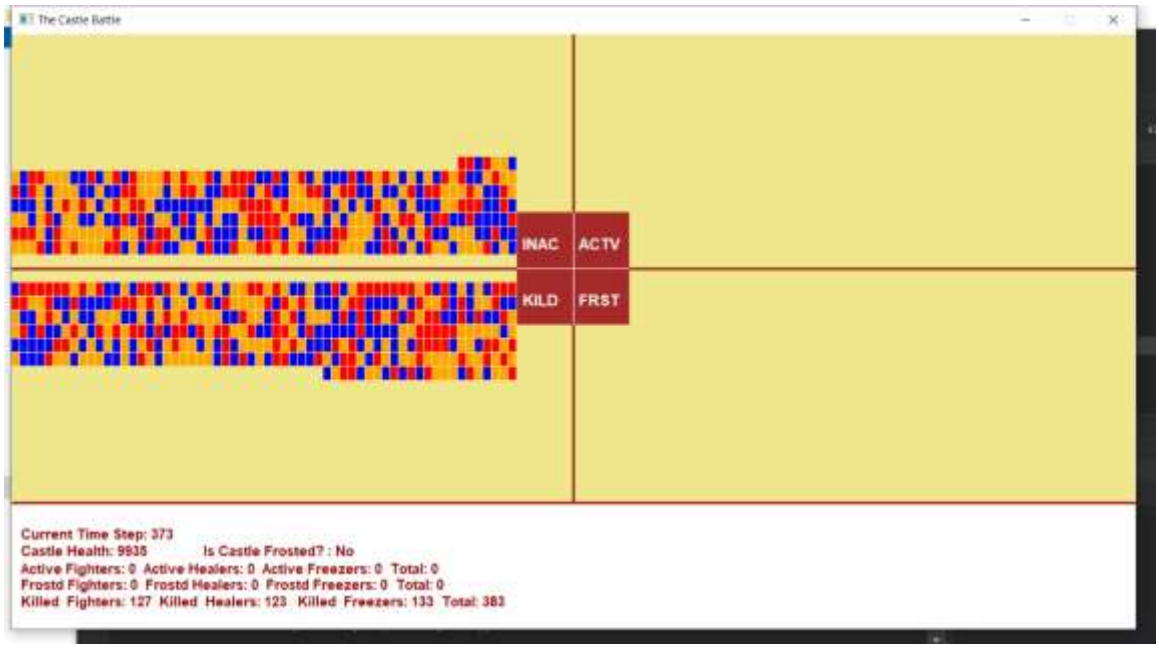
Screenshots:



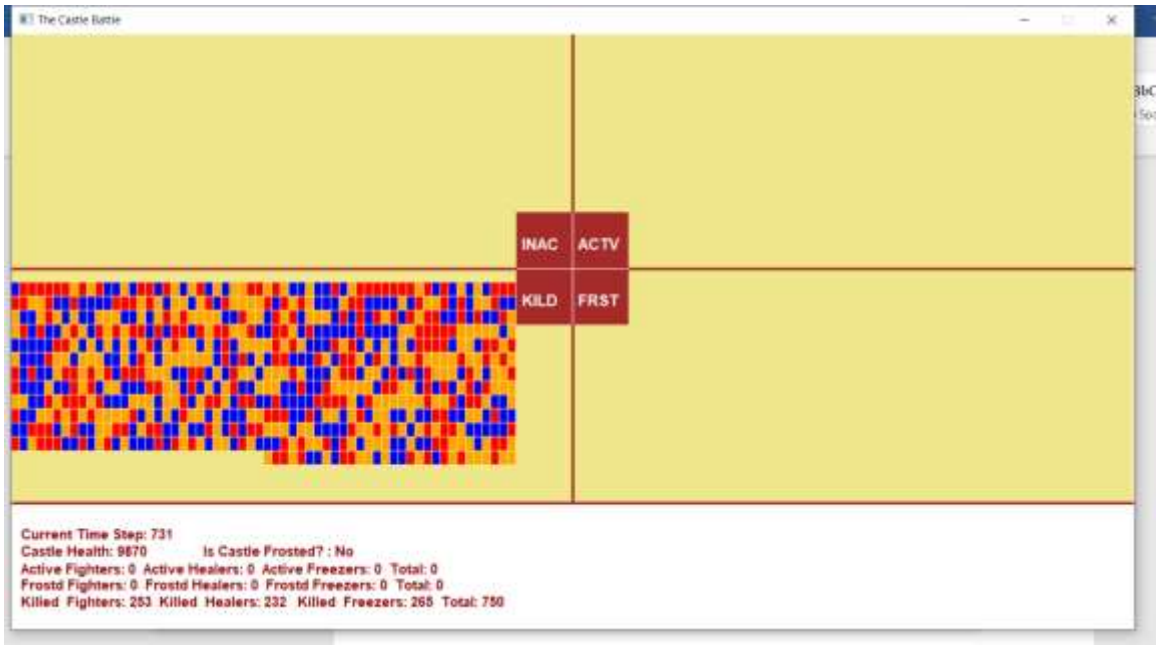
This is a test case where we tested the random input file generator as well as the game mechanics.

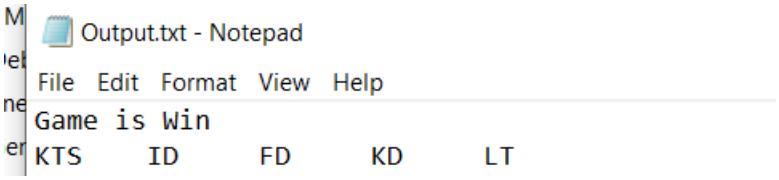


We manually modified the castle's health in the input file from 83 to 10000 to make the accuracy of this test higher that nothing will go wrong during the runtime.



This is a screenshot of the mid battle where the active list empty as all enemies are killed.





This is a screenshot of the end game and the output file saying that the game is a win.