German University in Cairo
Media Engineering and Technology
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Computer Programming Lab, Spring term 2014-2015
GUI
Deadline: Fri 24.4.2015 @23:59

In this milestone, you are required to implement the GUI to be able to play the game.

The GUI should cover the following requirements:

- In the start of the game:

  - Players are provided with an interface to enter their names.

- During the game:

  - The structure of the board should be seen. For each player, the hand, monster area, spell area, deck and graveyard slots must be visible.
  - The cards in the hand, monster area and spell area in the engine should be correctly reflected in the GUI throughout the game.
  - The GUI should show who's turn it is.
  - The GUI should show the current phase.
  - The GUI should have the player's name beside his/her field.
  - The GUI should show the life points of each player.
  - The GUI should show whether a monster is in attack or defense mode.
  - The GUI should show the number of cards in the deck.
  - On every card, the name of the card should be shown.
  - The Player should be able to view all the information of any monster card on his/her field. Monster card information includes: name, attack power, defense power and level.
  - Any change done in the cards in the engine should be reflected automatically in the GUI. For example, once a monster is summoned, automatically the GUI is updated such that the monster is not in the hand but in the monster area.
  - Whenever cards are added to the hand, it needs to be reflected automatically in the GUI.
  - Whenever the life points of a player changes, it should be reflected on the GUI.
  - All commands that a player can do should be done through the GUI.
    * End turn
    * End phase
    * Summon monster. If the monster needs to have sacrifices, the GUI should ask the player to choose the correct number of sacrifices, then the player should be able to choose the monsters to be sacrificed.
    * Set monster. If the monster needs to have sacrifices, it should be dealt with as previously mentioned.
    * Set spell
    * Activate spell
    * Switch monster

* Declare attack. If the opponent has monsters in his/her monster area, then the player must choose which monster he/she wishes to attack.
* Declare attack. If the opponent has no monsters in his/her monster area, then once the player chooses the attacking monster, the opponent's life points should be affected accordingly.
- The cards in the deck should be hidden for both players.
- Only the last card placed in the graveyard should be visible.
- The cards in the hand of a player should be hidden when it is not his/her turn.
- The game should run smoothly and any incorrect actions (e.g. wrong clicks) should not affect the continuation of the game.
- The game should be user-friendly. Players should be able to do any possible action like summoning a monster in an easy and clear way.
- Whenever a player tries to do a wrong action (e.g. summon a second monster in a turn), he/she should get an alert with a corresponding message.

- In the end of the game:
  - Players are provided with an interface where the winner is identified and a button that allows them to play again.