

**response to the questions for this round:**

-1, `Dictionary` is in `Game` in your domain model, but it is in `Board` in your object model. There should be some consistency between the domain and object model.

Answer: Yes, I have made the dictionary belonged to board since it's the board's responsibility to check the action and dictionary is a very important tool for checking the correctness.

-1, `Game.haveAction` takes no argument in your object model, but it takes `Action` as an argument in your interaction\_move diagram.

Answer: Yes, that's where I have revised in my hw4b, I have revised the method name to Game.makeAction(Action action), the method will be called after the action is validated.

-3, \* Your `Board` is passing a `Game` as a parameter in `makeSpecialEffect`, but it is suggested by the object diagram that there isn't a reference.

Answer: Yes, I transfer the game object as the parameter of method makeSpecialEffect(), since the effect made by the special tile will be laid on the structure of the game.

-1, In your interaction\_move diagram, tiles should be placed before special effects are applied. What if some tiles are removed by `Boom`?

Answer: The rule I want is to firstly place the tiles on the board, and if there is an boom specialTile, then the score will be deleted and the tiles effected will be removed from the board.

**And the answer to the former questions:**

1.How can a player interact with the game?

Answer: The player will be interacted with the game by making choices on GUI.

2. What are possible actions a player can perform?

Answer: I think there are two actions that the player can make. one is the exchange action and the other one is the place word action. Of course, if the place action is invalid, the player will have to skip for this round.

3. How would someone start a game with multiple players?

Answer: The Game class has a addPlayer method, this will add a player to its player list and at the same time add the the player to the controller system for managing orders.

4. How is a player's action of placing multiple tiles represented?

Answer: Firstly, the GUI will let the player define the start location of placing tiles, then it's the direction of placing tiles, in the end, player can place the tiles in the sequence defined by the direction, in this process, if the player is likely to remove the tiles he has put, he has to removed them all and define the new start location and direction of the word, for my design, I think the more GUI restrict the player, the less bugs will the game has. So necessary restriction for player is needed.

5. How are points calculated for placing a word at a specific location on the board?

Answer: There are three parts of score needed to be calculated when placing a word. The first part is the original word that the word player directly placed, the second part is the adjacent words the tiles near the exist tiles. And the last part is the score needed to be deleted when a relevant special tile has been activated, like boom special tile.

6. How are double letter score / double word score etc. squares evaluated?

Answer: There is a private parameter timer set for the Word class, when encountering a double/triple word score, the timer of the word will be multiplied by two or three. So the method of calculating the score of the word is: Firstly adding the score once of all the tiles in this word, if encountering a double/triple letter, just add twice or three times of the value of the tile to the score, and after traversing, multiply the score by timer, the initial timer is one.

7. How can words be attached to existing words?

Answer: That's the adjacent words I have talked about, for the original word, I traverse in the direction sequence, if the location is not occupied, then we can traverse in the other direction and combine the adjacent words from the existing word.

8. How might special tiles affect the calculation of the score?

Answer: For each special tile class, it will have a makeEffect method with a Game object as a parameter.

9. How can a player acquire special tiles?

Answer: In the GUI, there will be a special tile store, if the player has enough score, he can buy and set special tile from the special tile store.

10. When and how are special tiles placed on the board?

Answer: When the player has placed the word and the word has been validated, he can buy the special tile from the special tile and set the special tile to the empty location on the board.

11. How are special tiles triggered?

Answer: When the locations of the action have overlapped with the locations of the special tiles.

12. What happens when special tiles are triggered?

Answer: The special tile will have an effect on the game.

13. How can special tiles (current or future-planned) affect the game?

Answer: Different special tiles have different effects, like the reverseOrder special tile will change the controlling sequence of the controller and the boom special tile will remove the tiles on the board and delete the scores from the player.

14. How are turns managed?

Answer: The true is controlled by the controller of the game, it will return any information about the order for the game.

15. Who is responsible for knowing who the current player is?

Answer: The Controller class belongs to the Game class, it will have method like currentPlayer() will tell the Game what the current player is.

