FIT3077 sprint two deliverables

1. Class diagram

GamePanel
- playerList
- backgroundImage
+ run()

Player
- tokenAssigned

Board
+ movesTokenTo()

Cave
- volcanoCardAssigned

DragonCard
- animalType
- numOfSteps

Token

VolcanoCard
- volcanoCardNumber

MainMenuPanel
- width
- height
- backgroundImage
+ paintComponent()
+ run()

Main
- window
- mainMenuPanel

<<enum>> AnimalType
- spider
- babyDragon
- salamander
- bat
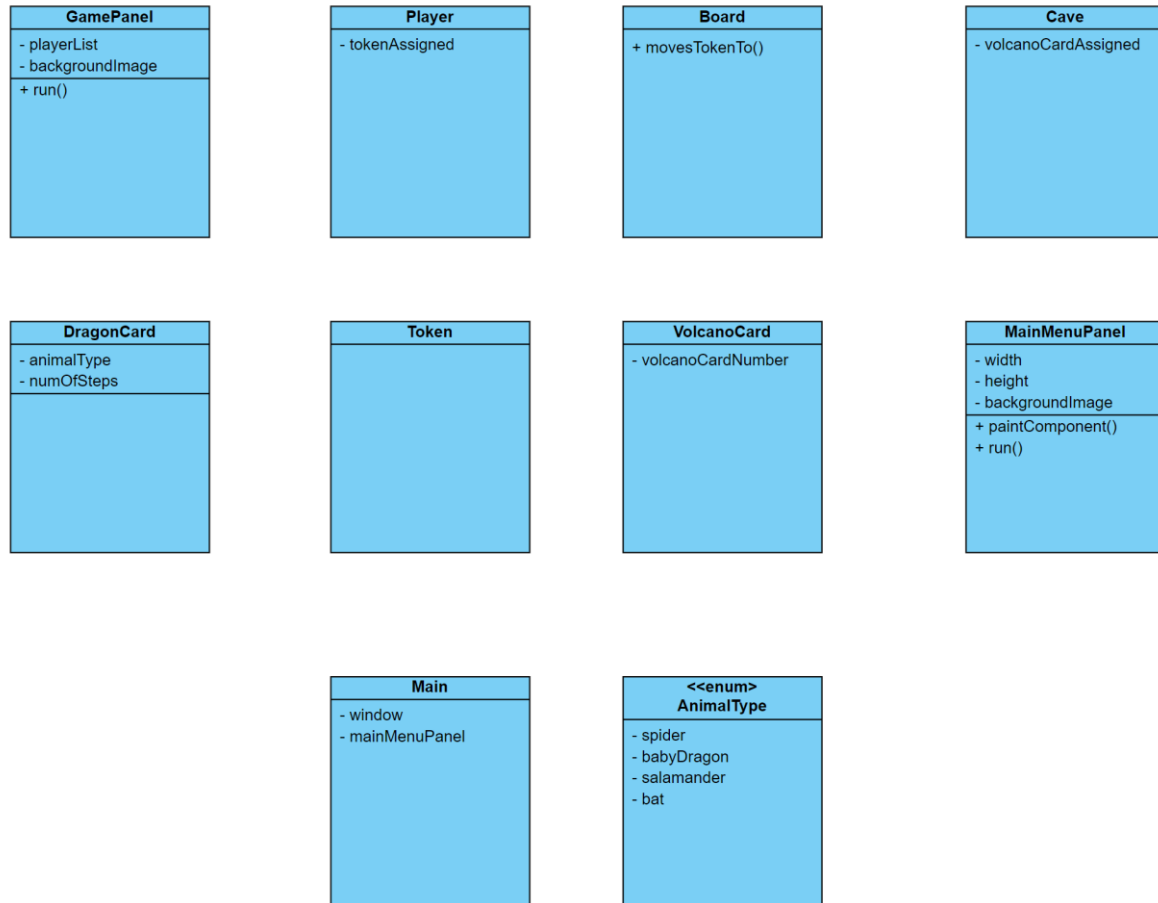
2. Key game functionalities

--- Set up initial game board: Setting up the game board will be initiated the moment the game panel has been initiated. In the GamePanel() constructor method, a list of players and game board will be created. Game board will be created by initiating the Board class, where in the Board class, the Board() constructor method will initiate the other classes required. For example, Cave(), DragonCard(), VolcanoCard() and Token(). These classes are initiated and then placed in their corresponding location to mimic the game in real life.

--- Flipping of dragon cards: The first player is selected from the list of players in playerList and uses the playerRoundStart() function to start their round. When player click on the dragon card, the board class will have a mouse listener where it detects the player clicks on which location (dragon card). After detecting the location, the board class determines which dragon card the player selects and proceed to the dragon card class to initiate the function flipDragonCards().

--- Movement of dragon tokens based on their current position as well as the last flipped dragon card: After player clicks on the dragon card, if the animal type of the dragon card is same as the

token of animal type of the player, the card remains flipped and DragonCard class calculate how many steps (let's call it n) to take and return it to the Board class. Then, the Board class will move the token to the volcanoCardNumber + n.

--- change of turn to the next player: The board class use the mouse listener to detect which dragon card the player chooses and repeat the process until the animal type of dragon card is not the same as the animal type of player's token. Then, the system selects the next player in playerList and start their round using the playerRoundStart() function.

--- winning the game: when player selects a dragon card and the number of steps – 1 reaches startingDC stored by Token, it will move to the Cave next to the Dragon Card and determine the player has won the game.

3. Design Rationales

4. Design Patterns