## Volcano ring is cyclic. It is an array of **VolcanoCards. Each card on ring has** numbered ID.

## Should we have a **StateManager class?**

Since total cards to form volcano ring differs, we try to then pass this info to calculate it such that each segment gets an equal amount. By ChitCard for it to be ChitCard handle too much modifying the logic in the method once, it works for all flipped segments VolcanoSegment <<interface>> Animal Player volcanoRing: VolcanoCard[] - segmentLength: int - covered:boolean - getPicResource(number:int) -calculateSegmentLength(numCards): int getChoice(playerChoice) ChitCard DragonToken VolcanoCard Here we need to insert a check: if - animal: enum card is already uncovered, don't - totalMovementCount:int - covered:boolean - ID flip it again. We only cover the - currentPosition: int (ID of volcano - animal:enum card when the turn ends card I'm on) occupied:boolean + flipCard(playerTokenAnimal): - movedOutOfCave: boolean boolean - covered:boolean The flipCard method + getOccupiedStatus():boolean returns a boolean - flipOccupiedStatus():boolean indicating if a successful move is made(the volcano updateTotalMovementCount(steps) card animal the player's token is on matches the

Alternative is to have interface for animal and dragonpirate, then we will have if-else on the enum to determine which resource to fetch

If we have single class, the class can directly point to the resource in the constructor, so this is the best way to do it, however doing it once for every animal is not feasible, so we do one class for animal, once for dragon pirate

However, having a class that only does this is waste of space, so method via interface is best

chitcard animal

<<interface>> DragonPirate getPicResource(number:int)

ChitCardFactory

the getChoice checks if a

ChitCard is to be flipped

from the choice. if yes,

this checking is handled

by player, we should not

pass the information to

ChitCard since it makes

- animalCount:int - animalType: enum

Why volcano card should be own class and not method: maybe in future want to tweak functionality for the occupation status: allow certain number of cards to be on it, not just one. This responsibility makes sense to be for volcano card, not the player class

player has dragonToken: rationale is that when we need to check what volcano card the player is currently on, and this is related to dragon token, not player. Alternative: combine everything into one class, i.e. no dragonToken entity: could be GOD class

player choice can be end turn button or chit card. if it is a chit card, we ask the chitcard to call its flipCard method. info required: what animal player's token is on, and this can be retrieved via a getter from player's dragon token

the flip card method returns a boolean deciding if forward steps or backward steps can be made. Next check is to see if a player is already on the volcano card destination, and again this requires the dragonToken to retrieve the ID of the volcano card it is currently on, then add the # moves to get index which corresponds to the VolcanoCard on VolcanoRing

if not occupied, then:

- ask dragonToken to ask volcanoCard to execute flipOccupiedStatus()
- update dragonToken's total movement count
- update dragonToken's current position
- update movedOutOfCave to be True

call CheckWinCondition method to see if we should end the game