TEAM 10: PROJECT ARCHITECTURE

COURSE: SOEN 6441 (WINTER 21)

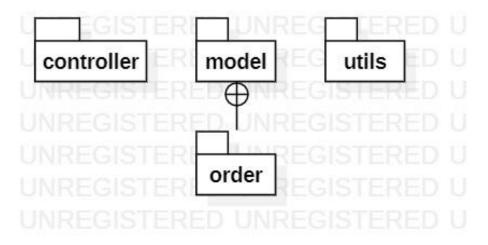
INSTRUCTOR- JOEY PAQUET

TEAM MEMBERS:

- 1. Dhananjay Narayan
- 2. Madhuvanthi Hemanthan
- 3. Prathika Suvarna
- 4. Neona Pinto
- 5. Surya Manian

PACKAGE STRUCTURE

The package structure in our project is as in the following diagram.



MODEL OVERVIEW

model

Continent

- -d Id: String
- -d Name: String
- -d AwardArmies: int
- -d Credited: boolean
- +getId(): String
- +setId(p Id: String): void
- +getName(): String
- +setName(p name: String): void
- +getAwardArmies(): int
- +setAwardArmies(p AwardArmies: int): void
- +isCredited(): boolean
- +setCredited(p Credited: boolean): void
- +getCountries(): Country[*]

Country

- -d Id: String
- -d Name: String
- -d Continent: String
- -d Armies: int
- -d NeighborsName: String[*] {collection="Set"}
- +getId(): String
- +setId(p_Id: String): void
- +getName(): String
- +setName(p_Name: String): void
- +getContinent(): String
- +setContinent(p_Continent: String): void
- +getPlayer(): Player
- +setPlayer(p_Player: Player): void
- +getArmies(): int
- +deployArmies(p_armies: int): void
- +setArmies(p_Armies: int): void
- +getNeighbors(): Country[*]
- +setNeighbors(p_Neighbor: Country): void
- +setNeighborsName(p_NeighborCountryName: String): void
- +getNeighborsName(): String[*]
- +removeNeighborsName(p_NeighborCountryName: String): void
- +createANeighborList(p Neighbors: Country[*]): String

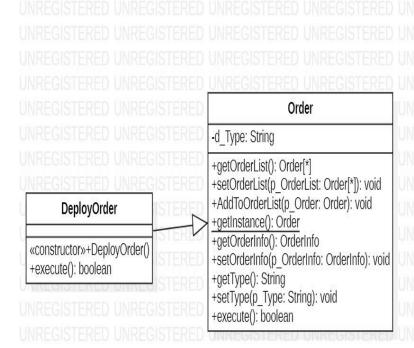
«enumeration» GamePhase

MapEditor LoadGame Reinforcement IssueOrder ExecuteOrder ExitGame

Plaver

- -d Id: int
- -d Name: String
- -d OrderCount: int
- -d_Orders: Order[*] {collection="Deque"}
- -d ReinforcementArmies: int
- +d OrderList: Order[*] {collection="List"}
- +getId(): int
- +setId(p Id: int): void
- +getName(): String
- +setName(p Name: String): void
- +getOrderCount(): int
- +setOrderCount(p OrderCount: int): void
- +getCapturedCountries(): Country[*]
- +setCapturedCountries(p CapturedCountries: Country[*]): void
- +getOrders(): Order[*]
- +setOrders(p Orders: Order[*]): void
- +addOrder(p_Order: Order): void
- +nextOrder(): Order
- +getReinforcementArmies(): int
- +setReinforcementArmies(d AssignedArmies: int): void
- +issueOrder(p Commands: String): void
- +checklfCountryExists(p Country: String, p Player: Player): boolean
- +deployReinforcementArmiesFromPlayer(p_ArmyCount: int): boolean
- +createACaptureList(p_Capture: Country[*]): String

ORDER OVERVIEW



OrderInfo

- -d Destination: String
- -d NumberOfArmy: int
- +getPlayer(): Player
- +setPlayer(d Player: Player): void
- +getDeparture(): Country
- +setDeparture(d_Departure: Country): void
- +getDestination(): String
- +setDestination(d Destination: String): void
- +getNumberOfArmy(): int
- +setNumberOfArmy(d NumberOfArmy: int): void

OrderCreater

+createOrder(p_commands: String[*], player: Player): Order

-generateDeployOrderInfo(p Command: String[*], p Player: Player): OrderInfo

CONTROLLER OVERVIEW

Controller

GamePlay

- ~d NextGamePhase: GamePhase
- ~d GamePhase: GamePhase
- ~d GameMap: GameMap
- +setUp(): void
- +tearDown(): void
- +start(): void
- +setReinforcementTroops(): void

ExecuteOrder

- ~d NextGamePhase: GamePhase
- ~d GamePhase: GamePhase
- ~d GameMap: GameMap

«constructor»+ExecuteOrder()

- +start(p_GamePhase: GamePhase): GamePhase
- -ExecuteOrders(): boolean

IssueOrder

- ~d NextGamePhase: GamePhase
- ~d GamePhase: GamePhase
- ~d GameMap: GameMap
- -d_scanner: Scanner {readOnly}

«constructor»+IssueOrder()

- +start(p_GamePhase: GamePhase): GamePhase
- -readFromPlayer(): String

UTILS OVERVIEW

MapReader utils +readMap(p GameMap: GameMap, p FileName: String): void +readContinentsFromFile(p GameMap: GameMap, p ContinentArray: String[*]): void +readCountriesFromFile(p GameMap: GameMap, p CountryArray: String[*]): Map MapReader +addNeighborsFromFile(p GameMap; GameMap, p NeighborList; Map); void **MapValidation** InvalidExecutionException SaveMap ~d Message: String = "The command will not be available in current Game stage" ValidationException «constructor»+InvalidExecutionException() «constructor»+InvalidExecutionException(message: String) InvalidExecutionException +getMessage(): String ValidationException

~d Message: String = "Invalid command. Type help to know further"

«constructor»+ValidationException()

-checklfMaplsConnected(p_GameMap: GameMap): boolean -checkMapConnectivity(p_Graph: ConnectedGraph): boolean

SaveMap

+createANeighborList(p Neighbors: Country[*]): String

-gameMap: GameMap

TYPE HIERARCHY

