Environmental Model

ClientSystem

Input:

- Login, MainLobby, GameLobby, Saving, Chat
    - requestConnection()
    - requestCreateRoom(roomName: string)
    - saveGame()
    - requestLoadSavedGame()
    - requestJoinRoom(roomName: string)
    - requestSendChatMessage(message: string)
    - requestSetReady(isReady: boolean)
    - requestSetHeroSelection(selectedHero : Hero)
    - requestDisplayHeroes()
    - requestSetDifficulty(difficulty: Difficulty)
- Starting and quitting the game, Set up
    - requestStartGame()
    - requestQuitGame()
- Basic Moves
    - move()
    - selectDestination(r:Region)
    - ConfirmMove(hr: int)
    - cancelMove()
- Other Basic Moves
    - startAFight()
    - endTheDay()
    - passTurn()
    - endTurn()
- Common with system
    - DecisionMade(y: boolean)
- Time-triggered:
    - passTurn():
- Trade related functions:
    - requestTrade(offering: Player, receiving: Player, triggeredByFalconIcon :Boolean)
    - requestInitiateTrade(offering: Player, receiving:Player, boolean:falcon)
    - acceptDeclineTradeRequest(offeringPlayer:Player, t:Trade)
    - updateTradeWindow(t: Trade, obj: Item)
    - triggeredByFalconIcon :Boolean)
    - cancelTradeRequest(t: Trade)
- Distribute gold and wineskin:

  - selectWGWind(player: Player, wineskin: Integer, gold:Integer)
  - acceptOrDeclineConfirmation(player:Player, choice:Boolean)
- Store purchase specific functions:
  - openStoreWind()
  - isValidPurchaseRequest(player:Player, item: List<Item>)
- Fight related functions:
  - startFight (m: Monster,h:Hero)
  - ConfirmFight (confirm: boolean)
  - JoinFight (f: Fight)
  - rollDice () (normal, black)
  - useMagic()
  - useBrew()
  - useHelmet()
  - useHerbWill()
  - useHerbStrength()
  - useShield()
  - extraWillpowerHourStart m: Monster,h:Hero)
  - ContinueOrQuit (continue: Boolean)
  - Distribute(gold: int; willpower: int) (contains a GUI to increase, decrease and confirm)
  - endTheAttack()
- Free Actions
  - DrinkTheWell(well: Well)
  - UseTelescope(chosenRegions: List<Region>)
  - useMedicinalHerbToMove(chosenRegion: Region)
  - useMedicinalHerbToIncreaseWillPower()
  - pickUpAnItemFromTheGround(item: Item, groundMenu: GroundMenu)
  - dropAnItemToTheGround(item: Item, groundMenu: GroundMenu)
  - checkMerchant(merchant: Merchant)
  - checkPlayerInfo(player: Player)
  - checkMonsterInfo(monster: Monster)
  - pickUpAFarmer(farmer: Farmer)
  - dropDownAFarmer(farmer: Farmer)
  - UpdateGameState(gameStatus: Game)

Output:

ErrorMessage(msg:String)

- Login, MainLobby, GameLobby, Saving, Chat
  - displayAvailableRooms(currentRooms: List<Room>)
  - displayCreatedRoom()
  - displayReceivedChatMessage(message: string)
  - displayStateOfPlayer(player: Player)

    - displayHeroes(heroes: List<Hero>)
    - displayDifficulty()
- Starting the game, Set up
    - displayGameBoard()
- updateInfo
    - displayPath(hr: int)
    - fogTriggered(String: info)
    - goesToSunrise()
- Messages
    - askForDecision(info: String)
    - notEnoughHour()
    - notEnoughWP()
    - moveSuccessed(r: Region)
    - yourTurn()
- Falcon
    - updateBag(player:Player, listItem: Item)
- Trade related specific functions:
    - displayTradeWindow()
    - updateTradeWindow(t:Trade, item:Item)
    - updateBag(t:Trade, item: List<Item>)
    - displayTradeWind(t:Trade)
    - updateTradeWndow(t:Trade, obj:Item)
    - closeTradeWind()
    - updatedBag(player: Player, item: List<Item>)
    -
- Distribute gold and wineskin specific functions:
    - displayWGWindow();
    - updatedWGWind(player: Player, wineskin: Integer, gold:Integer)

- Fight related functions:
    - popConfirmFight ()
    - popConfirmJoin()
    - popExtraWillpowerHour ()
    - popFailFighting ()
    - popContinue()
    - advanceHrs()
    - displayFightScene(h: Hero, f:Fight)
    - attackHero (amount: int)
    - Result (winOrLose: Boolean)
    - updateFightState ()
    - updateGameState ()
    - exitFight () (failure due to not enough hours…)

    - dispayDiceResult()
    - displayDamage()
- Free action
    - PromptInvalidAction(message: InvalidAction)
    - UseTelescopeSuccessfully()
    - drinkWellSuccessfully()
    - MoveSuccessfuly()
    - IncreaseWillPowerSuccessfuly()
    - pickUpSuccessfully()
    - DropToGroundSuccessfully()
    - PromptMonstertWindow()
    - PromptplayerInfoWindow()
    - PromptMerchantWindow()
    - pickUpFarmerSuccessfully()
    - dropDownFarmerSuccessfully()
- General GameState
    - promptWin()
    - promptLose()

Server System

Input:

- Login, MainLobby, GameLobby, Saving, Chat
    - connectToServer()
    - createRoom(roomName: string)
    - createRoom_saved()
    - joinRoom(roomName: string)
    - sendChatMessage(message: string)
    - setReady(isReady: boolean)
    - setHeroSelection(selectedHero: Hero)
    - setDifficulty(difficulty: Difficulty)
- Starting and quitting the game, Set up
    - startGame()
    - quitGame()
- Event and Fog
    - triggerFog(r: Region):fog token should be in server concept model? Cause needs to update every player's map anyways
    - triggerEvent(eventName: string)
- Trade related functions:
    - updateTradeWindow(t:Trade,item: List<Item>)
    - requestIniateTrade(player1:Player, player2: Player, triggeredByFalconIcon :Boolean)
    - requestConfirm(t: Trade, items: List<Item>,triggeredByFalconIcon :Boolean)

- cancelTrade(Trade: t)
    - acceptOrDeclineRequest(player:Player, choice:Boolean)
- Distribute gold and wineskin:
    - updateWGWind(player: Player, wineskin:Integer, gold:Integer)
    - acceptOrDeclineRequest(player: Player,choice: Boolean)
    - updatePlayerInfoPrompt(name:Player)
- Fight related functions:
    - AdvanceHours (int hrs) *(someone else's work)
    - AddHeroInFight(h:Hero)
    - UpdateMap(m:Map)*(someone else's work)
    - attackMonster (amount: int)
    - RequestHeroInfo(h:Hero)
- Free Actions:
    - SendGameState(gameStatus: Game)
- Turn manager
    - nextPlayer()
- Gernal Game State
- checkGameResult()

Output：

- Login, MainLobby, GameLobby, Saving, Chat
    - availableRooms()
    - createdRoom()
    - createdRoom_saved()
    - joinedRoom()
    - receivedChatMessage()
    - receivedPlayerState(playerInRoom: Player)
    - receivedDifficulty()
- Starting the game, Set up
    - startedGame()
- Falcon
    - updateBag(Player: name, item:List<Item>)
    - updatePlaterInfo(name: Player)
- Error Message
    - ErrorMessage(String: msg)
- Trade related specific functions:
    - updateTradeW(t:Trade, item: Item)
    - initiateTrade(t:Trade)
    - closeTrade(t:Trade)
- Distribute wineskin and gold specific functions:
    - displayWGWind();

        - updatedWGWind(player:Player, wineskin:Integer,gold:Integer)
        - displayedWGWind()

updatePlayerInfo(name:Player)

- Fight related functions:
    - Result (r:FightResult)
    - updateHeroState (h:Hero)
    - updateMonsterState (m:Monster)
    - updateFightState (fs:FightState)
    - returnheroInfo(h:Hero)
- General GameState
    - returnWinOrLose(r:GameResult)
- Communication w/client
    - informTurn()