

Model

Game
<ul style="list-style-type: none">- <u>game</u> : Game- civilizations : Civilization[]- originalCapitals : City[]- turn : int- map : Hex[][]
<ul style="list-style-type: none">- Game(users : user[]) : << constructor>>+ startNewGame(user : user[]) : void+ getGame() : Game+ getPlayingCivilization() : Civilization

Civilization
<ul style="list-style-type: none">- user: User- isYourTurn : boolean- visibilityMap : HexVisibility[][]- technologies : HashMap<TechnologyName , Technology>- technologyInProgress : Technology- openedUnits : ArrayList<Unit>- openedResources : ArrayList<Resource>- capital : City- units : ArrayList<Unit>- cities : ArrayList<City>- gold : int- sciencePerTurn : int- scienceStorage : int- happiness : int
<ul style="list-style-type: none">+ Civilization (user : User) : <<constructor>>+ getmap (int x , int y) : String+ adjustVisibility(x : int , y : int) : void

User
<ul style="list-style-type: none">- <u>listOfUsers</u> : ArrayList<User>- username: String- password : String- nickname : String- score : int
<ul style="list-style-type: none">+ User(username : String, password : String, nickname : String): <<constructor>>+ addUser (username : String, password : String, nickname : String) : void

Technology
<ul style="list-style-type: none">- <u>technologyTree</u> : ArrayList<Technology>- futureTechnologies : HashMap<TechnologyName , Technology>- prerequisiteTechnologies : HashMap<TechnologyName , Technology>- openingUnits : ArrayList<Unit>- openingResources : ArrayList<Resource>- cost : int- name : TechnologyName
<ul style="list-style-type: none">+ Technology(name : TechnologyName, cost : int): <<constructor>>

City
<ul style="list-style-type: none">- name : String- owner : Civilization- neededProduction : int- unitInProgress: Unit- numberOfCitizen : int- coordinatesOfCenter : HashMap<char, int>- foodStorage : int- foodPerTurn : int- productionPerTurn : int- goldPerTurn : int- sciencePerTurn : int- cityHexes : ArrayList<Hex>- cityUnit : RangedMilitary
<ul style="list-style-type: none">+ City(name : String, x : int , y : int): <<constructor>>

Model

Hex
<div>- owner : Civilization</div> <div>- terrain : Terrain</div> <div>- feature : Feature</div> <div>-resource: Resource</div> <div>- imrovement : Improvement</div> <div>- hasDestroyedImprovement : boolean</div> <div>-percentOfBuldingImprovement : int</div> <div>-isAnyCitizenWorking: boolean</div> <div>-movementPrice: int</div> <div>- hasRiver : boolean</div> <div>- hasRoad : boolean</div> <div>- hasRailRoad : boolean</div> <div>- coordinates : HashMap<char, int></div> <div>-militaryUnit: MilitaryUnit</div> <div>-civilUnit : CivilUnit</div>
<div>+ Hex() : <<constructor>></div> <div>+ getUnitInside() : Unit</div>

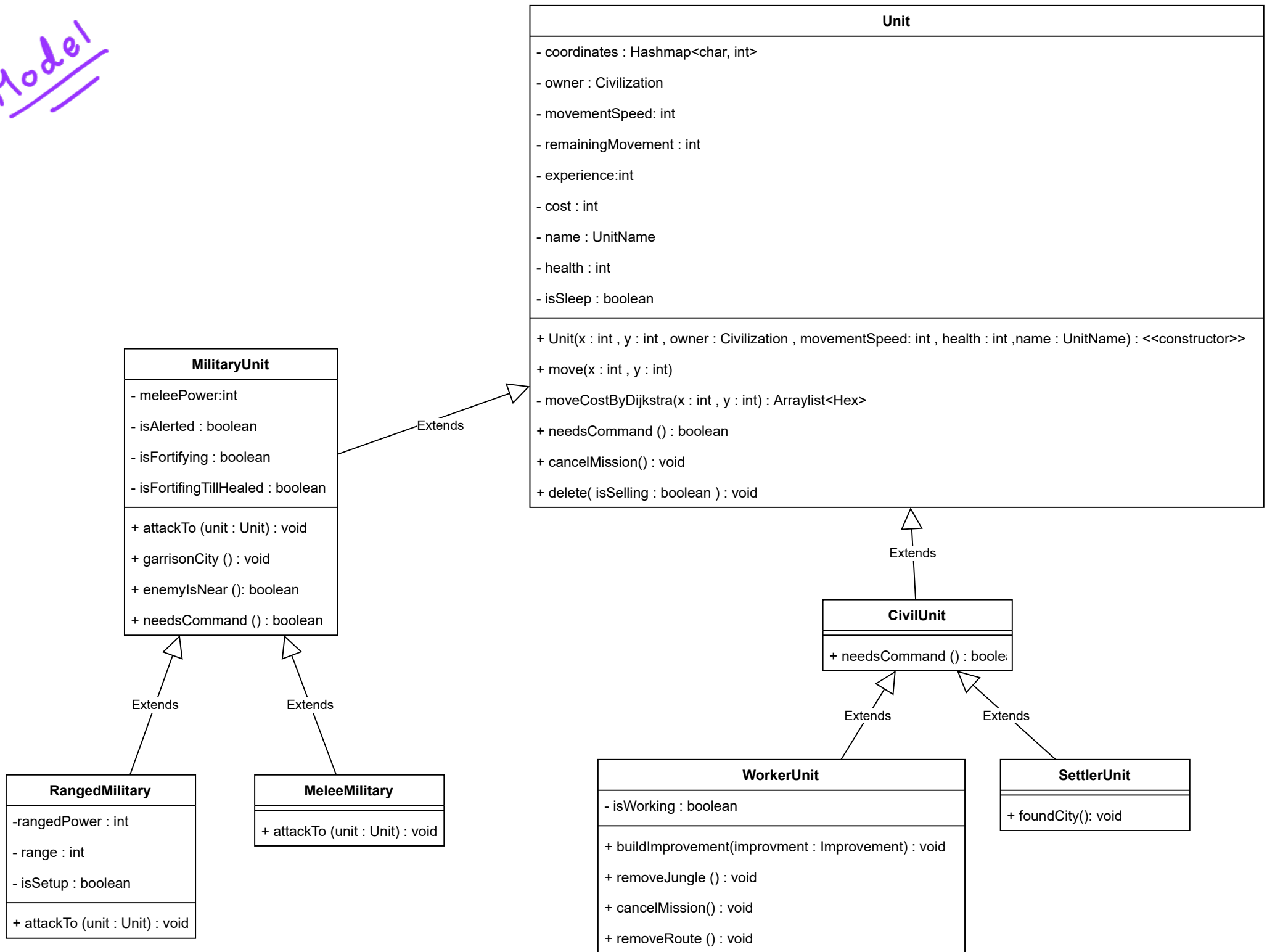
Terrain
<div><u>+ terrains : HashMap<TerrainName, Terrain></u></div> <div>- food : int</div> <div>-movementPrice: int</div> <div>-combatEffect : int</div> <div>- gold : int</div> <div>- production : int</div> <div>- name : TerrainName</div>
<div>+ Terrain(gold : int , production : int , combatEffect : int , mp : int ,food : int , name : TerrainName) : << constructor >></div>

Feature
<div><u>+ features : HashMap<FeatureName, Feature></u></div> <div>- gold : int</div> <div>- production : int</div> <div>- combatEffect : int</div> <div>-movementPrice: int</div> <div>- food : int</div> <div>- name : FeatureName</div>
<div>+ Feature(gold : int , production : int , combatEffect : int , mp : int , food : int , name : FeatureName) : << constructor >></div>

Improvement
<div><u>+ improvements : HashMap< improvementName, Improvement></u></div> <div>- food : int</div> <div>- gold : int</div> <div>- production : int</div> <div>- name : ImprovementName</div>
<div>+ Improvement(gold : int , production : int, food : int , name : ImprovementName) : << constructor >></div>

Resource
<div><u>+ resources : HashMap<ResourceName, resource></u></div> <div>- food : int</div> <div>- gold : int</div> <div>- production : int</div> <div>- name : ResourceName</div>
<div>+ Resource(gold : int , production : int, food : int , name : ResourceName) : << constructor >></div>

Model



Controller

GameMenuController

- selectedUnit : Unit
- selectedCity : City
- notificationsHistory : ArrayList<String>

+ changeTurn() : String
+ showTechnologyInfo() : String
+ showUnitsPanel() : String
+ showCitiesPanel() : String
+ showDiplomacyPanel() : String
+ showVictoryPanel() : String
+ showDemographicsPanel() : String
+ showNotificationHistory() : String
+ showMilitaryPanel() : String
+ showEconomyPanel() : String
+ showDiplomaticSituation() : String
+ showDealsPanel() : String
+ selectMilitaryUnit(x : int, y : int) : String
+ selectCivilUnit(x : int, y : int) : String
+ selectCity(name : String) : String
+ selectCity(x : int , y : int) : String
+ moveTo(x : int , y : int) : String
+ sleepUnit() : String
+ alertUnit() : String
+ fortifyUnit() : String
+ fortifyUnitUntilHeal() : String
+ garrisonUnitInCity() : String
+ setupRangedUnit() : String
+ attackTo(x : int , y : int) : String
+ foundCityHere() : String
+ wakeUpUnit() : String
+ deleteUnit() : String
+ cancelMission() : String
+ build(improvement : ImprovementName) : String
+ removeJungle() : String
+ removeRoute() : String
+ repair() : String
+ showMap(x : int , y : int) : String
+ showMap(cityName : String) : String
+ moveMap(direction : Direction , amount : int) : String

Controller

loginMenu : LoginMenu
mainMenu : MainMenu
profileMenu: ProfileMenu
gameMenu: GameMenu

+ run() : void

Extends

Extends

Extends

Extends

MainMenuController

+ startGame (users : User[]) : void
+ Logout() : String

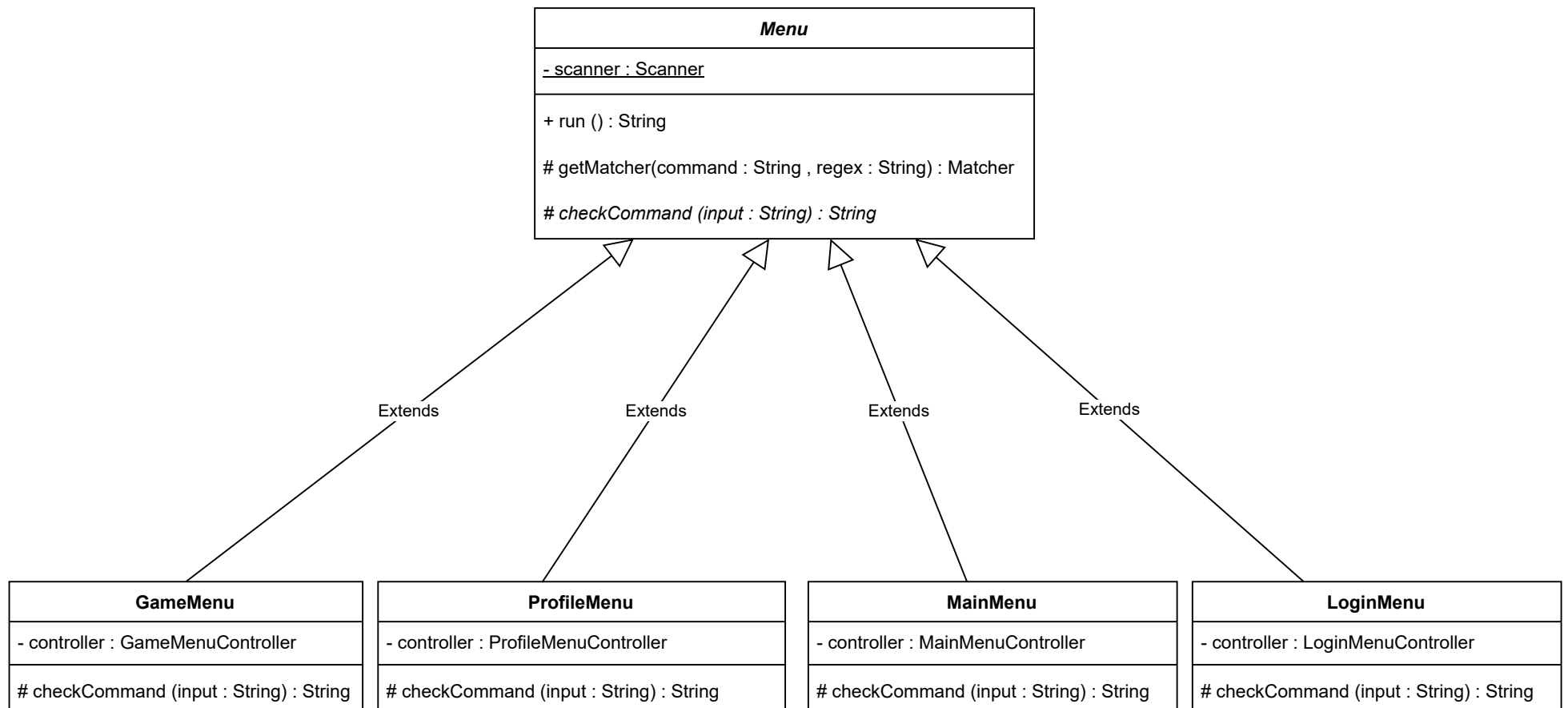
ProfileMenuController

+ changeNickname (nickname : String) : String
+ changePassword (password : String, newPasword : String) : String

LoginMenuController

+LoginUser(username : String , password : String) : String
+CreateUser(username : String, nickname : String, password : String) : String

view



enums

<<enumeration>> UnitName
ARCHER
CHARIOT_ARCHER
SCOUT
SETTLER
SPEARMAN
WARRIOR
WORKER
CATAPULT
HORSEMAN
SWORDSMAN
CROSSBOWMAN
KNIGHT
LONGSWORDSMAN
PIKEMAN
TREBUCHET
CANON
CAVALRY
LANCER
MUSKETMAN
RIFLEMAN
ANTI_TANK_GUN
ARTILLERY
INFANTRY
PANZER
TANK

<<enumeration>> ResourceName
BANANA
COW
GAZELLE
SHEEP
WHEAT
COAL
HORSE
IRON
COTTON
COLOR
FUR
GEM
GOLD
FUMIGATION
TUSK
MARBLE
SILK
SILVER
SUGAR

<<enumeration>> TechnologyName
AGRICULTURE
ANIMAL_HUSBANDRY
ARCHERY
BRONZE_WORKING
CALENDAR
MASONRY
MINING
POTTERY
WHEEL
TRAPPING
WRITING
CONSTRUCTION
HORSEBACK_RIDING
IRON_WORKING
MATHEMATICS
PHILOSOPHY
CHIVALRY
CIVIL_SERVICE
CURRENCY
EDUCATION
ENGINEERING
MACHINERY
METAL_CASTING
PHYSICS
STEEL
THEOLOGY
ACOUSTICS
ARCHAEOLOGY
BANKING
CHEMISTRY
ECONOMICS
FERTILIZER
GUNPOWDER
METALLURGY
MILITARY_SCIENCE
PRINTING_PRESS
RIFLING
SCIENTIFIC_THEORY
BIOLOGY
COMBUSTION
DYNAMITE
ELECTRICITY
RADIO
RAILROAD
REPLACEABLE
PARTS
STEAM_POWER
TELEGRAPH

<<enumeration>> TerrainName
DESERT
GRASSLAND
HILL
MOUNTAIN
OCEAN
PLAIN
SNOWLAND
TUNDRA

<<enumeration>> FeatureName
FLAT
JUNGLE
ICE
DENSE_FOREST
SWAMP
OASIS
RIVER

<<enumeration>> ImprovementName
CAMP
FARM
LUMBER_MILL
MINE
PASTURE
PLANTATION
QUARRY
TRADING_POST
FACTORY
ROAD
RAILROAD

<<enumeration>> HexVisibility
TRANSPARENT
DETERMINED
FOG_OF_WAR

<<enumeration>> Direction
RIGHT
LEFT
UP
DOWN