edu.monash.fit2099.engine

Location

Exit

MoveActorAction

Item

game

Actor

Player

game.dinosaurs

game.behaviours

1..4

<<Interface>>
Behaviour

FeedAction

Dinosaur

1

AttackBehaviour

HungryBehaviour

HornyBehaviour

WanderBehaviour

FollowBehaviour

Egg

BabyDino

Stegosaur

Brachiosaur

Allosaur

BabyStegosaur

BabyBrachiosaur

BabyAllosaur

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engine

WeaponItem

Item

Action

Ground

game.actions

BuyAction

PickFruitAction

game.items

LaserGun

PortableItem

game.grounds

VendingMachine

Fruit

Tree

Bush

Dirt

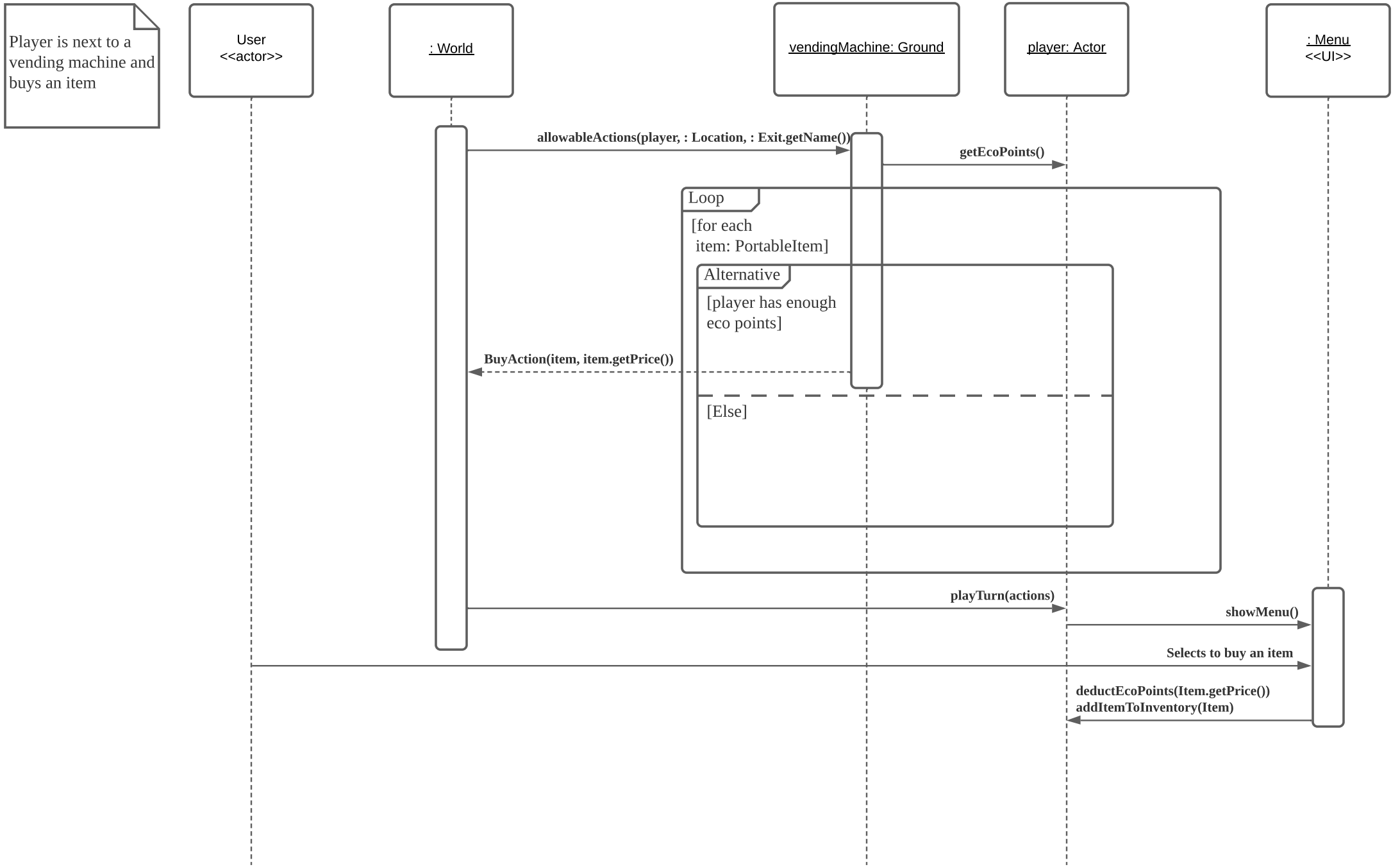
Egg

MealKit

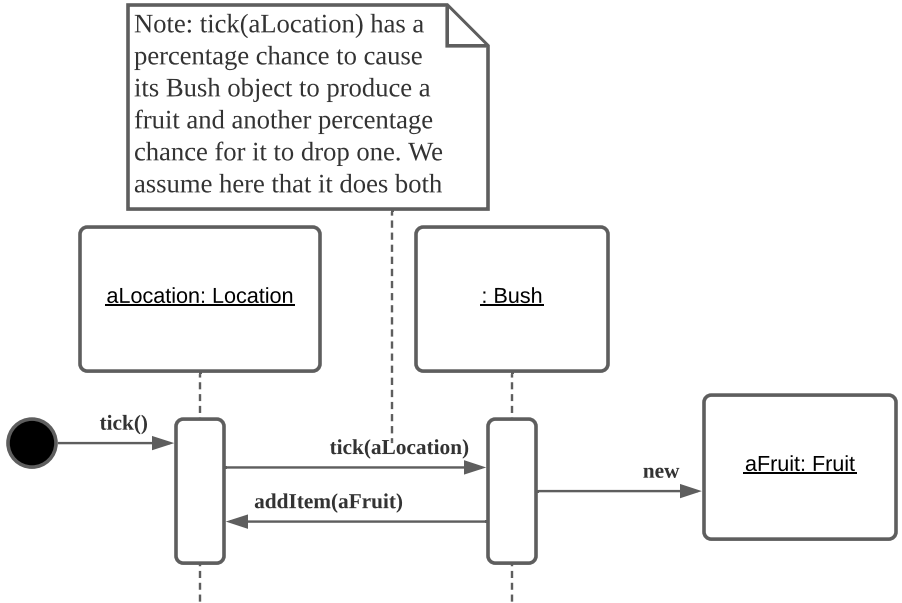
game.dinosaurs

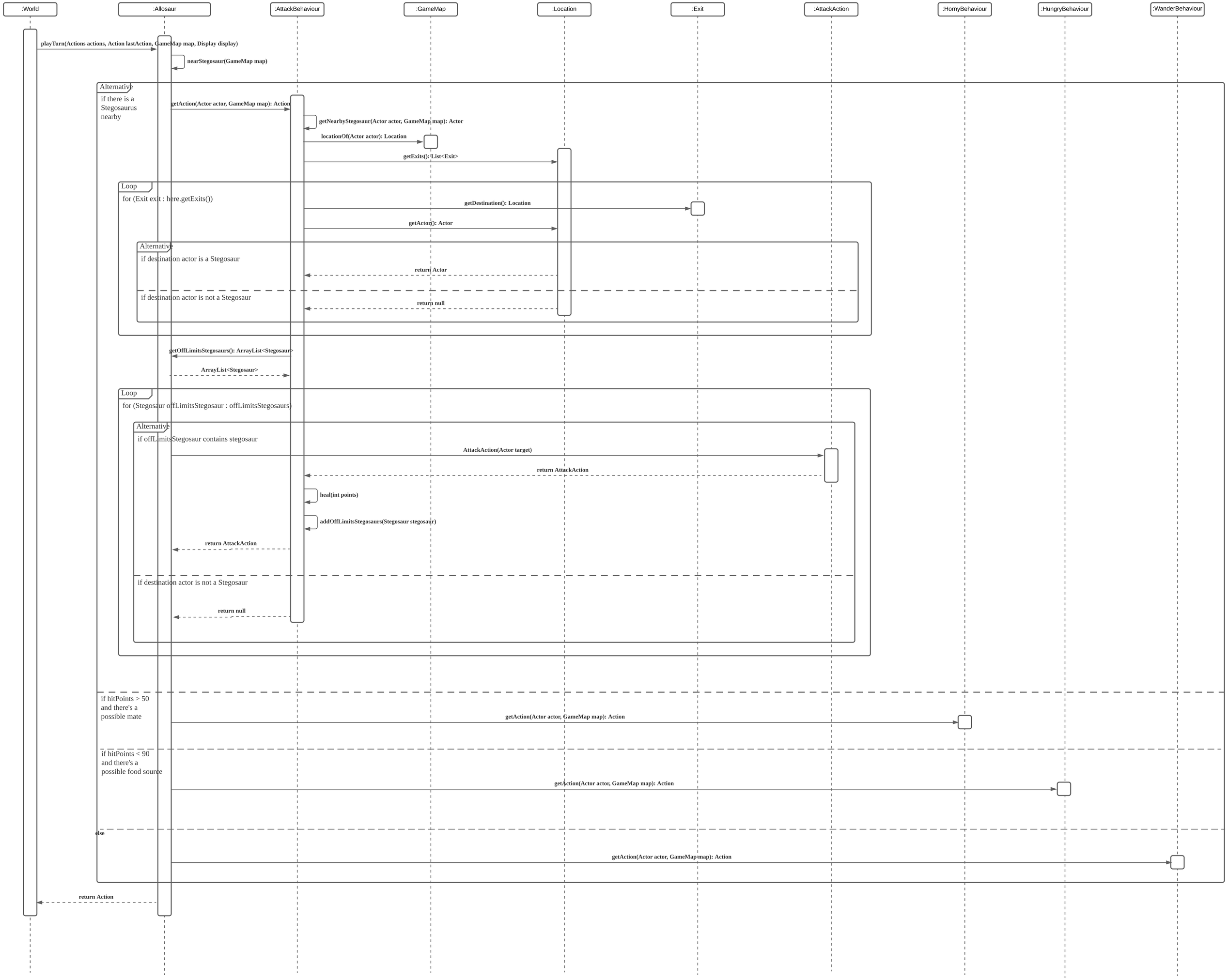
Branchiosaur

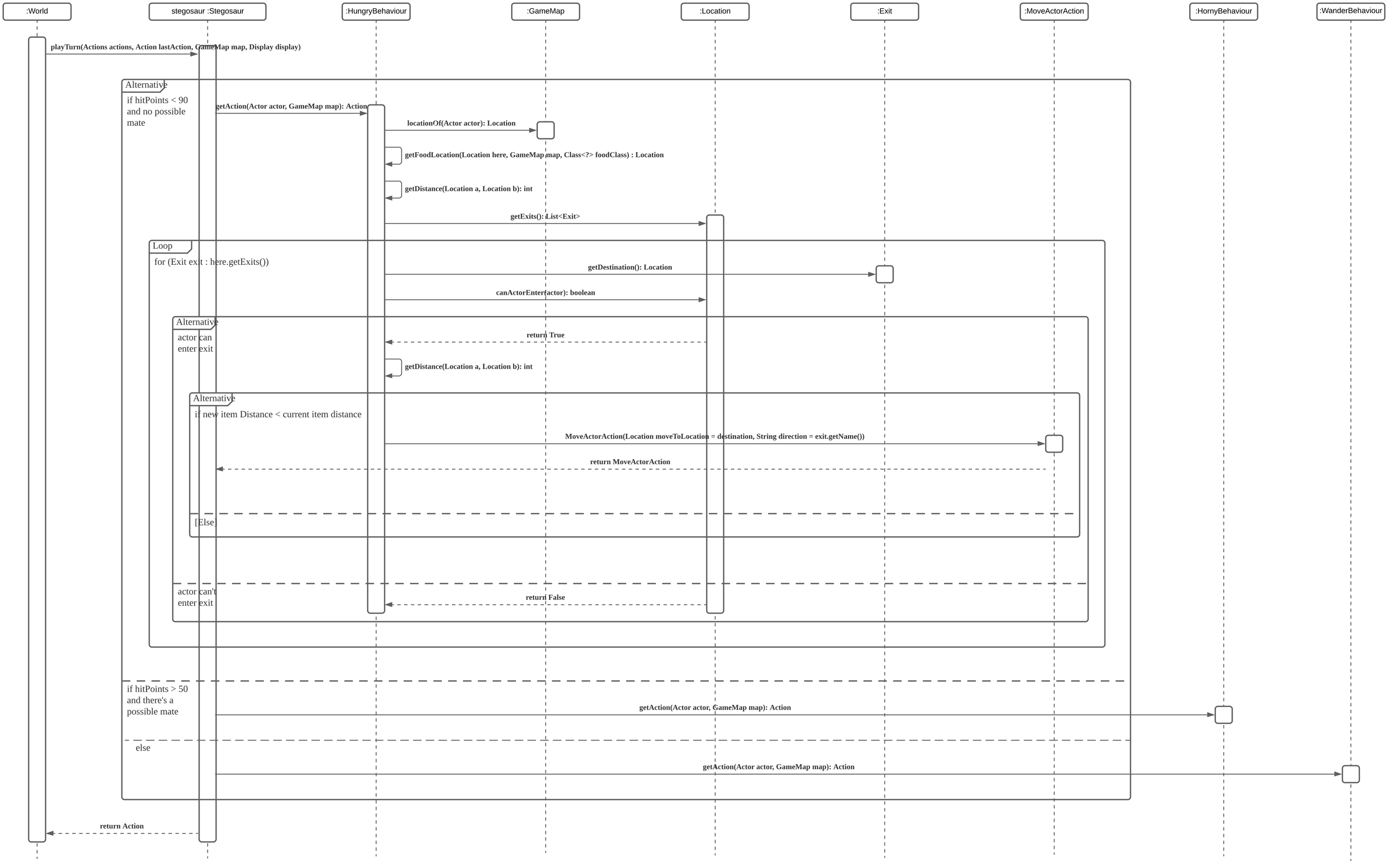
Stegosaur


Player is next to a vending machine and buys an item
User
<<actor>>
: World
vendingMachine: Ground
player: Actor
: Menu
<<UI>>
allowableActions(player, : Location, : Exit.getName())
getEcoPoints()
Loop
[for each item: PortableItem]
Alternative
[player has enough eco points]
BuyAction(item, item.getPrice())
[Else]
playTurn(actions)
showMenu()
Selects to buy an item
deductEcoPoints(Item.getPrice())
addItemToInventory(Item)

Bush produces and drops a fruit
(The process with a Tree is the same, just using different probabilities)




:World
:Allosaur
:AttackBehaviour
:GameMap
:Location
:Exit
:AttackAction
:HornyBehaviour
:HungryBehaviour
:WanderBehaviour
playTurn(Actions actions, Action lastAction, GameMap map, Display display)
nearStegosaur(GameMap map)
Alternative
if there is a Stegosaurus nearby
getAction(Actor actor, GameMap map): Action
getNearbyStegosaur(Actor actor, GameMap map): Actor
locationOf(Actor actor): Location
getExits(): List<Exit>
Loop
for (Exit exit : here.getExits())
getDestination(): Location
getActor(): Actor
Alternative
if destination actor is a Stegosaur
return Actor
if destination actor is not a Stegosaur
return null
getOffLimitsStegosaurs(): ArrayList<Stegosaur>
ArrayList<Stegosaur>
Loop
for (Stegosaur offLimitsStegosaur : offLimitsStegosaurs)
Alternative
if offLimitsStegosaur contains stegosaur
AttackAction(Actor target)
return AttackAction
heal(int points)
addOffLimitsStegosaurs(Stegosaur stegosaur)
return AttackAction
if destination actor is not a Stegosaur
return null
if hitPoints > 50 and there's a possible mate
getAction(Actor actor, GameMap map): Action
if hitPoints < 90 and there's a possible food source
getAction(Actor actor, GameMap map): Action
else
getAction(Actor actor, GameMap map): Action
return Action


:World
stegosaur :Stegosaur
:HungryBehaviour
:GameMap
:Location
:Exit
:MoveActorAction
:HornyBehaviour
:WanderBehaviour
playTurn(Actions actions, Action lastAction, GameMap map, Display display)
Alternative
if hitPoints < 90 and no possible mate
getAction(Actor actor, GameMap map): Action
locationOf(Actor actor): Location
getFoodLocation(Location here, GameMap map, Class<?> foodClass) : Location
getDistance(Location a, Location b): int
getExits(): List<Exit>
Loop
for (Exit exit : here.getExits())
getDestination(): Location
canActorEnter(actor): boolean
Alternative
actor can enter exit
return True
getDistance(Location a, Location b): int
Alternative
if new item Distance < current item distance
MoveActorAction(Location moveToLocation = destination, String direction = exit.getName())
return MoveActorAction
[Else]
actor can't enter exit
return False
if hitPoints > 50 and there's a possible mate
getAction(Actor actor, GameMap map): Action
else
getAction(Actor actor, GameMap map): Action
return Action