

Assignment 3 : Design Rationale, REQ4

Changes made from previous uml:

- Added fire flower extending magical item.
- Added sprout and sapling which creates fire flower.
- Added attack action and fire item. Attack action creates fire.
- Renamed ConsumableItem into MultiTurnBuffItem.

Other changes made:

- MultiTurnBuffItem consume method now returns string. It used to return nothing.

Fire flower is considered as magical item. Since fire flower is an item and it has multi turn buff, it extends magical item and inherits item and MultiTurnBuffItem. When player consumes fire flower, it will be added into consumed item manager to manage buff effect.

Drop fire at target location. When actor has capability drop_fire_when_attack, it creates and drops fire at target location after a successful attack. This will be done inside attack action execute method.

Spawning fire flower from sprout and sapling will be done inside tick method. If 10 turns pass, it drops fire flower at 50% chance.

When actor stands on top of fire, it hurts the actor by 20 damage. This is done inside the fire's tick(location) method. It first checks whether there is actor standing on top of the fire, if yes, it gets that actor and uses hurt method to damage the actor.

Fire will be removed from the ground after 3 turns. This is done inside tick(location) method. Integer attribute called turns is stored and it keeps track of turn. Turns will be incremented inside tick method and if turns is 3, it removes it self from the ground.