

COSC 2403 Term Project
The Wumpus World
Due date: Thursday, 12/10/2015

Goals

- The robot explores the wumpus world to find gold and avoids pits and the wumpus.
- The robot collects as many items as possible for higher score.
- The robot kills the wumpus.
- After collecting the gold, the robot travels back to starting point.

Environment

- Rooms adjacent to wumpus are smelly (stench)
- Rooms adjacent to pit are breezy (breeze)
- Glitter if gold is in the same square (glittering)
- Rooms adjacent to magic cookie smell good (aroma)
- Shooting kills wumpus if the wumpus is in the neighbor room and if the robot is shooting at the direction toward wumpus
- Shooting uses up the only arrow
- Grabbing picks up items (including gold) if in the same room
- Releasing drops the gold in same room

Requirements:

- Text interface. Up to extra 10 points for graphic user interface.
- Up to extra 15 points for automated (smart) Robot
- Classes:
 - Room
 - Four exits: north, east, south, west.
 - 5 bonus point for additional exits
 - Has items
 - Has signals (breeze, stench, aroma, glittering)
 - Robot
 - Executes commands: HELP, GO direction, SHOOT direction, GRAB item, DROP item, ITEMS (print all the collected items and total weight), and QUIT.
 - Can sense signals (breeze, stench, glittering)
 - Has weight limit
 - Has score
 - Has lives. For example, extra life for every 500 points. (option, no extra points)
 - Has weapon, the bow and arrow for shooting wumpus. 5 extra points for additional weapons. The additional weapons are the reward of gaining scores from the collected items.
 - If the robot finds and eats the magic cookie, it increases the weight limit.
 - Item
 - weight, description, score