**Wumpus World**

* **Starting position:** Agent ALWAYS **start at bottom left square (1, 1) = (0, 0)** in code. **Facing right**
* **World Size:** N x M where N >= 4, M <=7
* **Agent’s Actions:** 
  + Move FORWARD, TURN\_LEFT/TURN\_RIGHT BY 90 DEGREES (cost 1 pts each)
  + GRAB when agent & gold in the same square.
  + SHOOT in direction agent is facing. CONSTRAINT: only 1 arrow
  + CLIMB: can only climb out at starting position.
* **Indicators:**
  + STENCH indicates that 1 of its adjacent squares (directly not diagonally) is Wumpus.
  + BREEZE indicates that 1 of its adjacent squares (directly not diagonally) is Pitfall.
  + GLITTER indicates the square the gold is in.
  + BUMP indicates when the agent walks into a wall.
  + SCREAM indicates the Wumpus has been killed.
* **Tournament:**
  + Test agent across 10000 worlds, sizes from 4 x 4 to 7 x 7
  + Time out if goes longer than 2 hours
* **AI Requirements:**
  + Minimal: score >= -10 on average across 10000 worlds
  + Draft: score >= 100 on average across 10000 worlds
  + Final: score >= 200 on average across 10000 worlds
* **Shell Manual:**

To generator world: python ./world\_generator.py /Worlds/[name] [size] [col] [row]

java -jar Wumpus\_World.jar -f ../../Wumpus\_World\_World\_Generator/Worlds/

* **Logistics:**
  + If at starting position, agent senses breezes in both direction (up & right) climb out.
  + If agent senses first stench: DO NOT shoot arrow immediately but go to stench.
  + Try sensing for second stench to have better probability of killing Wumpus.
  + Only shoot arrow after agent sensed second stench. (shoot in the direction/tile that first and second stench have in common that is not in the safe path)
  + If sensing first breeze not at starting position, try sensing for second breeze to ensure the position of the pit
  + If encounter GLITTER, GRAB gold and return home.