

Hunt The Wumpus

Understanding the problem:

Create a game that is on a grid where your objective is to kill the wumpus, get the gold and escape alive. Player can shoot up to 3 times with an arrow in any direction and it will clear the entire grid until it hits the outer gridpoint. If player shoots the arrow and miss the wumpus will move to a new empty gridpoint. This is a 75% chance. If player is in the same room as the wumpus it will wake up and eat you. The gold will be picked up automatically. They're 2 bottomless pits that will kill you if you enter that room. Also, they're 2 super bats that will move your character to a random room. If player's room is next to any of the objects in the game a message will warn them that the user is nearby.

Design:

Pseudo code:

- Player inputs second command line argument as true or false
 - True shows a debug mode showing the grid with event location
 - False will start game normally.
- User input of wasd to move a direction in cave
 - W is north
 - S is south
 - A is west
 - D is east
- If player is next to an event a message will appear
 - You smell a terrible stinch for wumpus
 - You see a glimmering light for gold
 - You feel a breeze for bottom pit
 - You hear wings flapping for bats
 - You can't can't go this way
- If player dies
 - Message appear showing what killed you.
- Player objective
 - Pick up gold (message will appear after it is done)
 - Kill wumpus with arrow
 - Exit back to your starting point and leave
 - Live

Design Implementation:

Use of a command line argument in main parameter.

Event class will be abstract meaning that it will have all virtual functions. I will use a overloaded operator to change events (percept, die, event function).

Room class can only access members of Event class object so I will use certain event functions that reference functions from derived classes.

I will use a 2d vector to create the game grid.

Case	Input	Output
Good	Player inputs false at command line	Program runs normal
Good	Player moves north by pressing w	Player moves up a square
Good	Player enters a bathroom	Player randomly placed in a room good or bad
Bad	Player doesn't enters a f for false in command line	Error prompt again
Bad	Player doesn't find gold but wants to leave the game	Error message telling player what left there is to do.
Bad	Player starts game and inputs direction out of cave	Error message telling player what left there is to do.
Edge	Player inputs a direction towards the boundary of the game.	Cout " you can't go that way"
Edge	Player inputs an arrow	Error message prompt again
Edge	Player kills the wumpus and gets the gold then dies	Message appears, player loses the game