Project Proposal: Gold Miner Game

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necessary module: Tkinter

1 Game Description

Gold Miner is a little popular game. I will build a similar game with python in my term project. During the game, player can use arrow key to control the miner to release the claw in certain direction to get valuable gold and diamond and avoid get cheap rock and wood.

There are two different game mode, the score mode and the time mode. In score mode, the player is required to collect certain value of gold to enter the next level. There will be several levels of this mode. While in time mode, player is required to collect all gold and diamond in the whole screen as fast as possible. The least time needed is recorded. During each mode, there will also be magic boxes and power-ups that underground, which the miner can get and use for the current level. There will also be a shop the player can enter and but tools like power ups with the gold they collect from one level of game and use in another level.

2 Some Features

2.1 Splash Screen:

basic feature:

* The game will start with splash screen, with a gold miner theme image as background and several buttons displayed.
* can use mouse click or keypress to choose the mode and enter

add-on feature (hard level):

* The button will have texture of gold.
* When the mouse move over the button, the button will show highlight color
* the gold in the back ground can shine, and the light from the shinning gold can change with time.

2.2 Score Mode

* miner: a nice and mimic icon used for miner
* rope: the rope binding to the claw can extend to the boundary of the screen
* background: with texture and color, changing from mode to mode or level to level
* gold/rock/diamond/wood: use class to build this underground things. different object has different feature, which can be implemented from inheritance.
* score and timer display

add-on feature (hard level):

* claw: the claw should be able to change when clawed a rock or gold
* with 3 levels:
  + level 1 only has gold and rocks, with 500 points requirements to pass
  + level2 has golds, rocks, diamond and random content box, player need to score 1200 to pass this level
  + level3 will contain moving rats, shining diamonds and power ups. Players need to score 2500 to pass
* moving rat
  + disturbing moving rats. they try to get caught by the claw, so the player will lose time and get valueless rats
  + maybe with diamond, which is attractive! So this kind of rat will try to avoid been caught.
* random box: contain anything from valuable diamond to useless heavy rocks, will use random number to generate the content.
* get score and the twinkle effect: when the player get a gold of diamond, the new score will first appear near the player and then add to the current score. When appear near the miner, it can have some special animation feature
* when accomplish one level, there will be a screen show "level completed!"

2.3 Time Mode

* basically, the same with score mode, but with different colors

2.4 Shopping

* with a shop owner on the right side. The shop owner can move lips and raise hand and maybe some simple expression during talking(hard)
* with different item on a table
* with price and simple introduction when the mouse was on the item
* can purchase

2.5 help

* many simple instructions