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Project Overview

For my final project, I have deiced to make a computer program that emulates my game called a Princess Gathering Flowers. A Princess Gathering Flowers is a game that you use “up”, “down”, “right”, “left” keys from keyboard to move a princess to gather flower. Flowers and monsters will appear on the window randomly. The rules are as follow:

1. If this princess successfully gathers a flower, the player’s score will be increased by 10 points.
2. If this princess unfortunately collides with a monster, the player will lose the game.

List of classes and functions

Classes:

1. Princess—This class will be used to draw the image of the princess and also move the princess. The methods of the class will be” init “which needs variables—win and self and “move\_princess” which needs variables –win and self. The function “move\_princess” is used to move the princess.
2. Flowers – This class will be used to draw the image of flowers. The method of the class will be the “init” which needs variables-- height of the image(y), the width of the image(x), win, and self.
3. Monster -- This class will be used to draw the image of monsters. The method of the class will be the “init” which needs variables-- height of the image(y), the width of the image(x), win, and self.

Functions:

1. Create\_monsters\_flowers—This function will be used to draw monsters and flowers, making them randomly appear in the screen. The variable of this function is“win”. And inside the function, I need for-loops, one for flowers, and one for monsters. By using for-loops, I give x-position and y-position for flowers and monsters. I also need to call my classes – Flowers and Monsters. Return locations, a list that records the location of each monster or flower.
2. Update\_board – This function will be used to update board. When the princess moves downward, the board need to be updated, which makes the screen move and new monsters and flowers will appear in the adding part of the board. I am not sure what variables I need exactly, but I guess I need to call my classes (Monsters and Flowers) again inside this function. And I guess I also need a while loop. Like, while the princess moves downward, the board updates itself.

1. Beginningpage – This function will be used to show the beginning of my game. The first page will show a sentence” click to begin the game”. After the user clicking, the second page will appear four images of different princesses. The user can type “a”, “b”, “c”,” d” to choose which princesses he or she wants to play. After that, the game will begin. The variable of this function is win.
2. Show\_scores – This function will be used to display the player’s score on the board. In addition, it will also be used to make the flower, which has already picked by the princess, disappear on the board.
3. Main – This function will contain all of the game logic and call all functions. Also, I will first create a window. In addition, I will set the initial score is 0. Inside the main function, I also will write a Boolean which is used to examine whether the princess meets the monster. If the princess meets the monster, the game will end. After that, a text “Thanks for playing” and player’ s score will be shown on the window.

Minimal Features and Extras

At the least the program will be a game program that emulates A Princess Gathering Flowers with all of the rules stated above.

A list of features:

1. Beginning pages (one page for “click to begin the game” and another page for users to choose a princess.
2. User is able to use “up”, “down”, “right”, “left” keys from keyboard to move a princess to gather flower.
3. User’s score will be displayed on the board and will be updated according the number of flowers the user gathers.
4. When user collides with a monster, the ending page will be displayed on the board and show the user’s score. In addition, it will show “type ‘c’ to play again or click to end the game”.
5. If the user types “c”, then the game will begin again.