Instituto Tecnológico de Costa Rica

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[Ant's Game]

Students

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Contenido

Introduction:

The project performed consists in a game which is applied in all classes seen in the Python language. It is the realization of the second scheduled project, using the tkinter GUI labrery. The purpose of this project is to apply the knowledge gained in the course in a program of medium difficulty.

Ant's Game is developed in order to create an entertaining game for different ages, enabling users to interact with, causing the person to leave their daily routine for a few hours to solve the puzzle and needed to reach your goal strategies. It is presented as a game that stimulates the brain and develops logical areas that are significantly important in students.

The project has been developed using Python programming language who is number one in development for gaming because it has libraries available in your BookStore such as PyGame, note that because of the level of difficulty required for development of the project Pygame was not used to develop the interface, since for understanding basic concepts in the development of the above was better to use Tkinter.

Finally it is important to emphasize syntax Game Ant's Game, initially the user can enter their settings by adjusting the sugar cubes, wine and poison you want to find on the road, noting that you can not change at our convenience as players, as Randomly method that is responsible for putting right on the matrix size set is implemented such surprises.

The Ant or the path name that you wish to designate may undergo different changes in your body and they can drink themselves to death since, for this reason it is important to have a strategy to reach the goal without causing death.

It pretends to evaluate through the realization of this project the programming techniques learned. The creation of a graphical interface implemented in conjunction with a logical level processes that allow the operation of the game with a nice view that stimulates Interez in the game.

Analysis of the problem

According to the analysis should be performed initially create different methods which extend below:

The project is to make a game with graphical interface in which an ant must move on some boxes to reach their nest, classes be used, matrices, and a series of validations that allow the ant reach or not your destination.

A generic method of a matrix receiving array parameter edited by the user to create an array of the input size parameter is required. Added to this other method that temporarily receive data quantity of wine, poison and sugar should be created, such amounts would be received as a parameter to implement a condition on the random method for generating the number of times that the amounts shown should appear the input variables.

They had to create a method to store in a file the amounts originally entered by the user to keep track of the data previously entered the game barely started again, note that this method was coupled with 2 more for proper operation and that one of the requirements requested by the client for its development was, that the data were initiated by the last player should appear in the interface, as when the game was over was updated the file before leaving for this reason we can contemplate the methods developed for the operation was right their names are writeFile, loadingFile, informationSettings latter is the general manager windows, labels, buttons and textbox necessary interface to capture data and use a logic level

Solution of the problem

In developing the Ant's project Game was necessary to create various methods for running the game, and which we can mention as principal, a generic method to catch an array of 0 with the size to be assigned initial form, then developed randomly method inserted into the cell in the matrix randomly, respecting the number of times you want the user to display a constant variable, note that these variables are defined as constants to facilitate the use of variables required in the development of code, among which we can mention ANT = 1, ANTHILL = 2, CLOD_SUGAR = 5, CLOD_WINE = 6, CLOD_POISON = 7.

Then they had to create two Way and Ant objects each controlling its functions was necessary to implement the Ant object calculating your health according to the lumps that will eating as you progress toward the goal, the matrix was adjusted by means of one settings file that stores all the settings made on the interface, capturing entry interface int data type String and converting them so they can be read when starting the game again.

In the interface label needed were created to show your health, name and other important information, tailored to their advance a method that will identify the path forward ant through keyboard input of the PC is created and marks the journey with blue boxes.

Classes requesting the project were created using arrays that are used for logic level for the location of the ant and the objects that prevent this getting to your destination was implemented, was investigated as mounting images in windows created with tkinter librery and how to recognize that this button to move the ant from the keyboard.

Analysis of results

Task / Requirement	Status	Observations
Generate the matrix	Completed	
Generate Random	Completed	
Generate method Hip	Completed	
Generate Interface	Completed	
Update, and writing Upload a File	Completed	
Upload images on matrix Grafica	Completed	
Be noted the path of the ant	Completed	
Class Ant	Completed	
Class Way	Completed	

Recomendations

- We recommend creating improvements to the game requirements as a more attractive interface with various menus that offer help to the user in case of being lost in game

- It would be interesting to include lumps with questions and according to the result can give a mark to the ant immunity for the next 2 fields that must pass

- The ant can show a happy, sad as this according to their level of health

- It is also recommended that also includes a small window to explain briefly what is the game and its rules also explain how to play correctly and interactively.

- The ant can send a message to the user to help restore life through a random set of questions, in order to correctly answer as many to be reflected in an extra to receive health and avoid him die, but if you do not win at least 5 questions then you will be downgraded to a percentage of your health, affecting ant if he were to die, it is noteworthy that an extra therefore must risk health to win

- For the realization of projects it is recommended Such to research the best way to perform each one of the problems this presents That, as well as the correct way to attach the methods or Procedures That the protectorate was made.

Conclusions

- An interesting game to develop some strategic logic and people that use it is created, note that is a fun game, easy to understand and available for different ages

- The game features different scenes as you go ant and cannot always take the easy way, using the random method implemented to help make the trip more interesting

- The game ant is a simple interface developed in Tkinter benefit to the user to interact with the game, has windows with bright and desired by children colors, it would be a good recommendation to distract them at your leisure and in turn can enter them in the technological world

- The project stimulated research to carry out some parts of the draft which was not aware that in addition to applying seen together in classes Malthus achieve the development of a functional application.

- The ant's game was a practical way matrices to develop a project of medium difficulty with the implementation of GUI Role and logical methods which together result in an interactive game that runs using the navigation keys.

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