

15/10/25

Task 12: Simulate Gaming concepts using Python

Aim: To simulate gaming concepts using Python

Snake Game:

Problem 1:- write a python program to create a snake game using Pygame package.

Conditions:-

- (i) Set the window size
- (ii) Create a snake
- (iii) make the snake to move in the directions when left, right, down and up key pressed.
- (iv) when snake hits the fruit increase the score by 10.
- (v) If the snake hits the window game over

Algorithm:

1. Import pygame package and initialize it
2. Define that window size and title.
3. Create a snake class which initializes the snakes position, color and movement
4. Create a functions to check if the snake collides with the fruit and increase the score
5. Create a function to update the game display and draw the snake and fruit
6. Create a game loop to continue
7. End the game

other players prime, obviously ~~not~~
would prefer other players prime, obviously ~~not~~
would prefer other players prime, obviously ~~not~~

players who are going to play a strategy of making
something better than someone else's strategy.

Output:

size web size 0.1

value to store 0

Score: 0

beginning the algorithm needs initializing, that makes
all variables think all  values zero

now stage 0 value of first store will be 11 ①

initial A

In addition two strategies happens frequently
will have size web size full units ②
all variables starts zero values or stored ③
dimensions have values, initializing values.

Now all the webs of algorithm are ready ④
all second has first will after web will
be zero

Drop, all stages of webs are stored ⑤
two above all webs have value
~~initial~~

values of web stage 0 stored ⑥

and all web 5

Program:

~~1~~ Importing libraries

import pygame

import time

Snake-speed = 15

window - x = 720

window - y = 480

black = pygame color(0,0,0)

white = pygame color(255, 255, 255)

red = pygame. color (255,0,0)

green = pygame. color (0,255,0)

blue = pygame. color (0,0,255)

pygame. init()

pygame. display set

Fps = pygame - time. clock()

Snake-position = [[100,50], [90,50], [80,50], [70,50]]

Fruit-position = [random. randrange(1, window-x/10)+10
random. randrange(1, (window-y/10))+10]

Fruit-Spawn = True

direction = 'RIGHT'

Change-to = direction

Score = 0

def show-score (choice, color, fontsize)

Score-font = pygame-font-sys font (fontsize)

Score-surface = Score-font . render

My font = pygame - font . sys Font["times new
roman"; 30]

your score is : + str(score) True, red)

game-over-rect = game-over-surface.get_rect()

game-over-react mid-top = (window-x/2, window-y/2)

for event in pygame.event.get():

if event.type == pygame.KEYDOWN:

if event.key == pygame.K_UP:

Change-to = 'DOWN'

if event.key == pygame.K_LEFT:

Change-to = 'LEFT'

if event.key == pygame.K_RIGHT:

Change-to = 'RIGHT'

if direction == 'UP':

Snake = position[1] = 10

if direction == 'DOWN':

Snake - position[1] += 10

if direction == 'LEFT':

Snake - position[0] -= 10

if direction == 'RIGHT':

Snake - position[0] += 10

if not fruit - spawn:

Fruit-position = [random.randrange(1, (window

x/10)) * 10,

random.randrange(1, (window-y/10) * 10)]

Fruit - spawn = True

game - window.fill(black)

Four pos in snake body:

Pygame.draw.rect(game - window green),
pygame.Rect(pos[0].pos[1], 10, 10)

if snake position [0] < 0:
game - over []

if snake position [1] < 0
game - over []

Show score (1, white times new roman, 20)

pygame.display.update()

fps.tick(snake - speed,

Completed

VEL TECH	
EX No.	12
PERFORMANCE (5)	5
RESULT AND ANALYSIS (3)	3
VIVA VOCE (3)	3
RECORD (4)	4
TOTAL (15)	15
SIGN WITH DATE	

Result:

Therefore stimulation of gaming concept using python is completed.