

# POSSIBILITIES OF PYTHON IN GAME CREATION



Казанский федеральный  
УНИВЕРСИТЕТ

MENU

START



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MENU

🗡️ 01

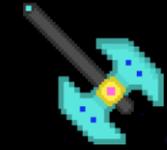
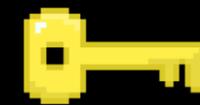
💎 07

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# WHAT IS PYTHON

➡️ PYTHON IS A PROGRAMMING LANGUAGE WIDELY USED IN WEB APPLICATIONS, SOFTWARE DEVELOPMENT, DATA SCIENCE AND MACHINE LEARNING (ML). DEVELOPERS USE PYTHON BECAUSE IT IS EFFICIENT AND EASY TO LEARN, PLUS IT CAN RUN ON MANY DIFFERENT PLATFORMS.



Python

Python

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PYTHON

IN

GAMING

➤ PYGAME

➤ PANDA3D

➤ COCOS2D

➤ OTHERS

DINAMIC  
TYPING

LIBRARY  
TOOLS

CREATE A  
PROTOTYPE

CLEAN AND  
READABLE  
SINTAX

SLOW

# PROS AND CONS

COMPATIBLE  
WITH AI

HARD TO FIND  
ERRORS

LOW  
COMPATIBILITY  
WITH GAMING  
ENGINES

DON'T  
SUPPORT  
MULTIREADING

CAN'T WRITE  
OWN ENGINE

MENU

# MY PROJECT



mi-serpiente.py x

```
1 import turtle
2 import random
3 import time
4
5 # screen
6 screen = turtle.Screen()
7 screen.title("SNAKE GAME")
8 screen.setup(width=700, height=700)
9 screen.tracer(0)
10 screen.bgcolor("#1d1d1d")
11 # borders
12 turtle.speed(5)
13 turtle.pensize(4)
14 turtle.penup()
15 turtle.goto(-310, 250)
16 turtle.pendown()
17 turtle.color("red")
18 turtle.forward(600)
19 turtle.right(90)
20 turtle.forward(500)
21 turtle.right(90)
22 turtle.forward(600)
23 turtle.right(90)
24 turtle.forward(500)
25 turtle.penup()
26 turtle.hideturtle()
27 # score
28 score = 0;
29 delay = 0.1
```

```
while True > if snake.distance(fruit) < 20
```

mi-serpiente.py x

```
27 # score
28 score = 0;
29 delay = 0.1
30 # snake
31 snake = turtle.Turtle()
32 snake.speed()
33 snake.shape("square")
34 snake.color("green")
35 snake.penup()
36 snake.goto(0, 0)
37 snake.direction = 'stop'
38 # food
39 fruit = turtle.Turtle()
40 fruit.speed(0)
41 fruit.shape("square")
42 fruit.color("white")
43 fruit.penup()
44 fruit.goto(30, 30)
45
46 old_fruit = []
47 # score
48 scoring = turtle.Turtle()
49 scoring.speed(0)
50 scoring.color("white")
51 scoring.penup()
52 scoring.hideturtle()
53 scoring.goto(0, 300)
54 scoring.write("Score: ", align="center", font=("Courier", 24, "bold"))
```

mi-serpiente.py x

```
57 # define how to move
58 def snake_go_up():
59     if snake.direction != "down":
60         snake.direction = "up"
61
62 1 usage
63 def snake_go_down():
64     if snake.direction != "up":
65         snake.direction = "down"
66
67 1 usage
68 def snake_go_left():
69     if snake.direction != "right":
70         snake.direction = "left"
71
72 1 usage
73 def snake_go_right():
74     if snake.direction != "left":
75         snake.direction = "right"
76
77 1 usage
78 def snake_move():
79     if snake.direction == "up":
80         y = snake.ycor()
```

MENU

# MY PROJECT



SNAKE GAME

Score :

A screenshot of a snake game window titled "SNAKE GAME". The window has a dark gray background. At the top, it says "Score :". In the center, there is a green square representing the snake's head and a white square representing an apple. The entire game area is enclosed in a red border.

SNAKE GAME

Game Over  
Your score is 25

A screenshot of a "Game Over" screen. The background is a solid cyan color. In the center, the text "Game Over" and "Your score is 25" is displayed in a white, monospace font.

SNAKE GAME

Score: 24

A screenshot of a snake game window titled "SNAKE GAME". The window has a dark gray background. At the top, it says "Score: 24". In the center, there is a red snake that has formed a large 'L' shape, and a white square representing an apple. The entire game area is enclosed in a red border.

MENU



# СПАСИБО БОЛЬШОЕ

PRESENTATION AND PROJECT OF ANIKA  
BOUBANE KONDO

