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THE SNAKE GAME

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TOPICS



Objectives



Methodology & Implementation

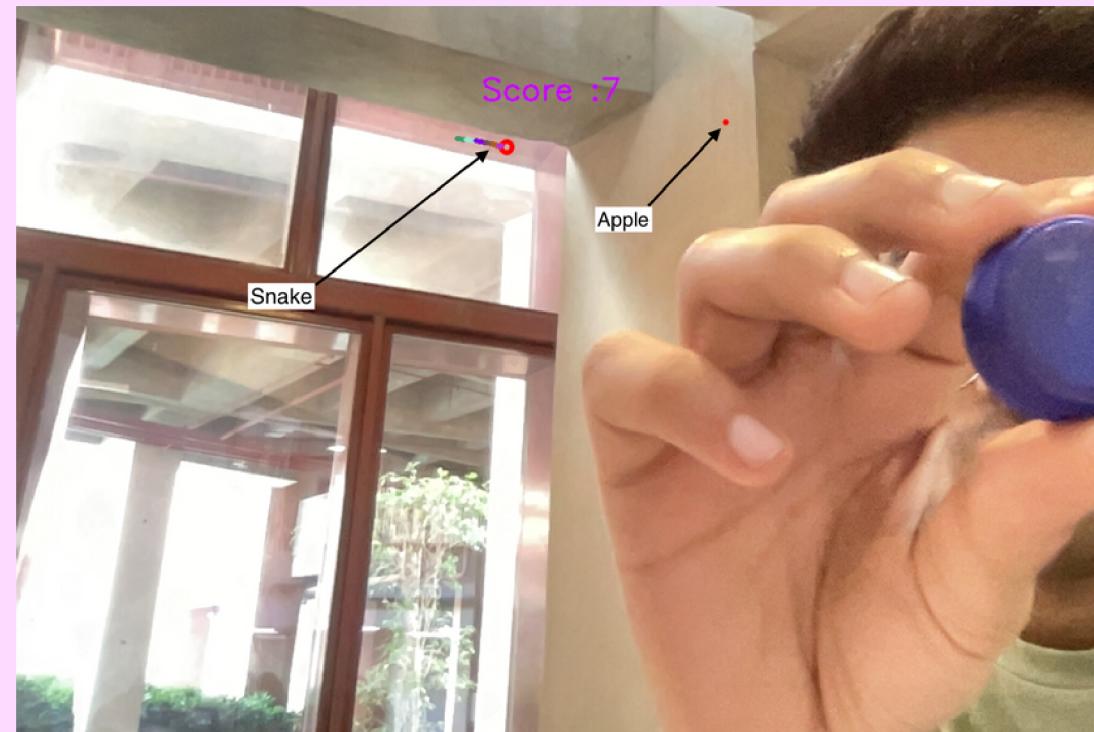
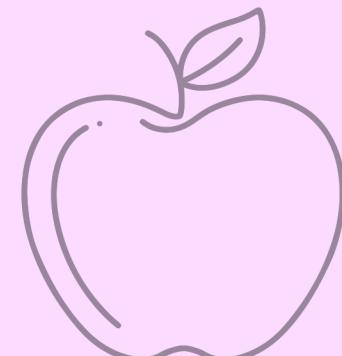
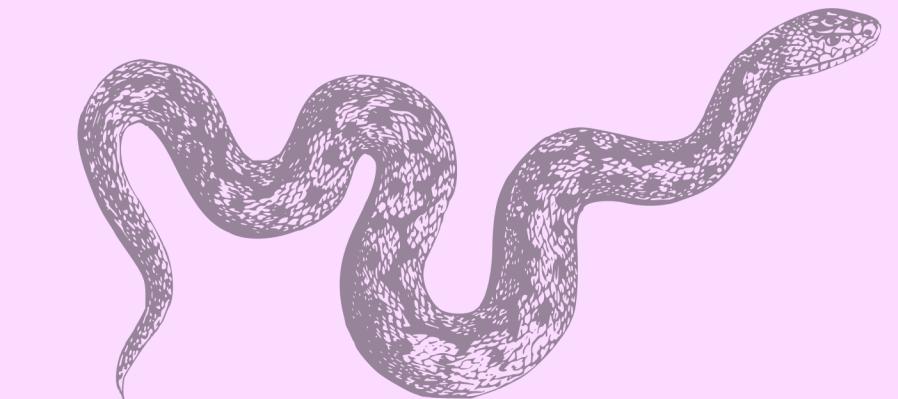


Conclusion

OBJECTIVES

The objective of the code is to re-create the famous snake game with computer vision where the player controls the snake's movement to eat apples.

The game ends when player reaches score 10.



METHODOLOGY & IMPLEMENTATION

INITIALIZATION

- Initial game state is set such as Score, Maximum score,
- Initial coordinates of apple and snake head are set.

IMAGE CAPTURE & MASKING

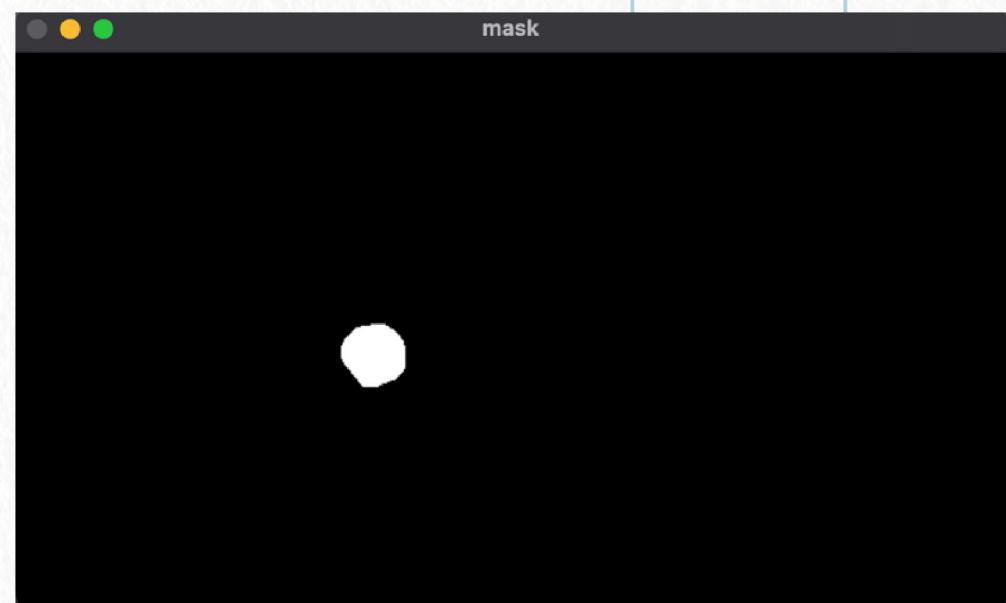
- Start capturing frames from the webcam using OpenCV's VideoCapture module.
- Define the lower and upper bounds of the blue color range in HSV space.
- Create a mask to isolate regions in the frame that match the blue color range using cv2.inRange().

CONTOUR DETECTION

- Find contours in the mask using cv2.findContours().
- The largest contour is used to represent snake's head.
- Calculate the enclosing circle around the largest contour to represent the snake's head position.

CONCLUSION

- The implementation demonstrates how Python and OpenCV can be used to create engaging and interactive computer vision applications.
- The game provides a simple user interface by overlaying graphics onto the feed. This allows players to interact with it seamlessly.
- The game captures and processes frames from the webcam in real time. This enables players to see the game's outcome immediately.



THANK YOU