

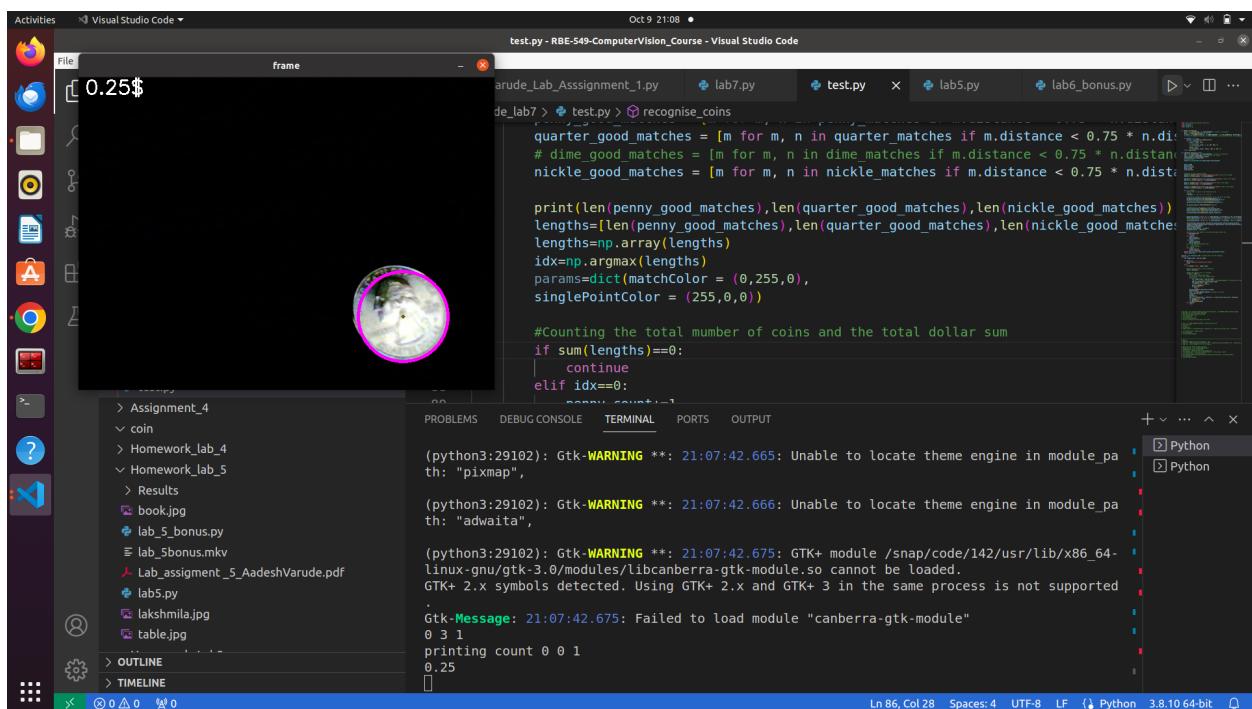
Report for Lab week 7:

Name : Aadesh Surendra Varude

Part 1:

I have created an app where the window starts capturing and identifying circles as u press key 'c' once you hit that key you need to place your coins and then hit esp then the screen will flash and image with the identified coins and the sum total of it in dollars. The video for the experiment id attached in the folder, below are the some snippet of the experiment:

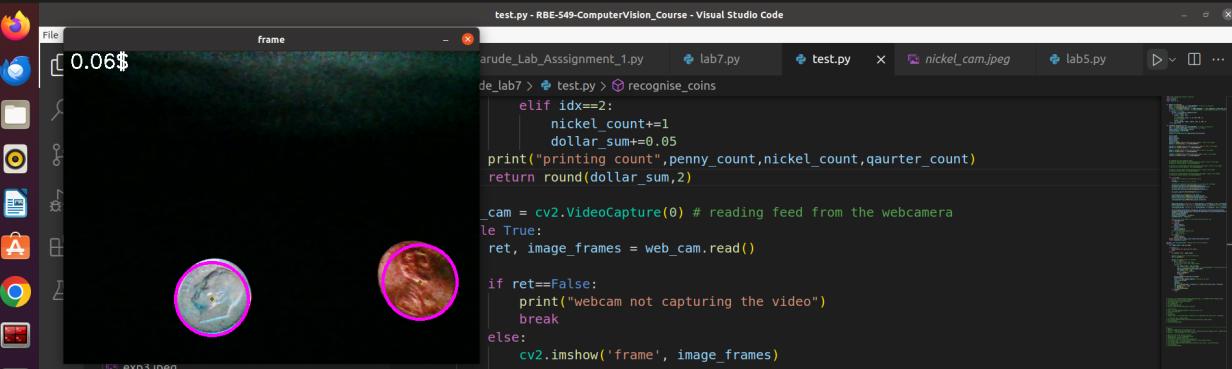
Results:



The screenshot shows a Visual Studio Code interface with the following details:

- Title Bar:** test.py - RBE-549-ComputerVision_Course - Visual Studio Code
- Code Editor:** The code is written in Python. It includes imports for cv2, numpy, and os. It defines functions for frame processing and identifies quarters, dimes, and nickels based on distance thresholds. It then prints the count and total value of each type of coin.
- Terminal:** The terminal shows several warning messages from GTK+ about theme engines and module loading, followed by a message from Gtk-Message indicating a failed load attempt.
- Sidebar:** The sidebar shows a file tree with files like Assignment_4, coin, Homework_lab_4, Homework_lab_5, Results, book.jpg, lab_5_bonus.py, lab_5_bonus.mkv, Lab_assignment_5_AadeshVarude.pdf, lab5.py, lakshmila.jpg, and table.jpg.
- Status Bar:** Shows the current line (Ln 86), column (Col 28), spaces (Spaces: 4), encoding (UTF-8), line separator (LF), Python version (3.8.10 64-bit), and a file icon.

Oct 9 22:54 • test.py - RBE-549-ComputerVision_Course - Visual Studio Code



```

arude_Lab_Assignment_1.py    lab7.py    test.py    nickel_cam.jpeg    lab5.py
de_lab7 > test.py > recognise_coins
    elif idx==2:
        nickel_count+=1
        dollar_sum+=0.05
    print("printing count",penny_count,nickel_count,qaurter_count)
    return round(dollar_sum,2)

_webcam = cv2.VideoCapture(0) # reading feed from the webcam
while True:
    ret, image_frames = web_cam.read()

    if ret==False:
        print("webcam not capturing the video")
        break
    else:
        cv2.imshow('frame', image_frames)

```

PROBLEMS DEBUG CONSOLE TERMINAL PORTS OUTPUT

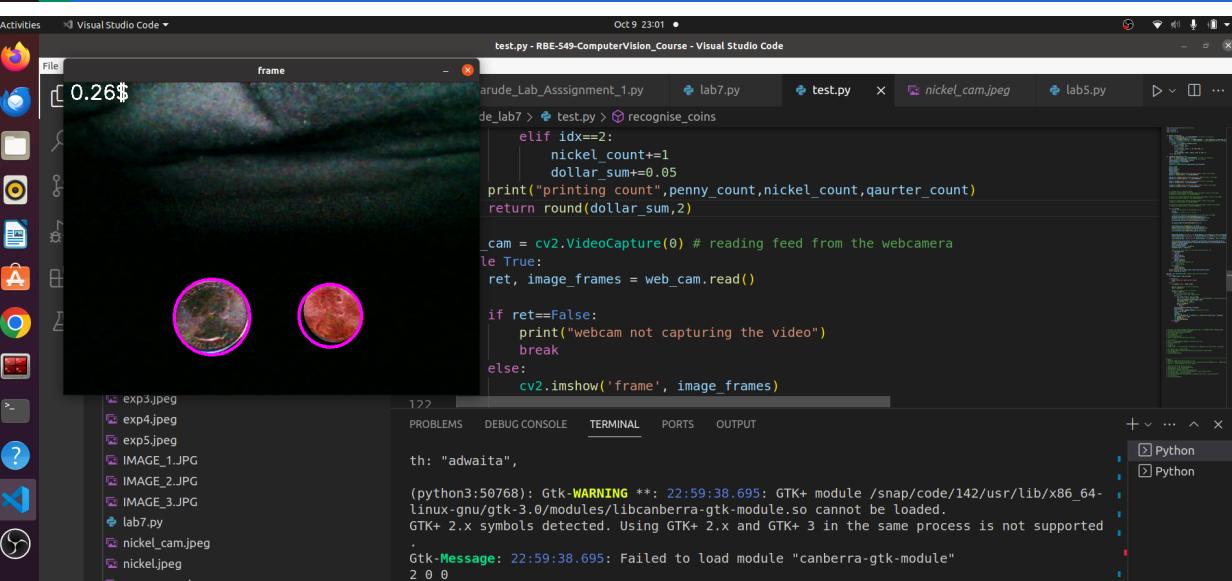
```

(python3:47554): Gtk-WARNING **: 22:53:29.621: GTK+ module /snap/code/142/usr/lib/x86_64-linux-gnu/gtk-3.0/modules/libcanberra-gtk-module.so cannot be loaded.
GTK+ 2.x symbols detected. Using GTK+ 2.x and GTK+ 3 in the same process is not supported
.
Gtk-Message: 22:53:29.621: Failed to load module "canberra-gtk-module"
2 0 0
0 0 0
printing count 1 0 0
0.01
1 1 2
2 0 2
printing count 1 1 0
0.06

```

Ln 111, Col 31 Spaces:4 UTF-8 LF Python 3.8.10 64-bit

Oct 9 23:01 • test.py - RBE-549-ComputerVision_Course - Visual Studio Code



```

arude_Lab_Assignment_1.py    lab7.py    test.py    nickel_cam.jpeg    lab5.py
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```

PROBLEMS DEBUG CONSOLE TERMINAL PORTS OUTPUT

```

th: "adwaita",
(python3:50768): Gtk-WARNING **: 22:59:38.695: GTK+ module /snap/code/142/usr/lib/x86_64-linux-gnu/gtk-3.0/modules/libcanberra-gtk-module.so cannot be loaded.
GTK+ 2.x symbols detected. Using GTK+ 2.x and GTK+ 3 in the same process is not supported
.
Gtk-Message: 22:59:38.695: Failed to load module "canberra-gtk-module"
2 0 0
printing count 1 0 0
0.01
6 1 1
0 1 0
printing count 1 0 1
0.26

```

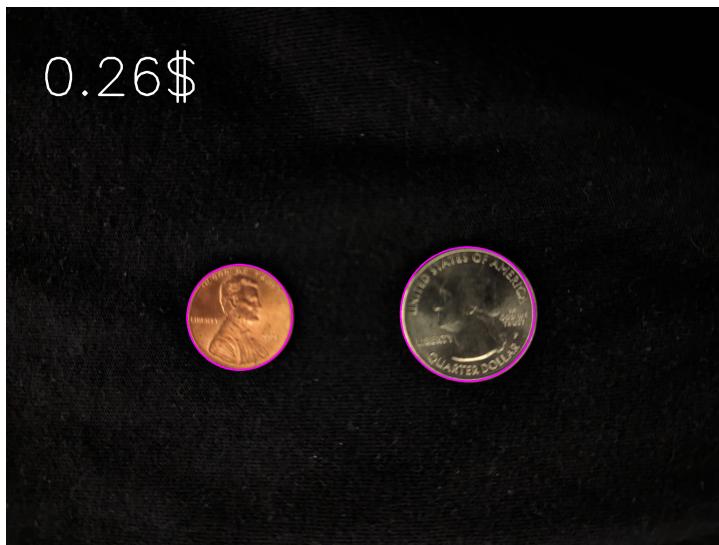
Ln 111, Col 31 Spaces:4 UTF-8 LF Python 3.8.10 64-bit

(Note : The coins are shiny hence the lighting conditions are very crucial for the sift features to match properly.)

I also performed experiment on the image captured with proper lighting conditions in order to verify my algorithm:



0.3\$

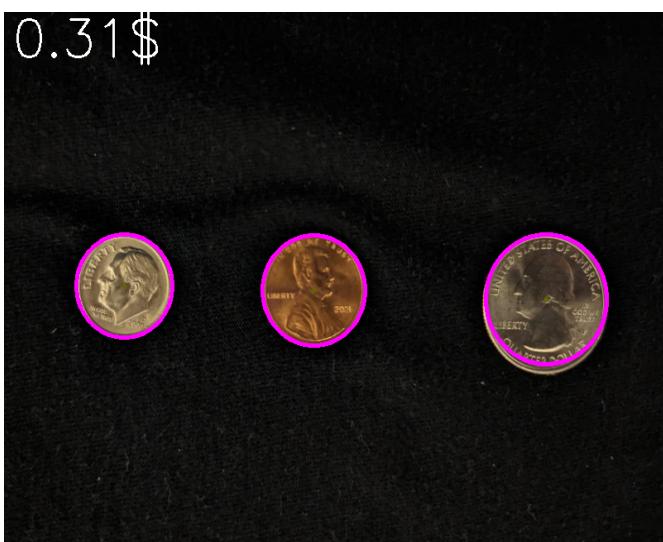


0.26\$

0.06\$



0.31\$



0.41\$



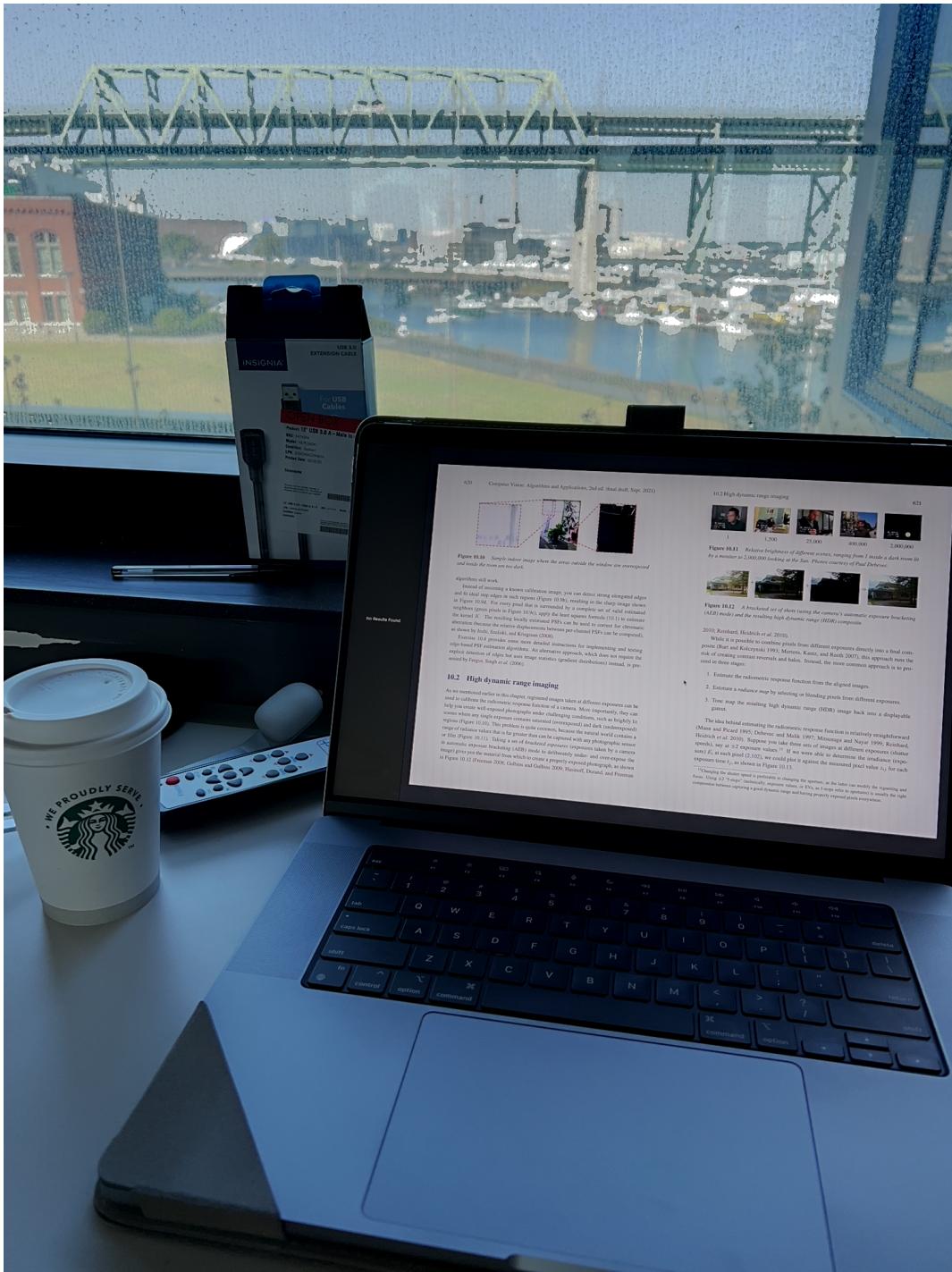
[Penny](#)

[Nickel](#)

[Dime](#)

[Quarter](#)

Part 2:



Result: