

Report 2

Embedded Machine Vision

Intelligent Automation

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Q1.

commands

```
ffmpeg -i big_buck_bunny_480p_surround-fix.avi image%d.ppm
```

```
ffmpeg -i big_buck_bunny_480p_surround-fix.avi image%d.jpg
```

PPM format and hence little clear since compression is less and image is more raw

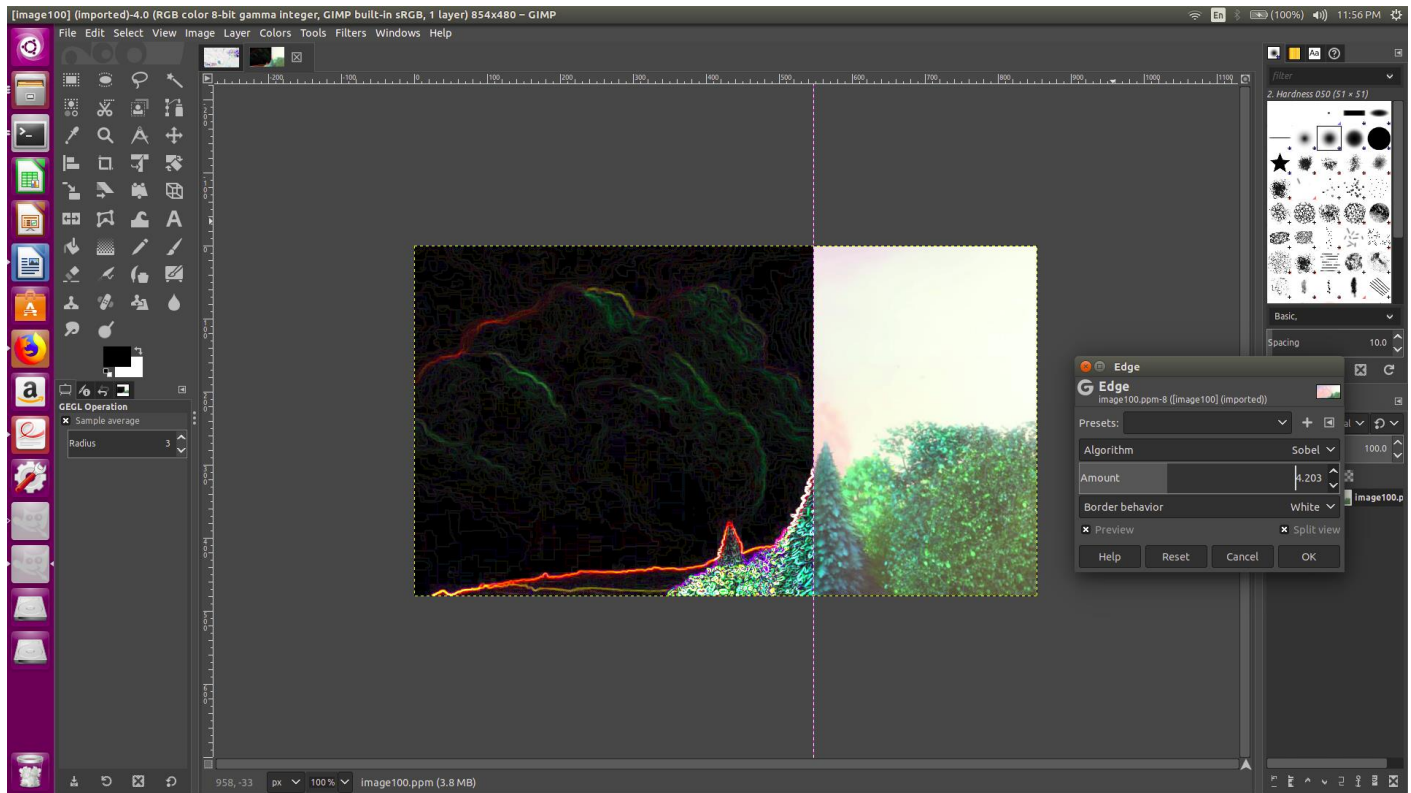


JPEG format and compression is more



Q2.

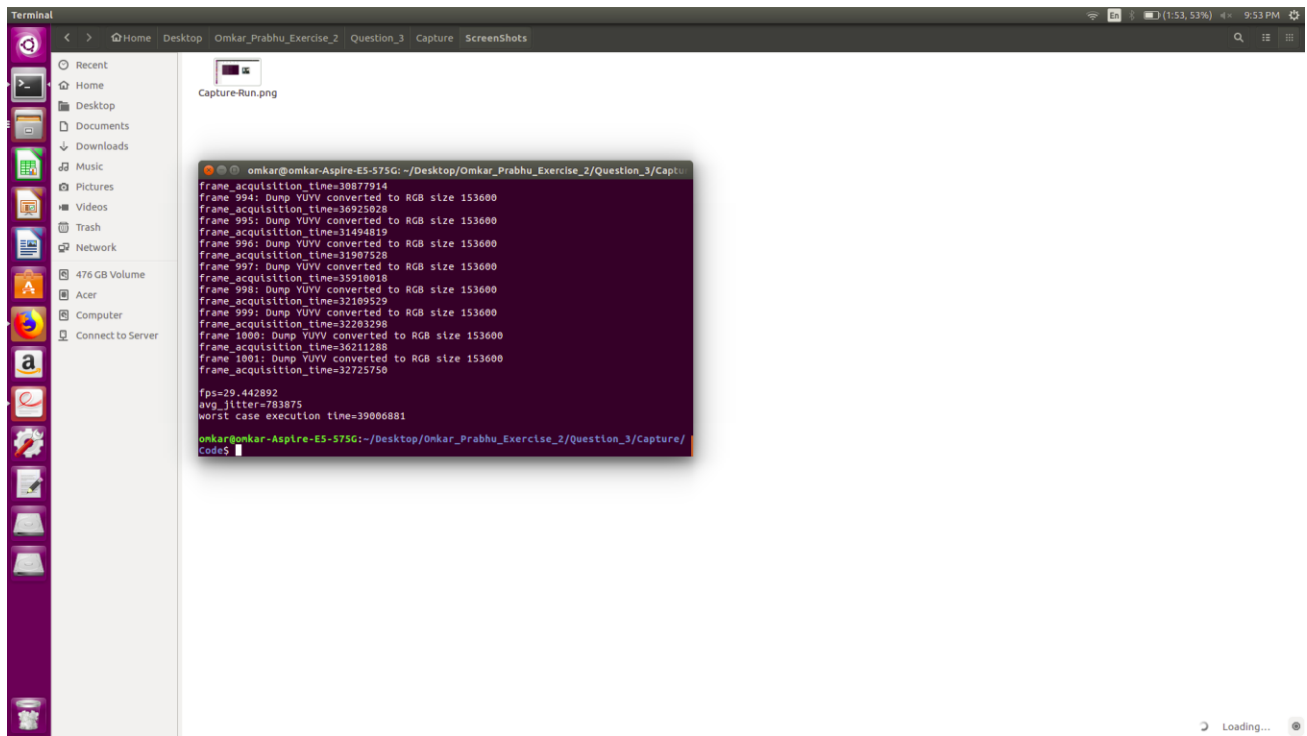
1. Open image that must be transformed (In this case 100th frame of bunny video)
2. Go to filters option and select edge detection from drop down menu
3. Select Sobel
4. This is a split view after taking sobel transform so that we can see both transformed and original images
5. As we increase the amount, the edge detection would be sharper
6. Selected border behavior as as white



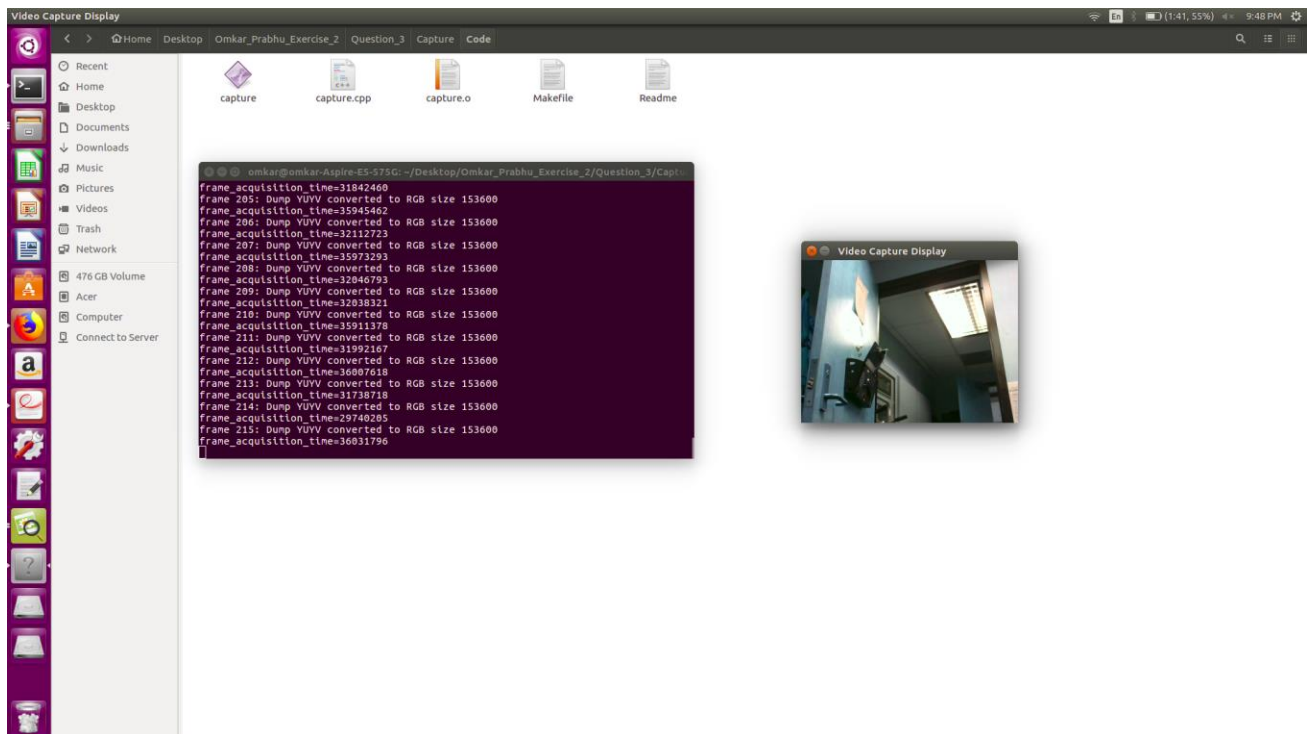
Q3.

Capture.cpp analysis codes and screenshots are provided in zip file as well.

FPS = 29.44 avg_jitter = 783875 ns Worst Case Execution = 39006881 ns

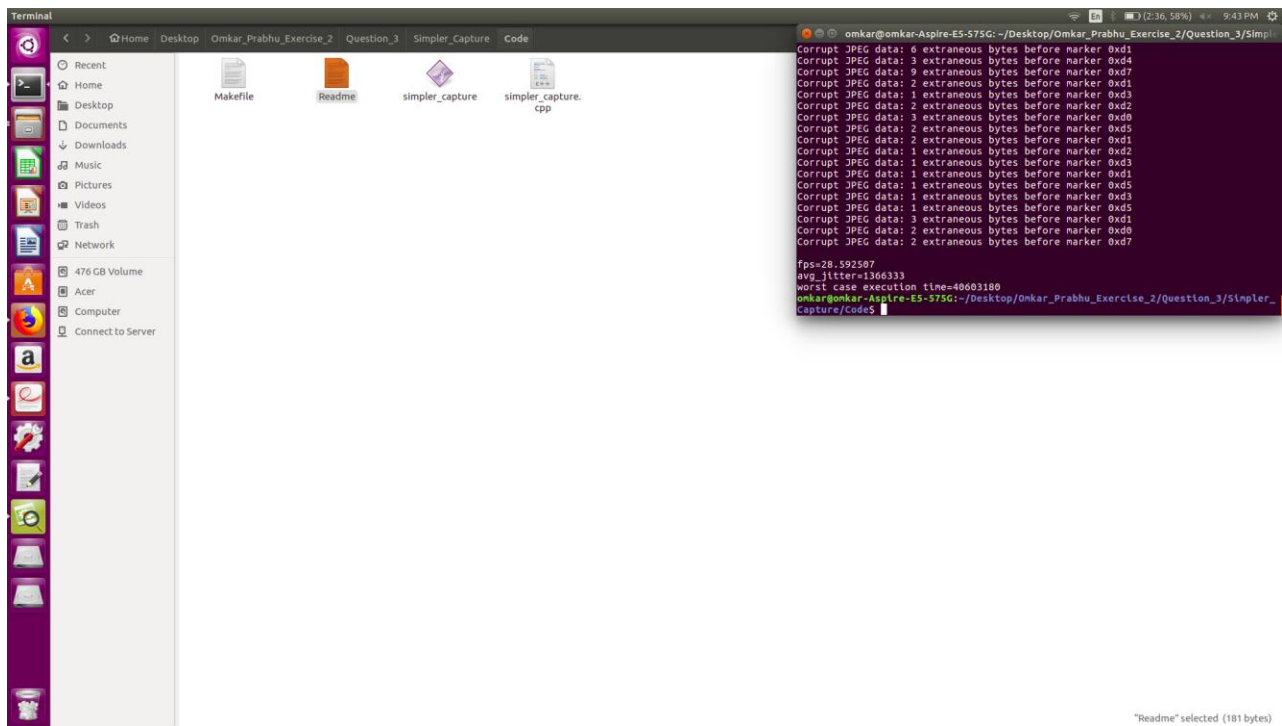


Capture.cpp runtime

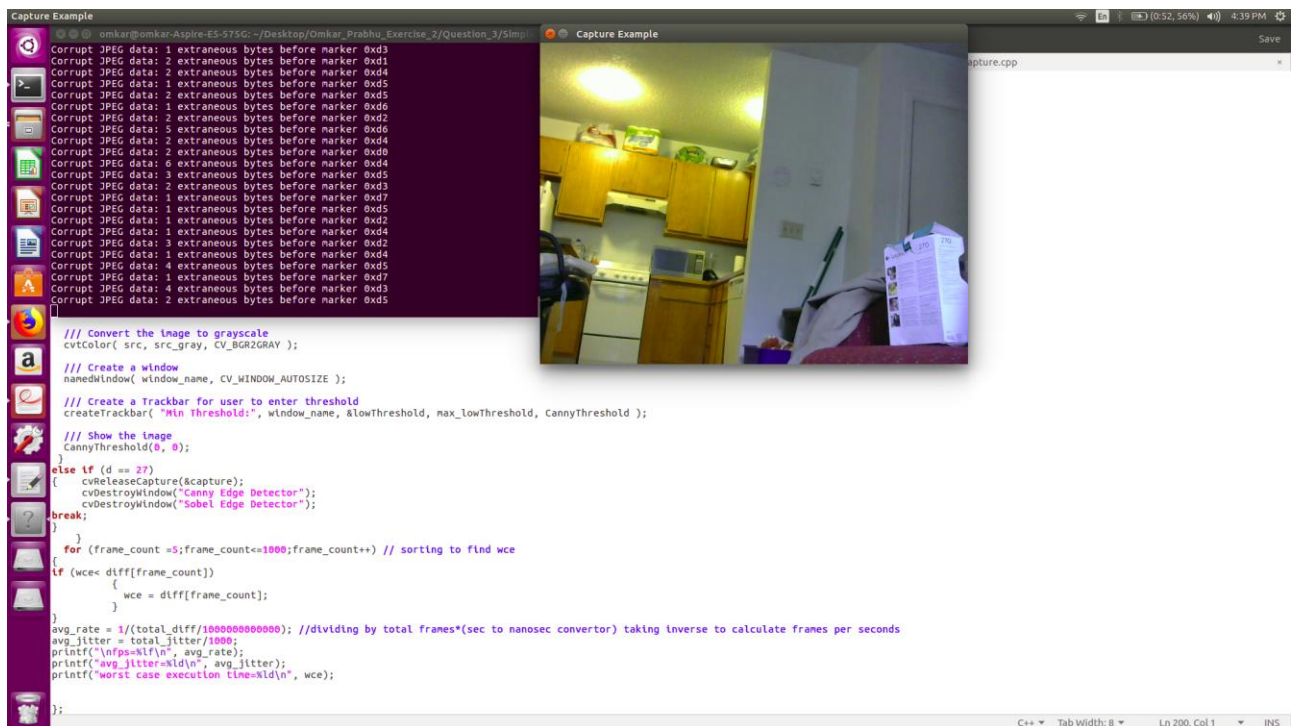


Simpler_Capture analysis

FPS = 28.59 avg_jitter = 1363333 ns Worst Case Execution = 40603280 ns



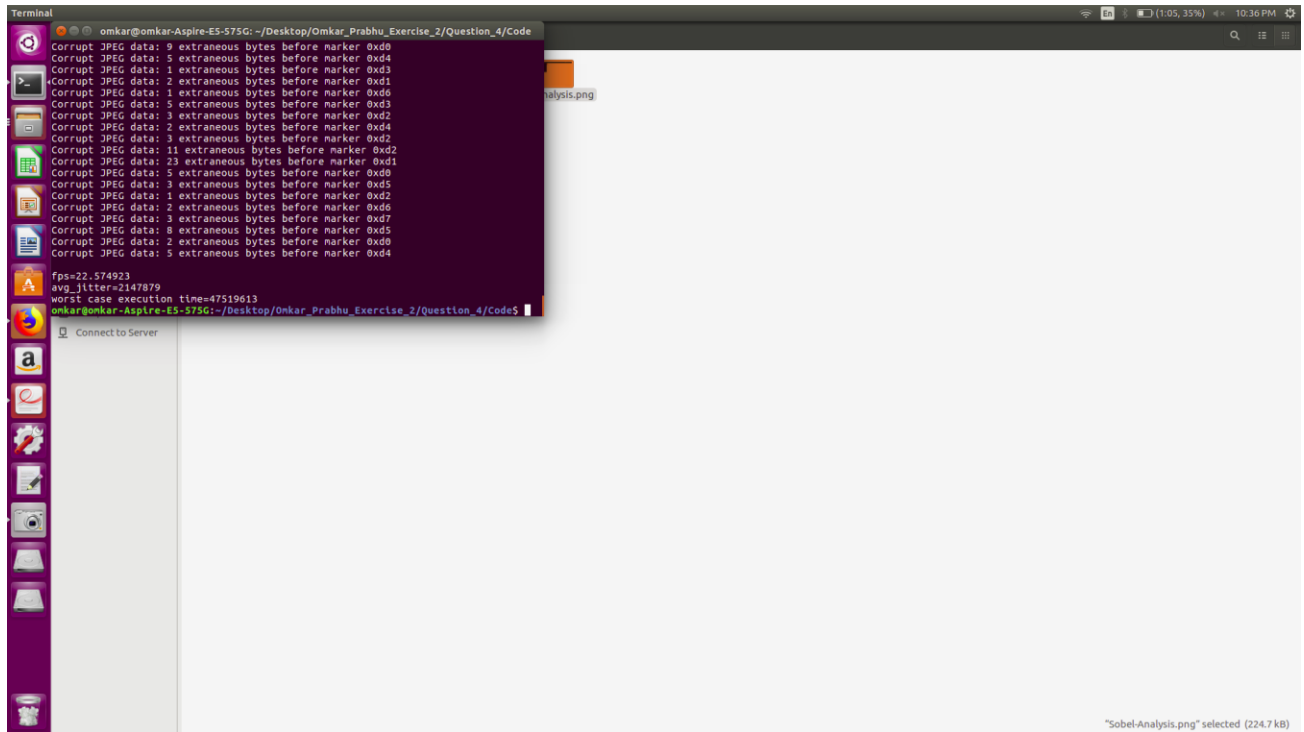
Simpler_Capture runtime



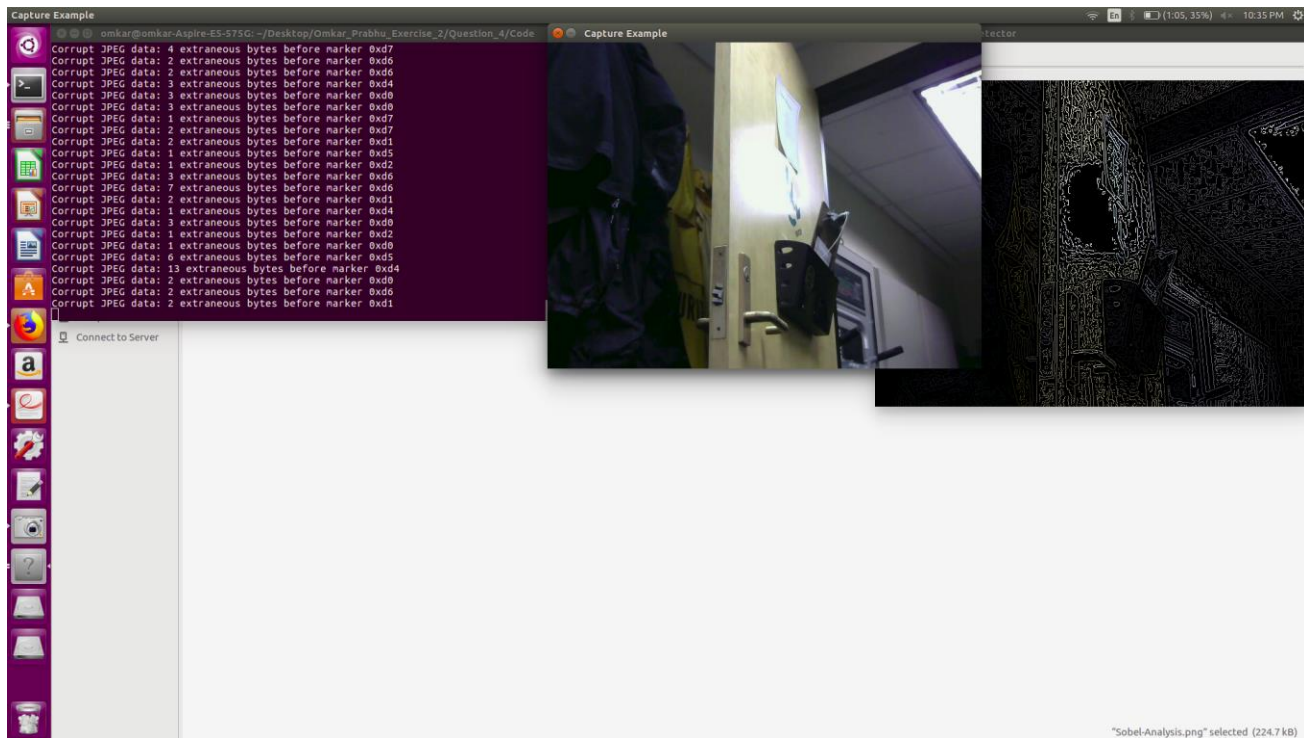
Q4.

Canny_analysis

FPS = 22.57 avg_jitter = 2147879 ns Worst Case Execution = 47519613 ns

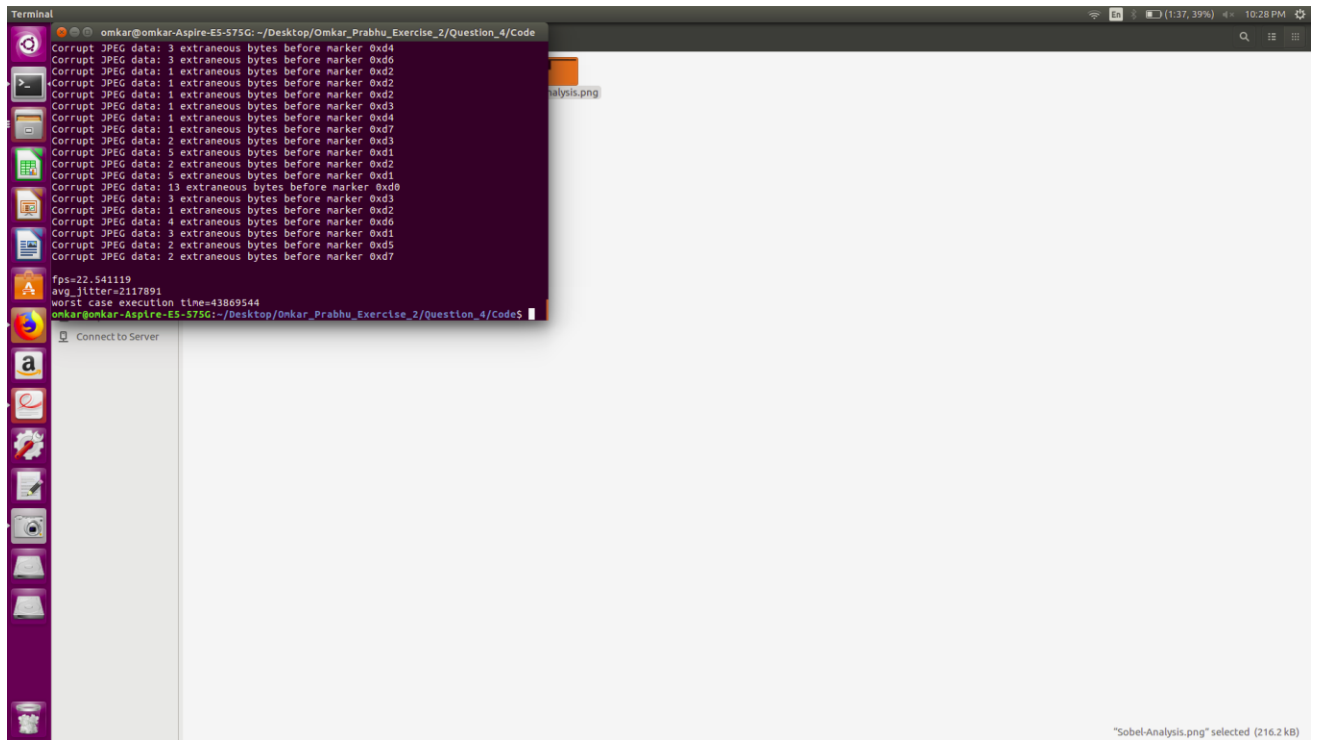


Canny Runtime



Sobel-analysis

FPS = 22.64 avg_jitter = 2117891 ns Worst Case Execution = 43869544 ns



Sobel_runitme

