In [8]:
```
pip install opencv-contrib-python
```

```
Collecting opencv-contrib-python
  Using cached opencv_contrib_python-4.7.0.72-cp37-abi3-win_amd64.whl (44.9 M
B)
Requirement already satisfied: numpy>=1.17.3 in c:\users\shruti sakpal\anacon
da3\lib\site-packages (from opencv-contrib-python) (1.23.5)
Installing collected packages: opencv-contrib-python
Note: you may need to restart the kernel to use updated packages.

ERROR: Could not install packages due to an OSError: [WinError 5] Access is d
enied: 'C:\\Users\\Shruti Sakpal\\anaconda3\\Lib\\site-packages\\cv2\\cv2.py
d'
Consider using the `--user` option or check the permissions.
```

In [1]:
```
pip install cvlib
```

```
Requirement already satisfied: cvlib in c:\users\shruti sakpal\anaconda3\lib
\site-packages (0.2.7)
Requirement already satisfied: pillow in c:\users\shruti sakpal\anaconda3\lib
\site-packages (from cvlib) (9.2.0)
Requirement already satisfied: imutils in c:\users\shruti sakpal\anaconda3\li
b\site-packages (from cvlib) (0.5.4)
Requirement already satisfied: numpy in c:\users\shruti sakpal\anaconda3\lib
\site-packages (from cvlib) (1.23.5)
Requirement already satisfied: imageio in c:\users\shruti sakpal\anaconda3\li
b\site-packages (from cvlib) (2.19.3)
Requirement already satisfied: requests in c:\users\shruti sakpal\anaconda3\l
ib\site-packages (from cvlib) (2.28.1)
Requirement already satisfied: progressbar in c:\users\shruti sakpal\anaconda
3\lib\site-packages (from cvlib) (2.5)
Requirement already satisfied: urllib3<1.27,>=1.21.1 in c:\users\shruti sakpa
l\anaconda3\lib\site-packages (from requests->cvlib) (1.26.11)
Requirement already satisfied: charset-normalizer<3,>=2 in c:\users\shruti sa
kpal\anaconda3\lib\site-packages (from requests->cvlib) (2.0.4)
Requirement already satisfied: idna<4,>=2.5 in c:\users\shruti sakpal\anacond
a3\lib\site-packages (from requests->cvlib) (3.3)
Requirement already satisfied: certifi>=2017.4.17 in c:\users\shruti sakpal\a
naconda3\lib\site-packages (from requests->cvlib) (2022.9.14)
Note: you may need to restart the kernel to use updated packages.
```

In [3]:
```
pip install gtts playsound
```

```
Collecting gtts
  Downloading gTTS-2.3.2-py3-none-any.whl (28 kB)
Collecting playsound
  Downloading playsound-1.3.0.tar.gz (7.7 kB)
  Preparing metadata (setup.py): started
  Preparing metadata (setup.py): finished with status 'done'
Requirement already satisfied: requests<3,>=2.27 in c:\users\shruti sakpal\an
aconda3\lib\site-packages (from gtts) (2.28.1)
Requirement already satisfied: click<8.2,>=7.1 in c:\users\shruti sakpal\anac
onda3\lib\site-packages (from gtts) (8.0.4)
Requirement already satisfied: colorama in c:\users\shruti sakpal\anaconda3\l
ib\site-packages (from click<8.2,>=7.1->gtts) (0.4.5)
Requirement already satisfied: charset-normalizer<3,>=2 in c:\users\shruti sa
kpal\anaconda3\lib\site-packages (from requests<3,>=2.27->gtts) (2.0.4)
Requirement already satisfied: certifi>=2017.4.17 in c:\users\shruti sakpal\a
naconda3\lib\site-packages (from requests<3,>=2.27->gtts) (2022.9.14)
Requirement already satisfied: urllib3<1.27,>=1.21.1 in c:\users\shruti sakpa
l\anaconda3\lib\site-packages (from requests<3,>=2.27->gtts) (1.26.11)
Requirement already satisfied: idna<4,>=2.5 in c:\users\shruti sakpal\anacond
a3\lib\site-packages (from requests<3,>=2.27->gtts) (3.3)
Building wheels for collected packages: playsound
  Building wheel for playsound (setup.py): started
  Building wheel for playsound (setup.py): finished with status 'done'
  Created wheel for playsound: filename=playsound-1.3.0-py3-none-any.whl size
=7020 sha256=669ebf075a661dc566e004ff4b5bd107e02911bc4c3091ac4c51ec37a8b329eb
  Stored in directory: c:\users\shruti sakpal\appdata\local\pip\cache\wheels
\ba\39\54\c8f7ff9a88a644d3c58b4dec802d90b79a2e0fb2a6b884bf82
Successfully built playsound
Installing collected packages: playsound, gtts
Successfully installed gtts-2.3.2 playsound-1.3.0
Note: you may need to restart the kernel to use updated packages.
```

In [10]:
```
pip install PyObjC
```

```
Collecting PyObjC
  Using cached pyobjc-9.2-py3-none-any.whl (4.0 kB)
Collecting pyobjc-framework-SyncServices==9.2
  Downloading pyobjc-framework-SyncServices-9.2.tar.gz (49 kB)
     -------------------------------------- 49.7/49.7 kB 2.6 MB/s eta 0:00:
00
  Installing build dependencies: started
  Installing build dependencies: finished with status 'done'
  Getting requirements to build wheel: started
  Getting requirements to build wheel: finished with status 'error'
Note: you may need to restart the kernel to use updated packages.
```

```
error: subprocess-exited-with-error

Getting requirements to build wheel did not run successfully.
exit code: 1

[17 lines of output]
Traceback (most recent call last):
  File "C:\Users\Shruti Sakpal\anaconda3\lib\site-packages\pip\_vendor\pep5
17\in_process\_in_process.py", line 363, in <module>
    main()
  File "C:\Users\Shruti Sakpal\anaconda3\lib\site-packages\pip\_vendor\pep5
17\in_process\_in_process.py", line 345, in main
    json_out['return_val'] = hook(**hook_input['kwargs'])
  File "C:\Users\Shruti Sakpal\anaconda3\lib\site-packages\pip\_vendor\pep5
17\in_process\_in_process.py", line 130, in get_requires_for_build_wheel
    return hook(config_settings)
  File "C:\Users\Shruti Sakpal\AppData\Local\Temp\pip-build-env-ts8572b6\ov
erlay\Lib\site-packages\setuptools\build_meta.py", line 341, in get_requires_
for_build_wheel
    return self._get_build_requires(config_settings, requirements=['whee
l'])
  File "C:\Users\Shruti Sakpal\AppData\Local\Temp\pip-build-env-ts8572b6\ov
erlay\Lib\site-packages\setuptools\build_meta.py", line 323, in _get_build_re
quires
    self.run_setup()
  File "C:\Users\Shruti Sakpal\AppData\Local\Temp\pip-build-env-ts8572b6\ov
erlay\Lib\site-packages\setuptools\build_meta.py", line 338, in run_setup
    exec(code, locals())
  File "<string>", line 30, in <module>
  File "C:\Users\Shruti Sakpal\AppData\Local\Temp\pip-install-ihn3lodd\pyob
jc-framework-syncservices_6ea077a045064f22a97a114c0780e224\pyobjc_setup.py",
line 469, in Extension
    if "clang" in get_config_var("CC"):
TypeError: argument of type 'NoneType' is not iterable
[end of output]

note: This error originates from a subprocess, and is likely not a problem
with pip.
error: subprocess-exited-with-error

Getting requirements to build wheel did not run successfully.
exit code: 1

See above for output.

note: This error originates from a subprocess, and is likely not a problem wi
th pip.
```

In [7]:
```
pip install tensorflow
```

```
Collecting tensorflowNote: you may need to restart the kernel to use updat
ed packages.

  Downloading tensorflow-2.12.0-cp39-cp39-win_amd64.whl (1.9 kB)
Collecting tensorflow-intel==2.12.0
  Downloading tensorflow_intel-2.12.0-cp39-cp39-win_amd64.whl (272.8 MB)
     ------------------------------------ 272.8/272.8 MB 2.0 MB/s eta 0:
00:00
Collecting flatbuffers>=2.0
  Downloading flatbuffers-23.5.26-py2.py3-none-any.whl (26 kB)
Requirement already satisfied: setuptools in c:\users\shruti sakpal\anacon
da3\lib\site-packages (from tensorflow-intel==2.12.0->tensorflow) (63.4.1)
Requirement already satisfied: h5py>=2.9.0 in c:\users\shruti sakpal\anaco
nda3\lib\site-packages (from tensorflow-intel==2.12.0->tensorflow) (3.7.0)
Collecting grpcio<2.0,>=1.24.3
  Downloading grpcio-1.56.0-cp39-cp39-win_amd64.whl (4.2 MB)
     -------------------------------------- 4.2/4.2 MB 2.9 MB/s eta 0:0
0:00
Collecting keras<2.13,>=2.12.0
```

In [2]:
```python
import cv2
import cvlib as cv
from cvlib.object_detection import draw_bbox
from gtts import gTTS
from playsound import playsound
import os
```

In [3]:
```python
def speech(text):
    print(text)
    language = "en"
    out = gTTS(text = text,lang = language, slow = False)

    output_directory = os.getcwd()  # Get the current working directory
    output_file = os.path.join(output_directory, "output.mp3")  # Combine dire

    out.save(output_file)
    playsound(output_file)
```

In [4]:
```python
obj = cv2.VideoCapture(0)
```

In [5]:
```python
labels = []
```

In [6]:
```python
while True:
    ret, frame = obj.read()
    bbox, label, conf = cv.detect_common_objects(frame)
    output = draw_bbox(frame, bbox, label, conf)

    cv2.imshow("Detecting Output",output)

    for item in label:
        if item in labels:
            pass
        else:
            labels.append(item)

    if cv2.waitKey(1) & 0xFF == ord(" "):
        break

cv2.destroyAllWindows()

i = 0
sentence = []
for label in labels:
    if i == 0:
        sentence.append(f"There is a {label} ")
    else:
        sentence.append(f", a {label}")

    i += 1
speech(" ".join(sentence))
```

There is a vase , a person , a cell phone , a refrigerator , a book

    Error 305 for command:
        close "C:\Users\SHRUTI~1\AppData\Local\Temp\PSsx5cm90p.mp3"
    Cannot specify extra characters after a string enclosed in quotation mark
s.
Failed to close the file: "C:\Users\SHRUTI~1\AppData\Local\Temp\PSsx5cm90p.mp
3"

In [ ]: