Task-

For GNU/Linux box:

1. **Create virtual environment https://docs.python.org/3/library/venv.html,**
2. **$ source /path/to/venv/bin/activate,**
3. **Ensure you are inside your virtual environment before proceeding,**
4. **Install ultralytics - follow steps given at https://docs.ultralytics.com/quickstart/,**
5. **Test installation with the example given, and verify whether the trained model can recognise objects and also perform segmentation from the online image.**

Procedure-

Step 1: Created Project Folder

- I created a new folder and named it:

yoloproject

Step 2: Created a Virtual Environment

- Opened Command Prompt and navigated to the yoloproject folder.
- Ran the following command to create a virtual environment:

python -m venv venv

Step 3: Activated the Virtual Environment

- Activated the virtual environment using:

venv\Scripts\activate

Step 4: Installed Ultralytics Library

- Installed the YOLO (Ultralytics) library using:

pip install ultralytics

Step 5: Performed Object Detection

- Used the YOLO CLI command for object detection on an online image:

yolo predict model=yolov8n.pt source='https://ultralytics.com/images/bus.jpg'

- This downloaded the model yolov8n.pt and processed the input image.
- The output image was saved in:

yoloproject\runs\detect\predict\

Step 6: Performed Image Segmentation

- Used the following command for segmentation:

yolo predict model=yolov8l-seg.pt source='https://ultralytics.com/images/bus.jpg'

- This used a segmentation model (yolov8l-seg.pt) to perform instance segmentation on the same image.
- The output image was saved in:

yoloproject\runs\segment\predict\