Assignemnt Q1:
You are tasked with implementing a video object detection system using Python and the OpenCV library. to detect and track objects of interest in a video stream and annotate them with bounding boxes. You will need to use a pre-trained deep learning model for object detection and apply it to each frame of the video.

Assignement Q2:

You are tasked with developing a video object detection model using a custom-trained dataset. Your dataset consists of videos from surveillance cameras and contains several object classes of interest. You have already trained a detection model on this dataset using a deep learning framework of your choice.

Write Python code to perform the following tasks:

- Load the pre-trained video object detection model and its weights.
- Configure the model to accept video input and perform object detection on each frame of the video.
- Draw bounding boxes around the detected objects on each frame.
- Save the processed video with bounding boxes to an output file.
- Please provide code snippets or functions for each of these steps and ensure that you specify the necessary libraries and dependencies required for your solution.