**Step-1:**

clone github repository using:

git clone <https://github.com/AlexeyAB/darknet>

**Step-2:**

Open MakeFile present in darknet repository in any editor of your choice and edit it:

1. Set GPU = 1 and CUDNN = 1 --if you have a GPU otherwise 0.
2. Set OPENCV = 1

GPU=1  
CUDNN=1  
CUDNN\_HALF=0  
OPENCV=1  
AVX=0  
OPENMP=0  
LIBSO=0  
ZED\_CAMERA=0  
ZED\_CAMERA\_v2\_8=0

Save that file.

**Step-3:**

Open a terminal in **darknet** directory and type commad **make,** to start compiling darknet.

**Step-4:**

In directory **darknet/cfg** find the cfg file named as yolov4-custom.cfg. copy and rename it with any name of your choice **i.e. yolo-obj.cfg**

Now open this file in any editor and edit the following:

1. Set batch **(in line 6**) according to requirement i.e **batch=64**
2. Set subdivision **(in line 7**) according to your requirement i.e. **subdivisions=16**
3. Set width and height **(in line 8, 9**) of your image to be resized. i.e. **width=416, height=416**.
4. Set max\_batches **(in line 20**) according to (classes\*2000) i.e. if no. of classes is 3 then **max\_batches=6000**
5. Set steps **(in line 22)** as 80%, 90% of your max\_batches i.e. **steps = 4800, 5200**
6. Set no. of classes in each YOLO layer **(in line 967, 1055, 1143)** according to your problem.
7. Set no. of filters according to **(classes + 5)\*3** in each Convolutional Layer Right Before Each YOLO **(in Line 963, 1051, 1139)** i.e. if no. of classes is 3 then **filters = 24**

Save the cfg file.

**Step-4:**

In directory **darknet/data** create a file named i.e. **obj.names** and place all the classes names in it (each in single line).

**Note: order of Classes matters During Testing so write them in same order classes are in annotation files.**

**Step-5:**

Create a text file **train.txt** and write all the paths to each training image in it.

Create another text file **test.txt** and write all the paths to each testing images in it.

**Step-6:**

Create a file **obj.data** in the directory **darknet/data** and write the following:

classes = 3 #No. of Classes  
train = data/train.txt #path to train.txt  
valid = data/test.txt #path to test.txt  
names = data/obj.names #path to obj.names  
backup = backup/ #path to backup folder in darkent directory

**Step-7:**

Download pre-trained weights for your YOLO Version. <https://github.com/AlexeyAB/darknet/releases/download/darknet_yolo_v3_optimal/yolov4.conv.137>

**Step-8:**

Now write the following command in terminal (opened in darkent directory)

**./darknet train <path-to-obj.data> <path-to-yolo-obj.cfg> <path-to-pre-trained-weights>**

And hit enter your training will start.