**Lab 9**

1. For this task I tried to implement image classification using CNN on Tensorflow. First step was to find image dataset, I used Cifar - 10 image dataset to implement my application. Then we divide data into the batches, this step will prevent our machine from running out of memory. Next step will be to normalize the data, which will return Numpy array. After that we have to randomize the data and process all data and save it. Next step will be to build network: For the neural network, we should built each layer into a function. To test the code more thoroughly, we require that to put each layer in a function. This allows us to give better feedback and test for simple mistakes using our unit tests. For the next step neural network should read in image dataset. Then we have to implement convolution and max pooling layers, then implement fully connected layer. Following step is to train Neural network, implement the function train\_neural\_network to do a single optimization. And finally test the dataset, accuracy should be more than 50%.

Confusion matrix:

