**Question1: Using default network.**

Trying to plot the train images and its corresponding labels. From the below labels we are not able to figure out the classes to which a particular group of images belongs.

A picture containing text

Description automatically generated

Plotting the default CNN Model

Diagram

Description automatically generated

Plotting the training loss, validation loss, training accuracy and validation accuracy for default CNN.

Chart, line chart

Description automatically generated

Question2: modifying the model.

To do this we have considered few models. Out first approach is to not to change the model, instead change the vary the learning rate and see what happens. In question1, we are using fixed learning rate but, in this model, we will be using learning rate exponential decay.

We have used the following decay condition: initial\_learning\_rate = 0.01,