1.) Supervised learning is an approach to machine learning where labeled data is used to train a model that predicts an outcome. Regression and classification problems can be solved using supervised learning. The “First Keras Example” in the lab is an example of supervised learning because the neural network is fitted with a labeled training data set to create a linear regression model. In this exercise, the input data, the mtcars training dataset, is linked to a desired output, the linear regression model to predict mpg. Unsupervised learning does not use a labeled dataset and the input data is not linked to a desired output. In the unsupervised learning approach, the machine learning algorithm attempts to determine patterns and relationships in unsorted, unlabeled datasets.

2.)

A screenshot of a computer screen

Description automatically generated

3.)

4.) The purpose of the loss function is to measure how well the network is performing by determining the difference between the predictions by the network and the true values.