Hello, we are group 1, and this is the explanation about our notebook lab 3. As you can see in the 1º image, these will be the references from the data without normalizing, after max-min scaling and standardization.

In the first point of the practice, we have applied directly kn classifier with 3 neighbours, so that we can see the differences from the distinct x variables references. In 2º image we show how the algorithm is being affected from having dynamic ranges and not.

3º image shows the computation of the optimal k value by 3-fold cross validation. Then compute the mean of the accuracies and choosing the one with greatest.

At 4º image, we see the results in test sets. We assume that the no normalized reference has greater accuracy than others because they have an overfitting in their training tests. This implies that at the end, they do not generalize well with test inputs.

Last 3 images show the alternative method, when validation-training graph plots the optimal k value as the point where both lines proximate most.

Finally, after discussing and comparing each of the measure values from the 3 models, before and after rescaling x train sets, we conclude that the best model possible to classify our desired output is the neural network, more precisely, MLP.