Sequential API

- Maps only one input to one output

Functional API

- If you have a model that has, e.g. one input and two outputs, you want to use the functional API
- A way to create models that are more flexible than Sequential API
- You build a graph using:
  - `from tensorflow.keras import layers`
  - `inputs = keras.Input(shape = (64, 64, 1))`
  - `x = layers.Conv2D(options)(inputs)`
  - `x = Batch.Normalization()(x)`
  - `x = keras.activation.relu(x)`
  - And so on…
- If you want to **create a network with two outputs,** you connect the last layer to two fully connected output layers
  - `output1 = layers.Dense(10, name='first_number')(x)`
  - `output2 = layers.Dense(10, name='second_number')(x)`
  - Your outputs now become a list like so:
    - `model = keras.Model(inputs=inputs, outputs=[outputs1, outputs2])`
  - When you decide to compile your model, you now have two losses like so:
    - ```
      loss = [
            keras.losses.SparseCategoricalCrossentropy(),
            keras.losses.SparseCategoricalCrossentropy()
      ]
      ```
      - Might be possible to just define one to use the same one for both
      ```