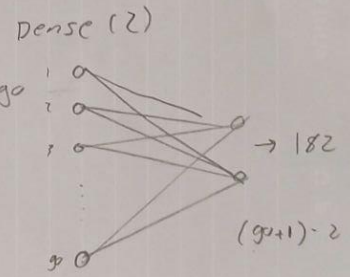
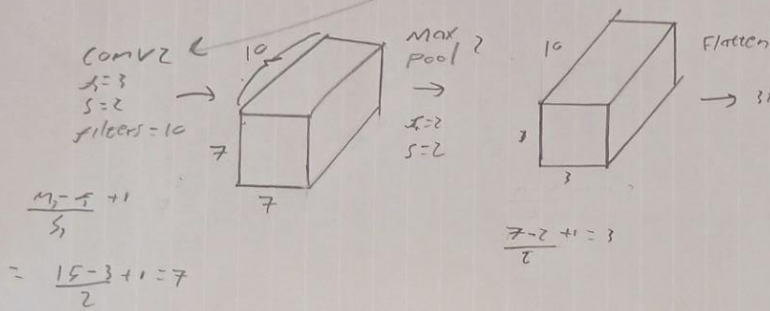


$\text{Conv 1} = 3 \cdot 3 \cdot 3 \cdot 10 \cdot 10 = 280$
 $\text{Max Pool 1} =$
 $\text{Conv 2} = 3 \cdot 3 \cdot 10 \cdot 10 \cdot 10 = 910$
 $\text{Max Pool 2} =$
 $\text{Flatten} =$
 $\text{Dense (2)} = (90+1) \cdot 2 = 182$
 $= 1372 \text{ Params}$

$$\frac{M-k}{s} + 1 = \frac{6-3}{2} + 1 = 3$$

$$\frac{M-k}{s} + 1 = \frac{3-2}{2} + 1 = 1$$



$$\frac{M-k}{s} + 1 = \frac{15-3}{2} + 1 = 7$$

$$\frac{M-k}{s} + 1 = \frac{7-2}{2} + 1 = 3$$

```

17/17 [=====] - 0s 9ms/step - loss: 0.6644 - accuracy: 0.6761
Epoch 3/20
17/17 [=====] - 0s 4ms/step - loss: 0.6482 - accuracy: 0.6780
Epoch 4/20
17/17 [=====] - 0s 6ms/step - loss: 0.6325 - accuracy: 0.6799
Epoch 5/20
17/17 [=====] - 0s 10ms/step - loss: 0.6171 - accuracy: 0.6818
Epoch 6/20
17/17 [=====] - 0s 8ms/step - loss: 0.6016 - accuracy: 0.6875
Epoch 7/20
17/17 [=====] - 0s 13ms/step - loss: 0.5857 - accuracy: 0.7159
Epoch 8/20
17/17 [=====] - 0s 14ms/step - loss: 0.5691 - accuracy: 0.7367
Epoch 9/20
17/17 [=====] - 0s 17ms/step - loss: 0.5524 - accuracy: 0.7557
Epoch 10/20
17/17 [=====] - 1s 30ms/step - loss: 0.5353 - accuracy: 0.7917
Epoch 11/20
17/17 [=====] - 0s 26ms/step - loss: 0.5179 - accuracy: 0.8049
Epoch 12/20
17/17 [=====] - 0s 30ms/step - loss: 0.5004 - accuracy: 0.8220
Epoch 13/20
17/17 [=====] - 0s 21ms/step - loss: 0.4826 - accuracy: 0.8314
Epoch 14/20
17/17 [=====] - 0s 7ms/step - loss: 0.4649 - accuracy: 0.8447
Epoch 15/20
17/17 [=====] - 0s 17ms/step - loss: 0.4472 - accuracy: 0.8561
Epoch 16/20
17/17 [=====] - 1s 37ms/step - loss: 0.4292 - accuracy: 0.8561
Epoch 17/20
17/17 [=====] - 0s 16ms/step - loss: 0.4113 - accuracy: 0.8617
Epoch 18/20
17/17 [=====] - 0s 28ms/step - loss: 0.3937 - accuracy: 0.8731
Epoch 19/20
17/17 [=====] - 0s 19ms/step - loss: 0.3764 - accuracy: 0.8788
Epoch 20/20
17/17 [=====] - 0s 11ms/step - loss: 0.3597 - accuracy: 0.8826
5/5 [=====] - 0s 2ms/step - loss: 0.3399 - accuracy: 0.8939
Test accuracy: 0.8939393758773804

```

When removing strides=2 from the two Conv2D layers, the accuracy can reach 1:

```

17/17 [=====] - 0s 7ms/step - loss: 0.0719 - accuracy: 0.9830
Epoch 15/20
17/17 [=====] - 0s 9ms/step - loss: 0.0614 - accuracy: 0.9848
Epoch 16/20
17/17 [=====] - 0s 8ms/step - loss: 0.0531 - accuracy: 0.9848
Epoch 17/20
17/17 [=====] - 0s 9ms/step - loss: 0.0466 - accuracy: 0.9848
Epoch 18/20
17/17 [=====] - 0s 7ms/step - loss: 0.0414 - accuracy: 0.9867
Epoch 19/20
17/17 [=====] - 0s 7ms/step - loss: 0.0372 - accuracy: 0.9962
Epoch 20/20
17/17 [=====] - 0s 19ms/step - loss: 0.0337 - accuracy: 0.9981
5/5 [=====] - 0s 2ms/step - loss: 0.0343 - accuracy: 1.0000
Test accuracy: 1.0

```