```
: model.summary()
```

```
Model: "sequential_1"
_________________________________________________________________
Layer (type)                 Output Shape              Param #
=================================================================
conv2d_2 (Conv2D)            (None, 32, 32, 64)        1792
_________________________________________________________________
max_pooling2d_2 (MaxPooling2 (None, 16, 16, 64)        0
_________________________________________________________________
conv2d_3 (Conv2D)            (None, 16, 16, 32)        18464
_________________________________________________________________
max_pooling2d_3 (MaxPooling2 (None, 8, 8, 32)          0
_________________________________________________________________
dropout_3 (Dropout)          (None, 8, 8, 32)          0
_________________________________________________________________
flatten_1 (Flatten)          (None, 2048)              0
_________________________________________________________________
dense_5 (Dense)              (None, 512)               1049088
_________________________________________________________________
dense_6 (Dense)              (None, 128)               65664
_________________________________________________________________
dense_7 (Dense)              (None, 64)                8256
_________________________________________________________________
dense_8 (Dense)              (None, 32)                2080
_________________________________________________________________
dropout_4 (Dropout)          (None, 32)                0
_________________________________________________________________
dense_9 (Dense)              (None, 10)                330
=================================================================
Total params: 1,145,674
Trainable params: 1,145,674
Non-trainable params: 0
_________________________________________________________________
```

DL Assignment 2

I. Conv2D layer1 ⟶ 1792

$(3 \times 3 \times 64 \times 3) + 64$

3 × 3 : kernel; 64 : filters; 3 : channels; 64 : backpropagation

II. Conv2D layer2 ⟶ 18464

$(3 \times 3 \times 32 \times 64) + 32$

3 × 3 : kernel; 32 : filters; 64 : filters from previous layer; 32 : backprop.

III. Dense layer 1 ⟶ 1049088

$(512 \times 2048) + 512$

512 : neurons in the layer; 2048 : output from flatten layer; 512 : backpropogation.

IV. Dense layer 2 ⟶ 65664

$(128 \times 512) + 128$

128 : neurons; 512 : o/p from previous dense layer; 128 : backpropogation.

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V. Dense layer 3 ⟶ 8256

$(64 \times 128) + 64$

64 → neurons; 128 → o/p from prev. dense layer; 64 → backprop.

VI. Dense layer 4 ⟶ 2080

$(32 \times 64) + 32$

32 → neurons; 64 → o/p from prev.; 32 → backprop.

VII. Dense layer 5 (output layer) ⟶ 330

$(10 \times 32) + 10$

10 → no. of o/p neurons; 32 → o/p from prev. layer; 10 → backprop.

Total trainable parameters
= 1,145,674.