Testing The Model

```
import numpy as np
from tensorflow.keras.preprocessing import image


img = image.load_img('/content/Dataset/test_set/D/10.png',target_size=(64,64))

img
```

Array Conversion

```
x = image.img_to_array(img)
x


array([[[0., 0., 0.],
        [0., 0., 0.],
        [0., 0., 0.],
         ...,
        [0., 0., 0.],
        [0., 0., 0.],
        [0., 0., 0.]],
        [[0., 0., 0.],
        [0., 0., 0.],
        [0., 0., 0.],
         ...,
       [0., 0., 0.],
        [0., 0., 0.],
        [0., 0., 0.]],
```

```
 [[0., 0., 0.],
  [0., 0., 0.],
  [0., 0., 0.],
  ...,
  [0., 0., 0.],
  [0., 0., 0.],
  [0., 0., 0.]],
 ...,
 [[0., 0., 0.],
  [0., 0., 0.],
  [0., 0., 0.],
  ...,
  [0., 0., 0.],
  [0., 0., 0.],
  [0., 0., 0.]],
 [[0., 0., 0.],
  [0., 0., 0.],
  [0., 0., 0.],
  ...,
 [0., 0., 0.],
 [0., 0., 0.],
  [0., 0., 0.]],
 [[0., 0., 0.],
  [0., 0., 0.],
  [0., 0., 0.],
  ...,
  [0., 0., 0.],
  [0., 0., 0.],
```

[0., 0., 0.]]], dtype=float32)

Expanding dimensions

```
x = np.expand_dims(x,axis=0)
x
        array([[[[0., 0., 0.],
                 [0., 0., 0.],
                 [0., 0., 0.],
                 ...,
                 [0., 0., 0.],
                 [0., 0., 0.],
                 [0., 0., 0.]],
                [[0., 0., 0.],
                 [0., 0., 0.],
                 [0., 0., 0.],
                 ...,
                 [0., 0., 0.],
                 [0., 0., 0.],
                 [0., 0., 0.]],
                [[0., 0., 0.],
                 [0., 0., 0.],
                 [0., 0., 0.],
                 ...,
                 [0., 0., 0.],
                 [0., 0., 0.],
                 [0., 0., 0.]],
                 ...,
```

[[0., 0., 0.],

[0., 0., 0.],

[0., 0., 0.],

...,

[0., 0., 0.],

[0., 0., 0.],

[0., 0., 0.]],

[[0., 0., 0.],

[0., 0., 0.],

[0., 0., 0.],

...,

[0., 0., 0.],

[0., 0., 0.],

[0., 0., 0.]],

[[0., 0., 0.],

[0., 0., 0.],

[0., 0., 0.],

...,

[0., 0., 0.],

[0., 0., 0.],

[0., 0., 0.]]]], dtype=float32)

Prediction

model.predict(x)

1/1 [==============================] - 0s 14ms/step
array([[0., 0., 0., 1., 0., 0., 0., 0., 0.]], dtype=float32)

xtrain.class_indices
{'A': 0, 'B': 1, 'C': 2, 'D': 3, 'E': 4, 'F': 5, 'G': 6, 'H': 7, 'I': 8}

[ ]

```
op = ['A','B','C','D','E','F','G','H','I']
pred = np.argmax(model.predict(x))
op[pred]
```

```
op = ['A','B','C','D','E','F','G','H','I']
pred = np.argmax(model.predict(x))
op[pred]
```

```
1/1 [==============================] - 0s 15ms/step
'
D
```

```
img = image.load_img('/content/Dataset/test_set/D/10.png',target_size=(64,64))
x = image.img_to_array(img)
x = np.expand_dims(x,axis=0)
pred = np.argmax(model.predict(x))
op[pred]
```

```
1/1 [==============================] - 0s 16ms/step
'
D
```