```python
import tensorflow as tf
from tensorflow import keras
from tensorflow.keras import layers
from tensorflow.keras.preprocessing.image import ImageDataGenerator

IMG_SIZE = 244
BATCH_SIZE = 32

train_datagen =
ImageDataGenerator(rescale=1./255,validation_split=0.2)
train_generator = train_datagen.flow_from_directory(
    '/content/drive/MyDrive/skin data/Skin_Data',
    target_size=(IMG_SIZE,IMG_SIZE),
    batch_size=BATCH_SIZE,
    class_mode='categorical',
    subset='training'
)

val_generator = train_datagen.flow_from_directory(
    '/content/drive/MyDrive/skin data/Skin_Data',
    target_size=(IMG_SIZE,IMG_SIZE),
    batch_size=BATCH_SIZE,
    class_mode='categorical',
    subset='validation'
)
```

```
Found 239 images belonging to 2 classes.
Found 58 images belonging to 2 classes.
```

```python
# Define the model
model = keras.Sequential([
    layers.Conv2D(32,
(3,3),activation='relu',input_shape=(IMG_SIZE,IMG_SIZE,3)),
    layers.MaxPooling2D(2,2),
    layers.Conv2D(64,(3,3),activation='relu'),
    layers.MaxPooling2D(2,2),
    layers.Conv2D(128,(3,3),activation='relu'),
    layers.MaxPooling2D(2,2),
    layers.Flatten(),
    layers.Dense(128,activation='relu'),
    layers.Dense(1,activation='sigmoid') #output layer
])

#compile the model
model.compile(optimizer='adam',loss='binary_crossentropy',metrics=['ac
curacy'])

model.fit(train_generator, epochs=5, validation_data=val_generator)
```

```
Epoch 1/5
8/8 [==============================] - 121s 16s/step - loss: 1.1190 -
```

```
accuracy: 0.5000 - val_loss: 0.6939 - val_accuracy: 0.5000
Epoch 2/5
8/8 [==============================] - 39s 5s/step - loss: 0.6934 -
accuracy: 0.5000 - val_loss: 0.6932 - val_accuracy: 0.5000
Epoch 3/5
8/8 [==============================] - 37s 5s/step - loss: 0.6932 -
accuracy: 0.5000 - val_loss: 0.6931 - val_accuracy: 0.5000
Epoch 4/5
8/8 [==============================] - 40s 5s/step - loss: 0.6931 -
accuracy: 0.5000 - val_loss: 0.6931 - val_accuracy: 0.5000
Epoch 5/5
8/8 [==============================] - 36s 5s/step - loss: 0.6931 -
accuracy: 0.5000 - val_loss: 0.6931 - val_accuracy: 0.5000

<keras.src.callbacks.History at 0x7c5d70689030>
```

```python
model.save("Model.h5","label.txt")

from tensorflow.keras.models import load_model
from tensorflow.keras.preprocessing import image
import numpy as np

model = load_model('/content/Model.h5')
test_image_path = '/content/drive/MyDrive/skin
data/Skin_Data/Cancer/Testing/1714-02.jpg'
img = image.load_img(test_image_path, target_size=(244, 244))
img_array = image.img_to_array(img)
img_array = np.expand_dims(img_array, axis=0)

img_array = img_array / 255.0

predictions = model.predict(img_array)
print(predictions)
```

```
1/1 [==============================] - 0s 308ms/step
[[0.49992236]]
```

```python
if predictions < 0.5:
    print('Non Cancer')
else:
    print('Cancer')
```

```
Non Cancer
```