~\Desktop\New folder\Coding\Jupyter\Sem 4\nn\custom_alexnet.ipynb

```
import os

# Define the path to the directory where images are stored
base_dir = "rice_leaf_diseases"

# Define the diseases
diseases = ["Brown spot", "Leaf smut", "Bacterial leaf blight"]

# Create the directory rice_leaf_diseases_2 if it doesn't exist
output_dir = "rice_leaf_diseases_2"
os.makedirs(output_dir, exist_ok=True)

# Loop through each disease
for disease in diseases:
    # Create subdirectories for each disease in rice_leaf_diseases_2 if they don't exist
    disease_dir = os.path.join(output_dir, disease)
    os.makedirs(disease_dir, exist_ok=True)

    # Create an ImageDataGenerator for each disease
    datagen = ImageDataGenerator(
        rotation_range=40,
        width_shift_range=0.2,
        height_shift_range=0.2,
        shear_range=0.2,
        zoom_range=0.2,
        horizontal_flip=True,
        fill_mode='nearest',
        rescale=1./255,
        validation_split=0.2
    )

    # Load images for the current disease
    img_dir = os.path.join(base_dir, disease)
    img_filenames = os.listdir(img_dir)

    for img_filename in img_filenames:
        img_path = os.path.join(img_dir, img_filename)
        img = load_img(img_path)
        x = img_to_array(img)
```

```
        x = x.reshape((1, )+x.shape)

        # Generate and save augmented images for the current disease
        i = 0
        for batch in datagen.flow(x, batch_size=1, save_to_dir=disease_dir, save_prefix=f"{disease}_", save_format='jpeg'):
            i += 1
            if i > 20:
                break
```