```python
# Install TensorFlow and import necessary libraries
!pip install tensorflow
import numpy as np
import matplotlib.pyplot as plt
from tensorflow.keras.datasets import cifar10
from skimage.transform import resize

# Load the CIFAR-10 dataset
(train_images, train_labels), (_, _) = cifar10.load_data()

# Class names
class_names = ['airplane', 'automobile', 'bird', 'cat', 'deer', 'dog',
'frog', 'horse', 'ship', 'truck']

# Function to display images
def display_images(images, labels, class_names, num_images=5):
    fig, axes = plt.subplots(1, num_images, figsize=(15, 15))
    for i in range(num_images):
        axes[i].imshow(images[i])
        axes[i].set_title(class_names[labels[i][0]])
        axes[i].axis('off')
    plt.show()

# Get indices of cat and dog images
cat_indices = np.where(train_labels == 3)[0]  # 3 is the index of the
'cat' class
dog_indices = np.where(train_labels == 5)[0]  # 5 is the index of the
'dog' class

# Select random cat and dog images
random_cat_indices = np.random.choice(cat_indices, 10, replace=False)
# Selecting 10 random cat images
random_dog_indices = np.random.choice(dog_indices, 10, replace=False)
# Selecting 10 random dog images

# Resize images to 64x64 pixels
resized_cat_images = np.array([resize(train_images[idx], (64, 64)) for
idx in random_cat_indices])
resized_dog_images = np.array([resize(train_images[idx], (64, 64)) for
idx in random_dog_indices])

# Display resized cat and dog images
display_images(resized_cat_images, train_labels[random_cat_indices],
class_names, num_images=10)
display_images(resized_dog_images, train_labels[random_dog_indices],
class_names, num_images=10)

Requirement already satisfied: tensorflow in
/usr/local/lib/python3.10/dist-packages (2.15.0)
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Requirement already satisfied: absl-py>=1.0.0 in
/usr/local/lib/python3.10/dist-packages (from tensorflow) (1.4.0)
Requirement already satisfied: astunparse>=1.6.0 in
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Requirement already satisfied: google-auth<3,>=1.6.3 in
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>tensorflow) (3.6)
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>tensorboard<2.16,>=2.15->tensorflow) (2024.2.2)
Requirement already satisfied: MarkupSafe>=2.1.1 in
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Requirement already satisfied: pyasn1<0.7.0,>=0.4.6 in
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>google-auth<3,>=1.6.3->tensorboard<2.16,>=2.15->tensorflow) (0.6.0)
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