1. Design a Neural Network using ANN algorithm on CIFAR 10 dataset

https://www.cs.toronto.edu/~kriz/cifar.html

```python
import tensorflow as tf
from tensorflow.keras import layers, models


# Load and preprocess the CIFAR-10 dataset
(train_images, train_labels), (test_images, test_labels) = tf.keras.datasets.cifar10.load_data()
train_images, test_images = train_images / 255.0, test_images / 255.0
train_labels = tf.keras.utils.to_categorical(train_labels, num_classes=10)
test_labels = tf.keras.utils.to_categorical(test_labels, num_classes=10)


# Build the ANN model
model = models.Sequential()
model.add(layers.Flatten(input_shape=(32, 32, 3)))
model.add(layers.Dense(256, activation='relu'))
model.add(layers.Dense(128, activation='relu'))
model.add(layers.Dense(10, activation='softmax'))


# Compile the model
model.compile(optimizer='adam',
        loss='categorical_crossentropy',
        metrics=['accuracy'])


# Train the model
history = model.fit(train_images, train_labels, epochs=10, batch_size=64, validation_split=0.2)


# Evaluate the model
test_loss, test_acc = model.evaluate(test_images, test_labels)
print("Test accuracy:", test_acc)
```