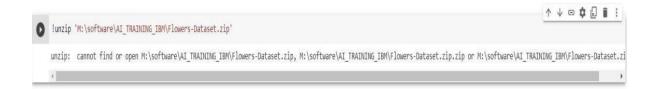
ASSIGNMENT - 3

| Assignment Date | 11 October 2022 |
|---------------------|-----------------|
| Student Name | Aswitha K G |
| Student Roll Number | 111519106007 |
| Maximum Marks | 2 Marks |

QUESTION - 1:

DOWNLOAD THE DATASET



QUESTION - 2:

DATA/IMAGE AUGMENTATION

Y [3] from tensorflow.keras.preprocessing.image import ImageDataGenerator

QUESTION - 3:

TRAINING & TESTING



QUESTION - 4 & 5:

CREATE MODEL:

ADD LAYERS

```
from tensorflow.keras.models import Sequential
from tensorflow.keras.layers import Convolution2D, MaxPooling2D, Flatten, Dense

model=Sequential()
model.add(Convolution2D(64,(3,3),activation='relu',input_shape=(64,64,3)))
model.add(MaxPooling2D(pool_size=(2,2)))
model.add(Flatten())
model.add(Dense(300,activation='relu'))
model.add(Dense(150,activation='relu'))
model.add(Dense(5,activation='softmax'))
```

QUESTION - 6:

COMPILE:

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

QUESTION - 7:

FIT THE MODEL:

QUESTION - 8:

SAVING THE MODEL

```
[11] model.save('Flower.h5')

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

QUESTION - 9:

TEST THE MODEL

```
img=image.load_img('M:\\software\\AI_TRAINING_IBM\\flowers\\sunflower\\6953297_8576bf4ea3.jpg',target_size=(64,64))
x=image.img_to_array(img)
x=np.expand_dims(x,axis=0)
prediction=np.argmax(model.predict(x))
op=['daisy','dandelion','rose','sunflower','tulip']
op[prediction]

1/1 [===========] - 0s 22ms/step
'sunflower'
```

QUESTION -10:

TESTING THE MODEL