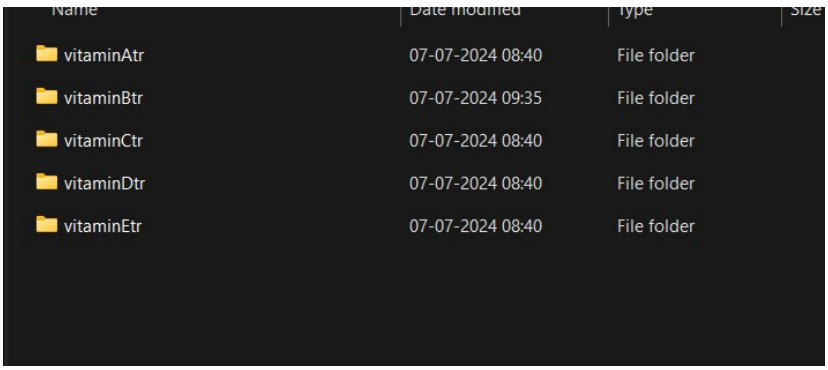
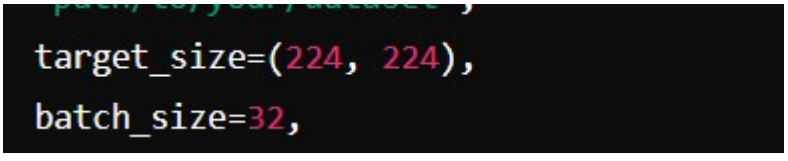
Data Collection and Preprocessing Phase

Date	07 July 2024
Team ID	**SWTID1720158583**
Project Title	**Vitamin Vision: Unveiling The Spectrum Of Nutrient Detection**
Maximum Marks	6 Marks

Preprocessing Template

The images will be preprocessed by resizing, normalizing, augmenting, denoising, adjusting contrast, detecting edges, converting color space, cropping, batch normalizing, and whitening data. These steps will enhance data quality, promote model generalization, and improve convergence during neural network training, ensuring robust and efficient performance across various computer vision tasks.

Section	**Description**
Data Overview	
Resizing	

Normalization	`rescale=1./255,`

Data Augmentation	`shear_range=0.2,`
	`zoom_range=0.2,`
	`horizontal_flip=True,`
	`validation_split=0.2`

Data Preprocessing Code Screenshots	
Loading Data	`train_generator = train_datagen.flow_from_directory(`
Resizing	`target_size=(224, 224),` `batch_size=32,`
Normalization	`train_datagen = ImageDataGenerator(` `rescale=1./255,`

Data Augmentation	`shear_range=0.2,`
	`zoom_range=0.2,`
	`horizontal_flip=True,`
	`validation_split=0.2`

Batch Normalization	`target_size=(224, 224),`
	`batch_size=32,`
	`class_mode='categorical',`
	`subset='validation'`