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Fruit Freshness Detector

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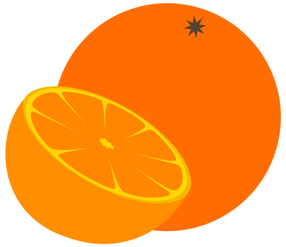
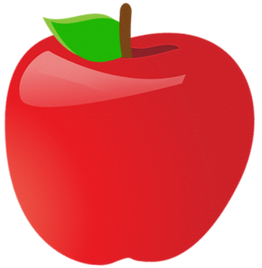
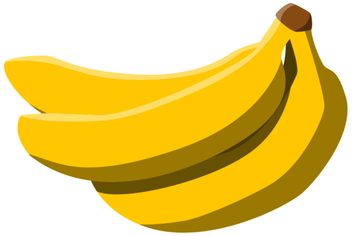
2540133234 - Jacqueline Abyasa
2502009173 - Shafa Amira Qonitatin

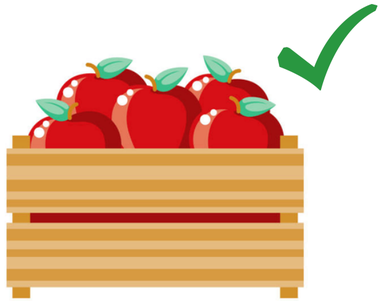
Kelompok 3
LC75

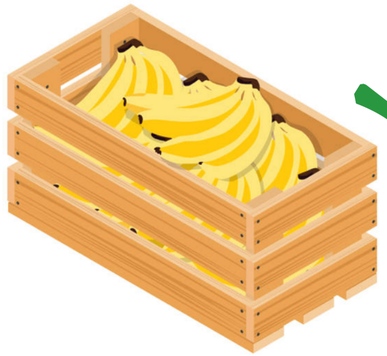
Project Background

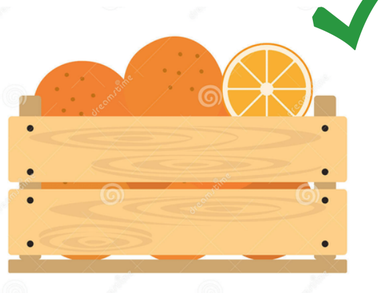




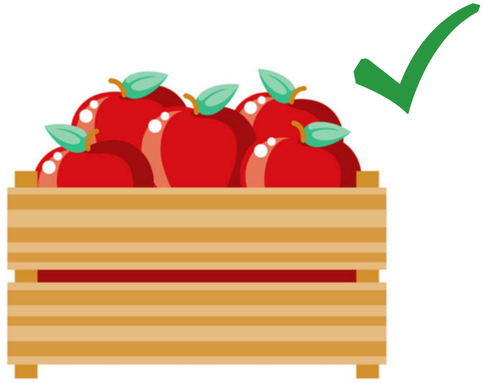


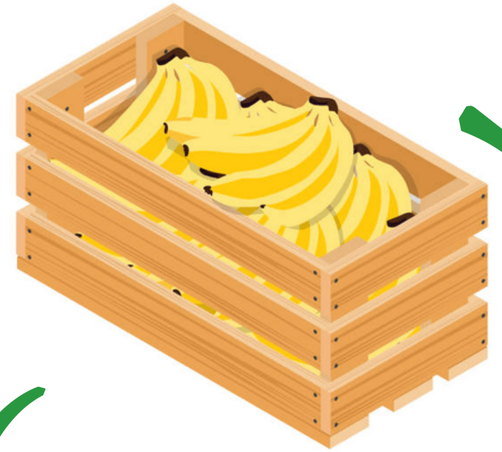


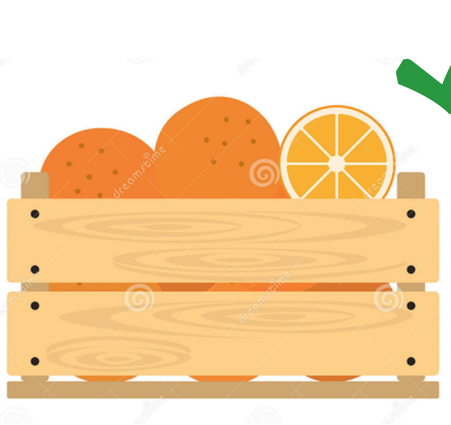


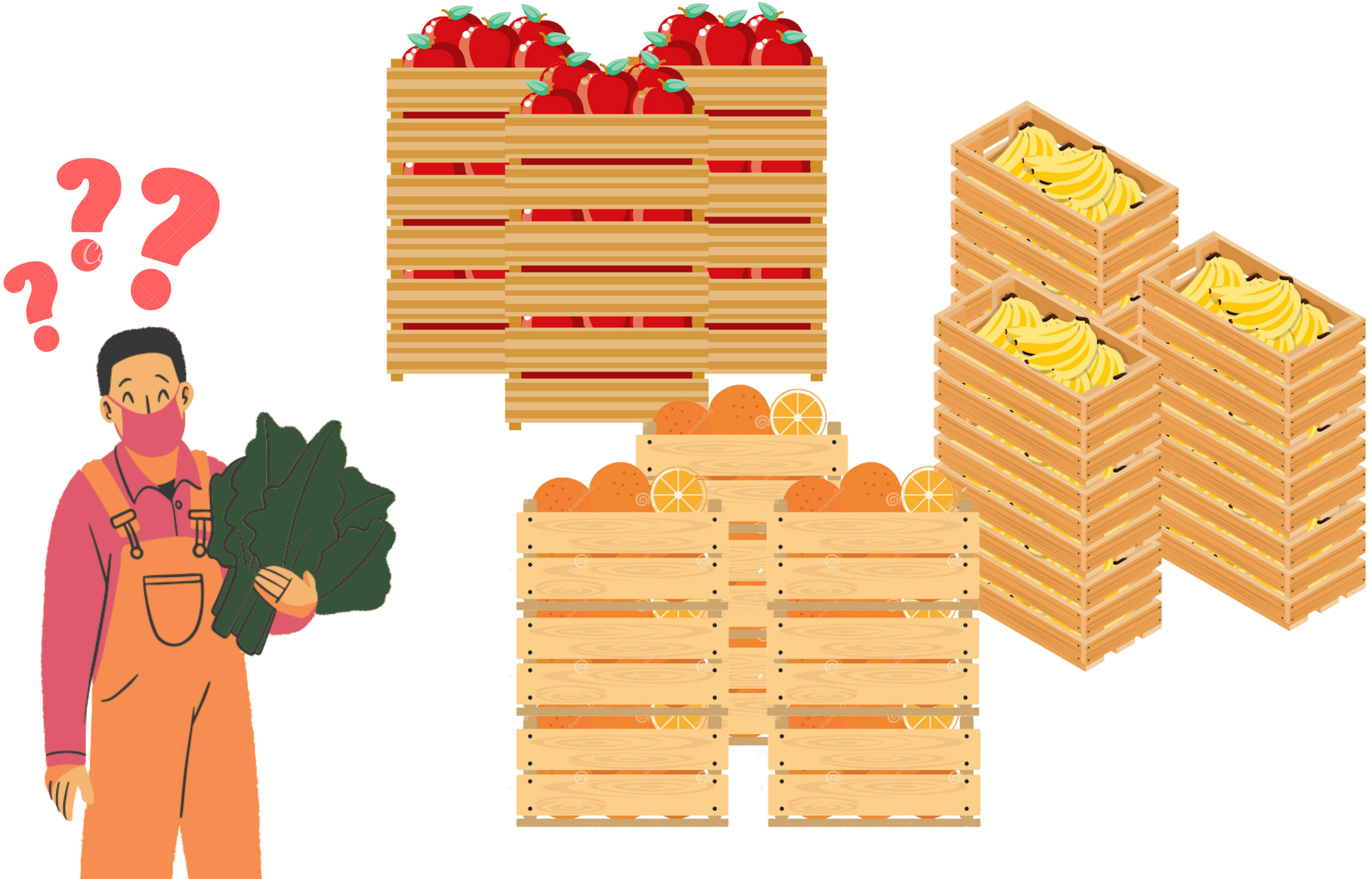



SUPERMARKET









SOLUTION

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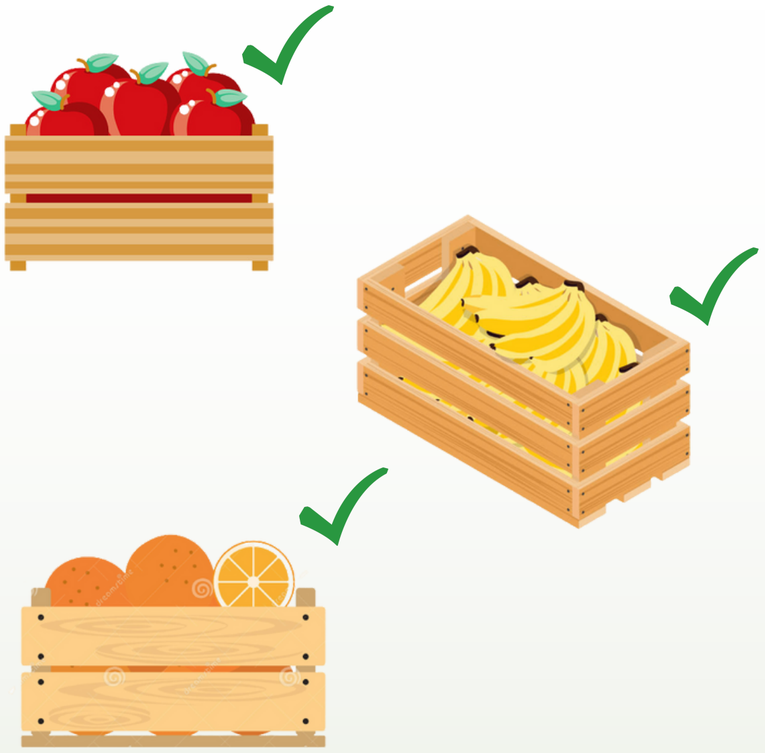
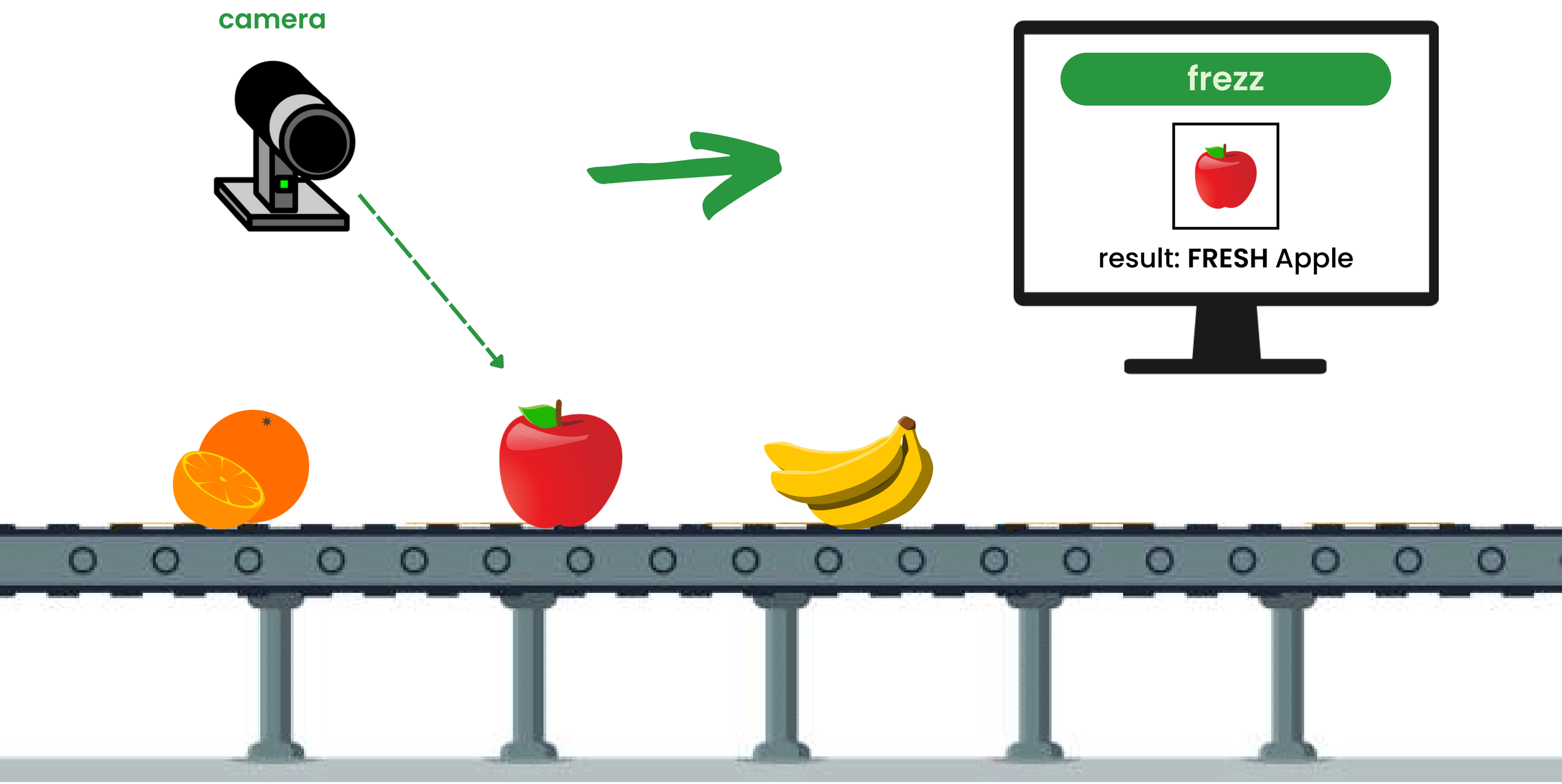
Memudahkan supermarket atau petani buah dalam melakukan **Quality Control** terhadap kesegaran buah.

Kenapa ada Quality Control?

- Meningkatkan nilai dan kualitas produk yang dijual
- Menjamin kesegaran buah yang diterima
- Mencegah transportasi buah yang tidak layak (biaya transportasi tidak terbuang pada buah yang tidak layak dijual)




camera
frezz
result: FRESH Apple

PEAS

Performance: Accuracy, Ease of use
Environment: Conveyor belt
Actuators: Software/Website
Sensors: Kamera

Key points

Efisien
Mudah digunakan
Akurat

TARGET MARKET


SUPRMRKET

Business Model

Mempermudah Petani buah untuk quality control sebelum jual ke supermarket

or

Mempermudah Supermarket untuk quality control sebelum jual ke customers

PROJECT FLOW

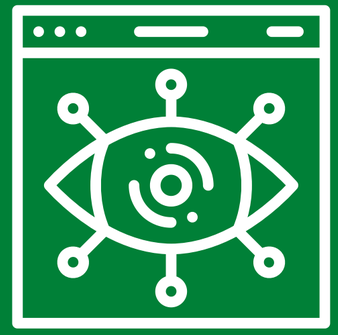
Featured Technologies:

Deep Learning

A **Subset of AI that uses multi-layers neural networks that learn from lots of data.**

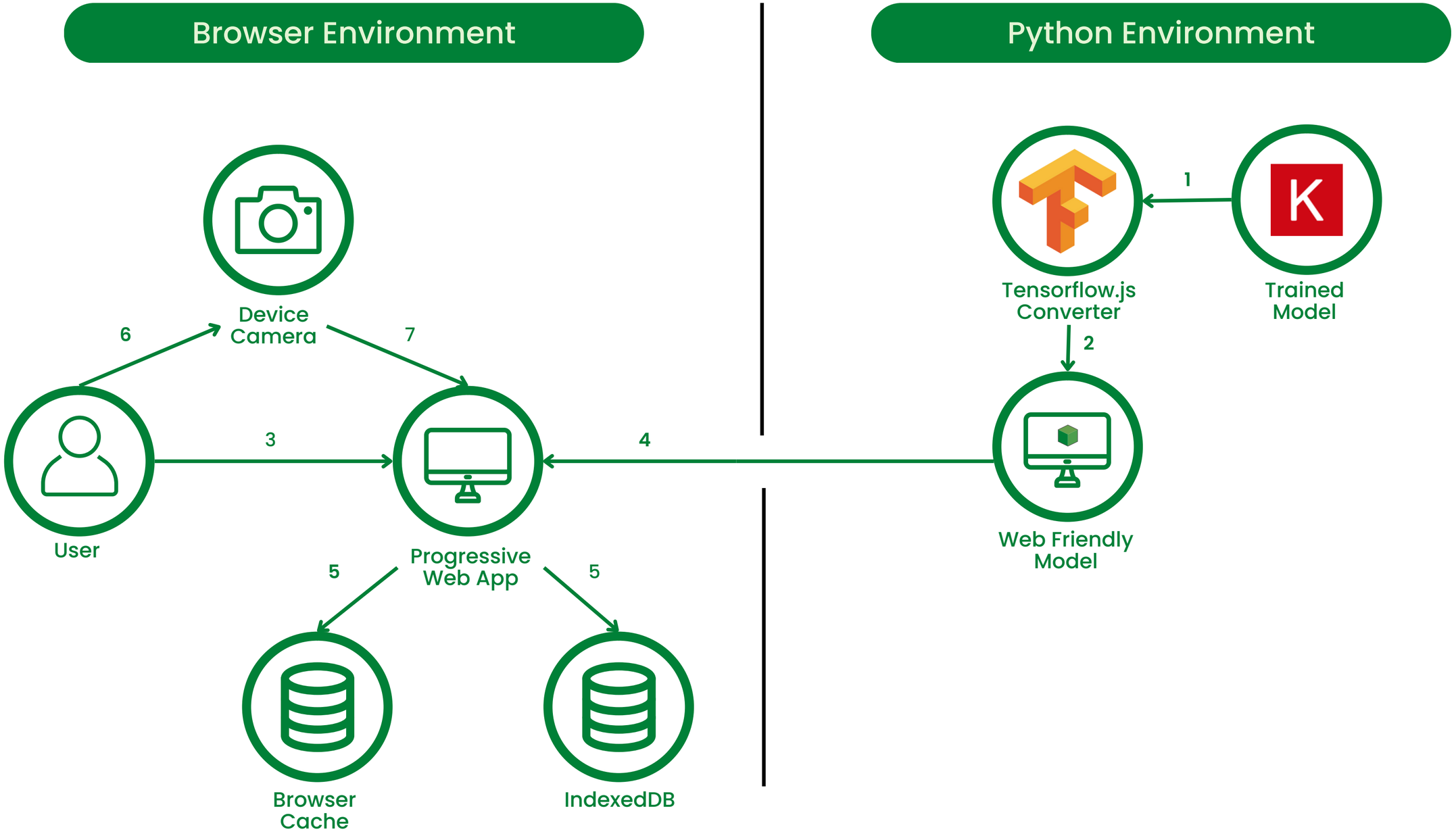
Web Development

The construction of modern web apps using open-standards technologies

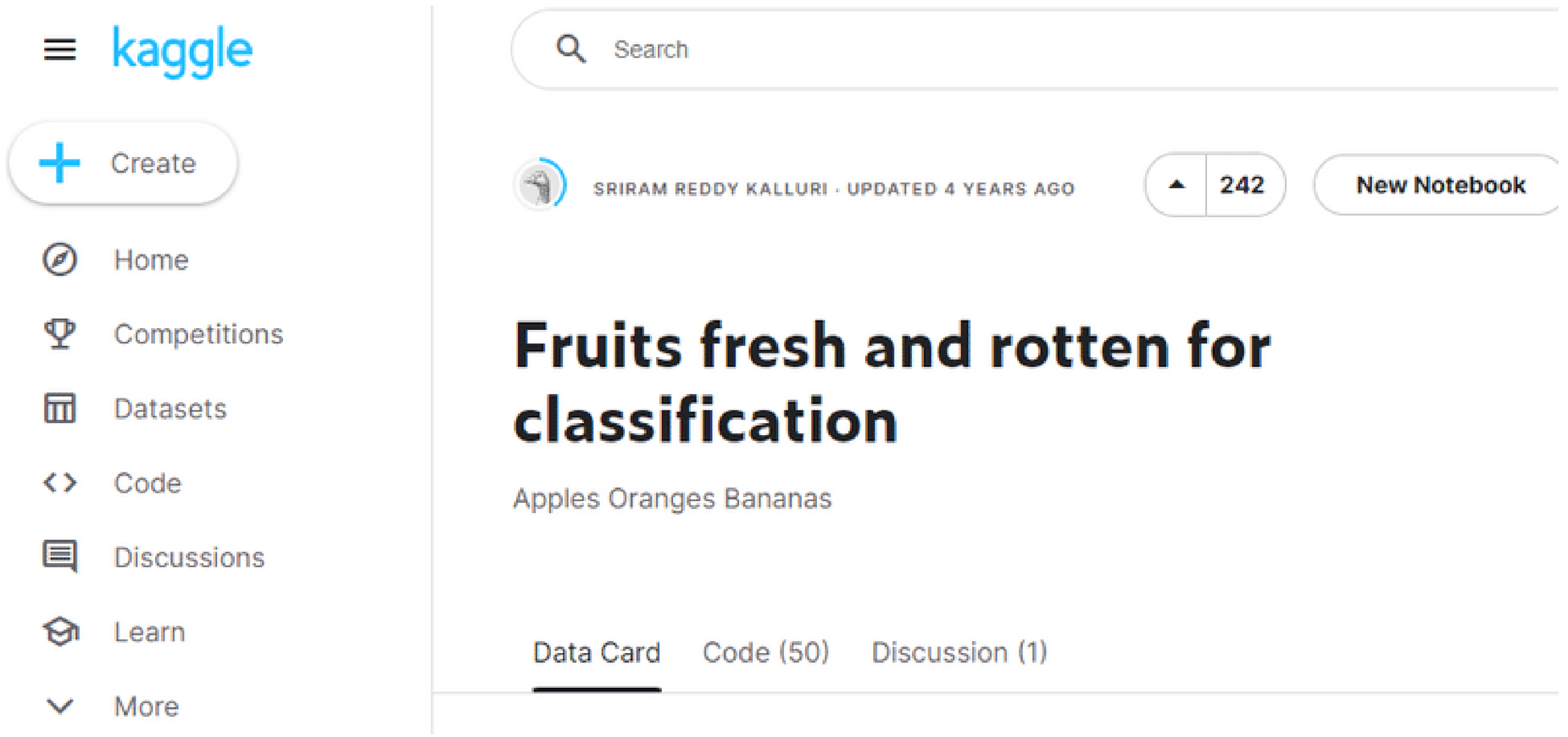


Visual Recognition

Tag, classify, and train visual content using machine learning.


Browser Environment
Python Environment
Device Camera
6
7
User
3
Progressive Web App
4
5
5
Browser Cache
IndexedDB
Tensorflow.js Converter
1
Trained Model
2
Web Friendly Model

Dataset (Kaggle)



https://www.kaggle.com/datasets/sriramr/fruits-fresh-and-rotten-for-classification

Model Training (Google Colab)

```
[ ]  from google.colab import files
     files.upload() # Run and select the kaggle.json file downloaded
     !ls -lha kaggle.json
     !pip install -q kaggle
     !mkdir -p ~/.kaggle
     !cp kaggle.json ~/.kaggle/
     !chmod 600 ~/.kaggle/kaggle.json
     ! kaggle datasets download -d sriramr/fruits-fresh-and-rotten-for-classification
```

```
Choose Files  No file chosen    Upload widget is only available when the cell has been execut
enable.
Saving kaggle.json to kaggle.json
-rw-r--r-- 1 root root 65 Dec 12 01:01 kaggle.json
Downloading fruits-fresh-and-rotten-for-classification.zip to /content
100% 3.58G/3.58G [00:35<00:00, 114MB/s]
100% 3.58G/3.58G [00:35<00:00, 109MB/s]
```

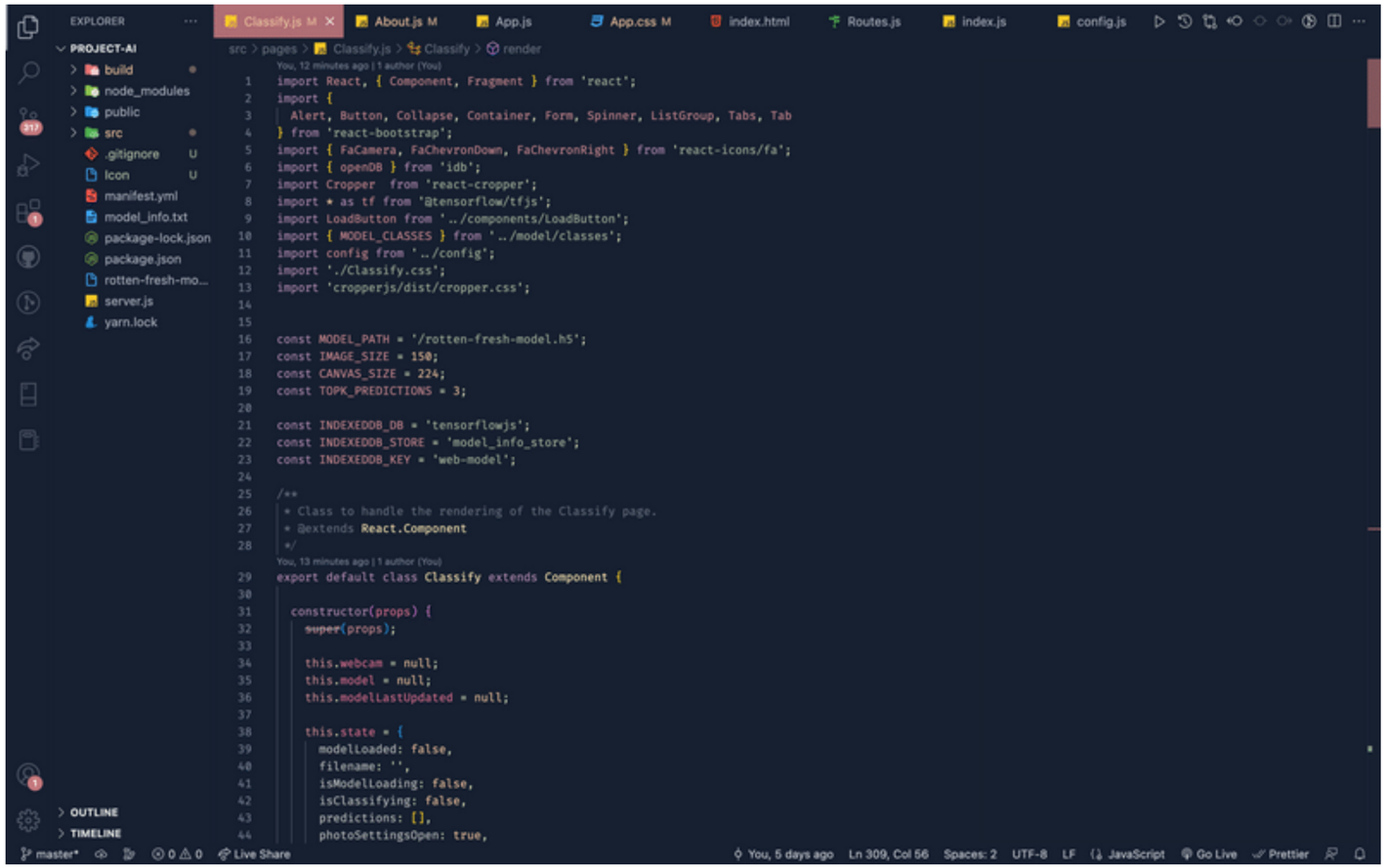
```
[ ]  import zipfile
     import os

     curDir = os.getcwd()
     print(curDir)

     local_zip = '/content/fruits-fresh-and-rotten-for-classification.zip'
     zip_ref = zipfile.ZipFile(local_zip, 'r')
     zip_ref.extractall('/content')

     zip_ref.close()
```

```
/content
```

```
[ ]  model.save('rotten-fresh-model.h5')
```

https://colab.research.google.com/drive/1Y88SiWiZIsz0tSIlkj0HJMkA3_D9NXSe?usp=sharing

Integrating Model into Web (Tensorflow.js)



DEMO

Terima Kasih