**IMAGE MACHINE APPLICATION**

**Problem Context**

Nowadays, people tend to generate tons of images daily and it becomes harder and harder to group all those images and manage them efficiently. Here comes the image grouping application that will help ease people’s lives.

This is code test is to create an Android application to help grouping images from your photo gallery and easily access them also.

**Function Description**

* The app is called "**Image Machine**”
* The app will have 2 menu: "**Machine Data**" and "**Code Reader**”
* When opening the app for the first time OR user click menu "**Machine Data**", the app will show a page with:
  + list of Machine ( name and type ) sorted alphabetically
  + button to sort the list
  + "**Add Machine Data**" button
* The "list of machine" page can be sorted by Machine Name or Machine Type
* When selecting any Machine Name the app will go to "Machine Data Detail" Page. It should show The following fields (information):
  + Machine Id ( autogenerated - random - unique)
  + Machine Name (text)
  + Machine Type (text)
  + Machine QR code Number ( number )
  + Last Maintenance Date (date, with datepicker)
  + Button "**Machine Image**", when this button clicked it will go to gallery then the user will be able to multi select image (max 10) and be associated with this machine , and the image(s) thumbnail will be shown at the bottom of this Machine Data Detail page
  + If the thumbnail is clicked it will then show the larger size version of that image (full screen) .
  + For machine that has images associated with it, user can also select one or more specific thumbnail(s) and disassociate them from the machine ( delete the images ) . **NOTE THAT** Deleted image will only remove the thumbnail from the app but **NOT** delete the image in the gallery
* The app need also "**Edit Machine data**" and "**Delete Machine data**" feature
* When user select **Code Reader** menu it will show the back camera, and the camera shall be able to read QR code and if that QR code number matches with one machine QR code number, the app will redirect to the "Machine Data Detail" Page for that machine

**Requirements**

* All the machine data added by this app need to be stored locally (you are not required to create or use any API/backend). The app should retain all the information the next time user reopen the app / restart their phone
* You are **allowed** to make any necessary assumption and use any existing library to implement the required function.
* You are also free to decide both the design and the UX for the app that is not stated above.
* Please document clearly about your application design solution (feel free to use professional diagrams to elaborate your idea), assumptions you made for implementation and compiling and invocation guide for your app.
* Please use **Java** to implement your application.
* You are **not required** to submit the app to Play Store.

**Submission**

* You are expected to submit your **source code project** with the **README document** containing the required content stated above.
* Create a repository on Github or Bitbucket and commit your work there. Please submit the **public link of the repository** containing the required source to us after you finished. We are willing to have a look on how you build the application step by step.