

# 1. Assignment Criteria

## 1.1. Overview

This assignment is designed to prove your technical acumen, design and actual hands-on skills for a Rapid Application Development use case. When working on the assignment, pretend that this is a real use case for a real customer.

It can be achieved in any way you like (such as researching technical documents online, or using real world experience), in any technologies you prefer (frontend, backend, database etc), but it is constrained to the following rules:

- You have five business days to complete the assignment
- A functioning web app is expected
- A functioning mobile app (either native or hybrid) is expected

Your assignment will be reviewed, and if your assignment is successful you will be asked to do a have video call session with my partner and myself.

## 1.2. Skills measured

We will be assessing your assignment based against the following skills:

- Technical acumen and actual design and hands-on skills around application development with knowledge of modern programming paradigms, design patterns and popular development frameworks, such as but not limited to:
  - Frontend Development
    - HTML/JavaScript/CSS
    - Any CSS frameworks
    - Any JavaScript frameworks
    - Responsive Design
    - Cross-Platform App Development
  - Backend Development
    - RESTful APIs
    - Server-side programming (any preferred programming languages: Python [preferred], Node.js [preferred], Java, PHP, Ruby etc)
    - Database design and implementation (any RDBMS or NoSQL [preferred])
- Ability to quickly develop a working MVP application to demonstrate value to customers
- Work with assumptions

## 2. Customer Requirements

### 2.1. ABC Cosmetics

#### 2.1.1. Summary

Company ABC is looking for a solution to automate the process of image publishing and updating process and make the latest images available in all mobile devices the current deployment process is all manual – when there are any image requirements (new image available, updates on the existing image, delete images and so on)

#### 2.1.2. Personas

1. **Marketing Team** – the team who manage the images. They are also the owners of the video content and the video publishing and updating requirements. Any changes of the content will be send an notification to the Sales team only.
2. **Sales Team** – the team of salesperson who use the mobile devices to show the images to the customers.
3. **Admin Team** – the team who manage users and images.

### 2.2. Requirements

The customer has the following requirements for this solution:

- The expected solution is to create a web application for the marketing team to manage the product videos and a mobile app (either native or hybrid) for the sales team that supports both Android/iOS/Web platforms.
- The solution allows for real time updates for the mobile devices to be updated once a
  - image is added/updated/deleted in the web application.
- The web application will have the below features:
  - Category management (2 categories available: Car and Bike)
  - Images management (upload a image with a category specified, delete images)
- The mobile application will have the below features:
  - Image product videos by category
  - Download new Image content when available

Sample workflow:

- Upload an image file in web app under a category
- A notification will be received in the mobile app
- On click of the notification, the app will be opened, and an icon is displayed to
- indicate new image content is available for download into the mobile app (**Offline**)
- By clicking on the icon, the Image is downloaded into the mobile app (**Offline**)
- The Image can be view within the mobile app (**Offline**)