3. **Correct QR Code sticker pasting to right part**
   (QR Code Sticker Mistake-Proofing and Automation for F.A. Support Machined Parts)

Background- Our Company manufactures a component named **"F.A. Support"** for Mshop.
This component has five variants (A, B, C, D, and E) which are machined in-house and then supplied to the customer. As per customer requirement, each part variant must be supplied with a **QR Code sticker** attached for traceability and identification.

Problem Description:

Currently, QR Code stickers are **manually printed and pasted** on the respective part variants before dispatch. Since all five variants (A, B, C, D, E) are **visually similar**, there are frequent instances where **wrong QR stickers are applied on incorrect variants** (for example, part A receives B's sticker, etc.).

When such mislabelled parts reach the **customer's assembly line**, the following issues arise:

- Wrong identification during QR scanning at assembly.
- Delay and rework in assembly process.
- Possibility of wrong part assembly, leading to product malfunction or damage.
- Process stoppage and customer dissatisfaction.

This problem directly affects productivity, quality, and brand reliability.

Existing Practice:

For another product family, we have implemented **Laser QR Code Printing**, which eliminates this issue entirely. However, adopting laser marking for the "F.A. Support" part is **not cost-effective** due to higher equipment and process costs.

The solution should ensure:

- 100% correct QR code sticker application on each variant.
- Elimination of operator-based or manual errors.
- Simple, reliable, and low-cost implementation feasible for shop-floor use. Preference for **automated or semi-automated systems** that can reduce or eliminate manual involvement wherever possible.