# 3 VTC Engineering

# 香港 VTC

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## 1. Introduction

We use smartphone 's camera to take image of the QR code and all program base on Android studio and Java language. The main function of the program is reconstructing the shape image with the information in QR code. Each level of puzzle piece location information will be display on screen which speed up the puzzle completion time.

### 2. Methodology used in the program

The main objective of the program is shortening the puzzle assembly time and assist user to find puzzle piece correct location. To retrieve location information of puzzle piece. It is necessary to capture QR code image and decode the QR code information. However, the location information is a series of numbers which are difficult to read and interpret by user during the contest. As a result, a graphical user interface is used to convert location information into geometry graphic with coordinations.

### 2.1 Revealed location information

The program consists of three modules to reveal the location information.



figure 1: Concept of the program reveal puzzle piece location