**Title: Dobot Arm**

**Priority: #1**

**Estimate: 5d**

**User story**

**As a** Dobot operator*,*

**I want to** have the Dobot arm to autonomously move objects from the conveyor belt to specified coordinates underneath a detection camera, after the objects have been placed on the specified coordinates I want a camera to detect the objects that have been moved.

**so that I can** save time and reduce manual effort*.*

**Acceptance criteria**

**Given that** a Dobot operator has configured the Dobot arm and the camera system*,*

**When** the Dobot is initiated by running the provided code

**then** the following observable outcomes should occur*:*

1. Given the Dobot is in the home position,

When the code is executed,

Then the Dobot should successfully rehome to the specified coordinates (0, -140, 60).

1. Given the Dobot has been rehomed,

When the code executes the specified movement cycles,

Then the Dobot should accurately follow the coordinates provided in the ‘coordinate\_queue’ during each cycle.

1. Given the Dobot has completed all cycles,

When the Dobot returns to the home position,

Then the Dobot should stop the conveyor belt and print a message indicating the successful completion of the task.

1. Given the camera system is operational,

When the Dobot detects an object of the specified color (red),

Then the Dobot should correctly identify and print out the shape of the detected object (triangle, square, or circle).