Moving logic

1. Base motor rollback
2. Arm sensor stop base motor
3. Start adsorption head
4. Roll adsorption head for like 10 degree
5. Base motor flip for like 120 degree
6. Forward pressing board
7. Stop adsorption head
8. Rollback adsorption head for like 10 degree
9. Body motor lift arm wait for signal
10. Pressing board motor
11. Body motor lower arm
12. Base motor rollback

位置是需要单片机去对齐pi，power是需要pi去对齐单片机

发完command先更新 except之后 再更回去

Stop logic

1. Check if body motor lift the arm and if adsorption head need rollback , if so rollback these motors
2. If not, rollback base motor and flip base motor to the middle

Start logic

1. Check if need supply a new book if so lift the book
2. Push the book
3. Begin moving logic

Reset logic

1. Get initial status from pi

System status variable:

Need\_new\_book Body\_position head\_position

Data head:

Check:

Feedback

Command:

Check: 1

Feedback 2

Command: 3

Base motor position 1

Body motor position 2

Head motor position 3

Lift motor position 4

Pushing book motor position 5

Forward pressing board motor position 6

Pressing board motor position 7

Rotating shelf motor position 8

**#define** CHECK '0'

**#define** FEEDBACK '1'

**#define** COMMAND '2'

**#define** Base\_Motor\_Msg '0'

**#define** Body\_Motor\_Msg '1'

**#define** Head\_Motor\_Msg '2'

**#define** Lift\_Motor\_Msg '3'

**#define** Pushing\_book\_Motor\_Msg '4'

**#define** Forward\_pressing\_board\_Motor\_Msg '5'

**#define** Pressing\_board\_Motor\_Msg '6'

**#define** Rotating\_shelf\_Motor\_Msg '7'

**#define** POSITION\_CHECK '0'

**#define** POWER\_CHECK '1'

**#define** NOT\_RESETED\_Msg '0'

**#define** RESETED\_Msg '1'

**#define** FORWARD\_Msg '1'

**#define** BACKWARD\_Msg '0'

**#define** POWER\_OFF\_str "0"

**#define** POWER\_ON\_str "1"

**#define** NOT\_RESETED\_str "0"

**#define** RESETED\_str "1"