AUTOMATIC BOOK SCANNER

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OUTLINE

- Definition
- Motivation
- System Diagram
- Machine components
- Machine running process

AUTOMATIC BOOK SCANNER

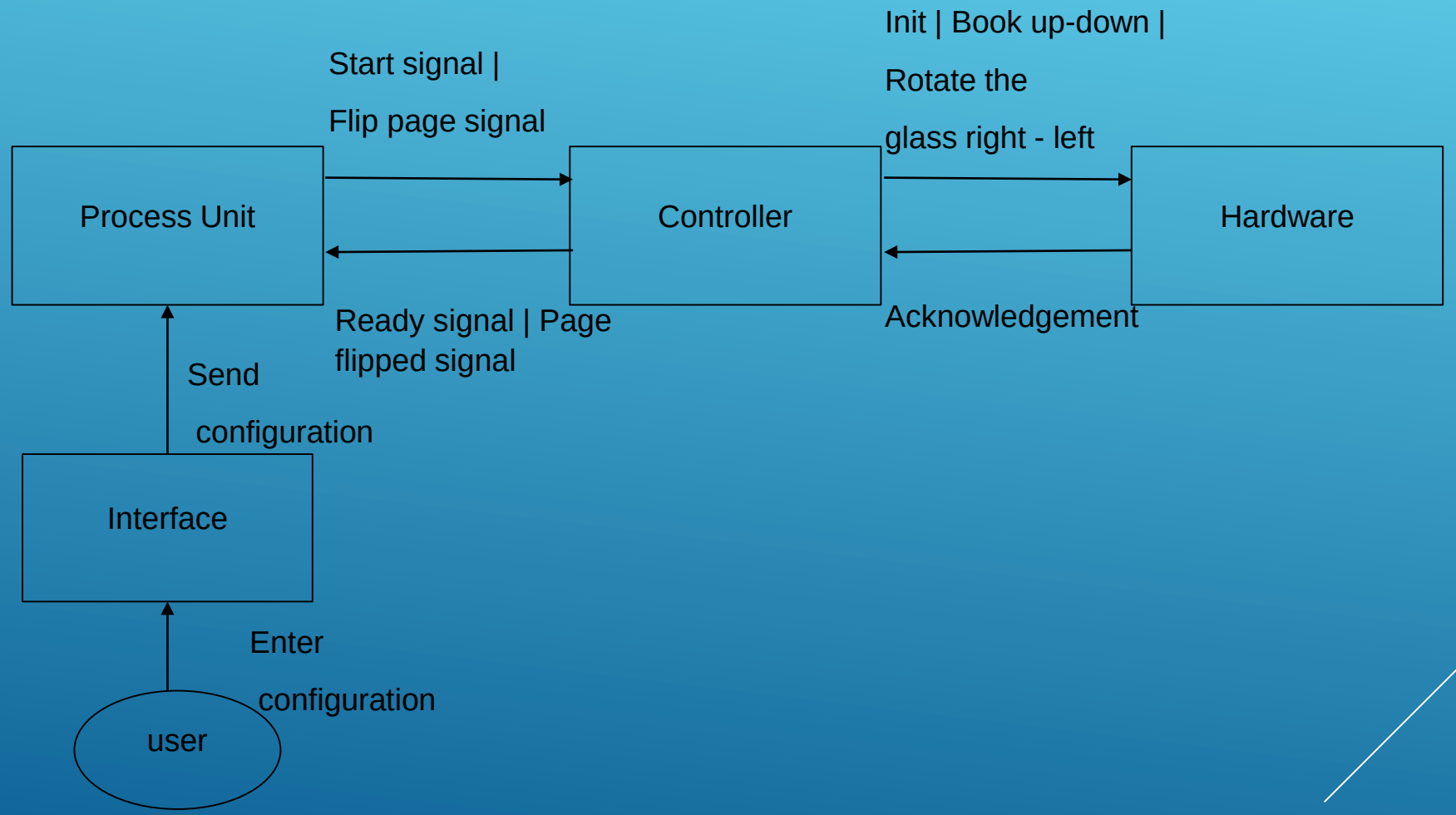
- Its a machine that's takes a pictures of book pages and convert it into PDF file.
- Simply , you just put the book and using a mobile application, the machine will start the scanning process.
- It takes the pictures using mobile phone , DSLR camera or web camera.

MOTIVATION

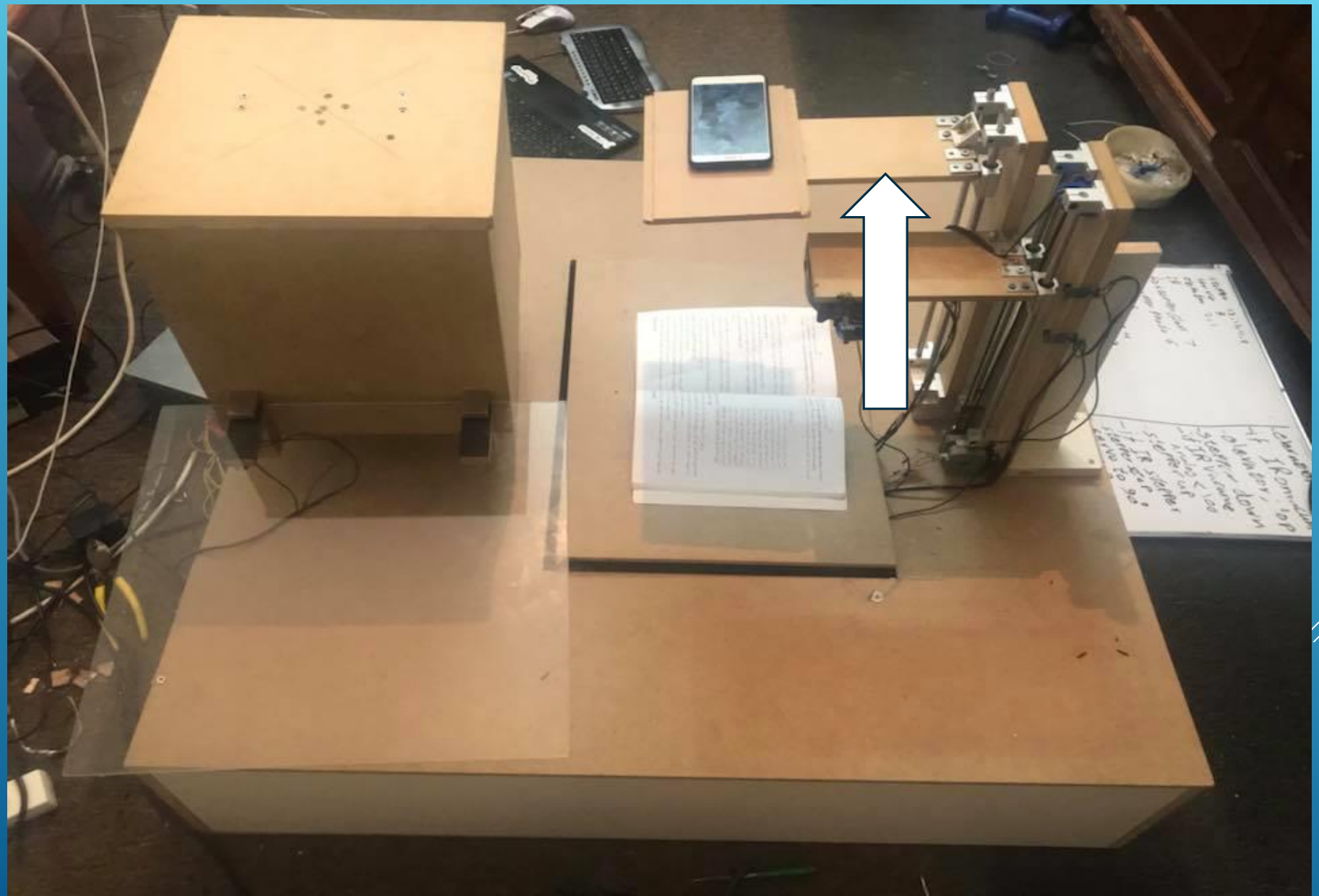
Why we built this application ?

- Manual Scanning saves effort, so you can do something else in the scanning time.

SYSTEM DIAGRAM



MACHINE COMPONENTS



MACHINE COMPONENTS

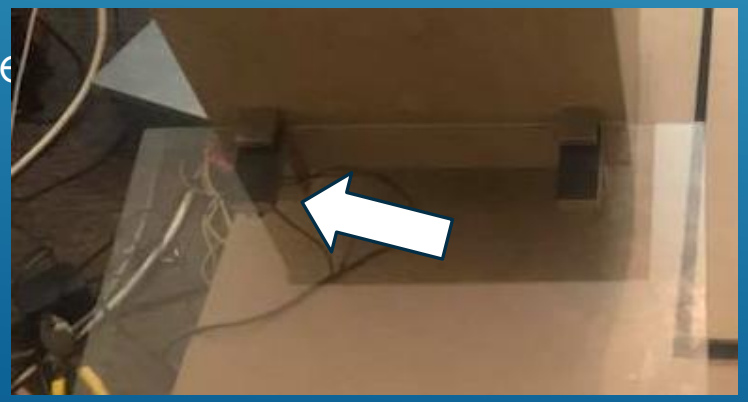
MACHINE COMPONENTS: GRABBER ARM

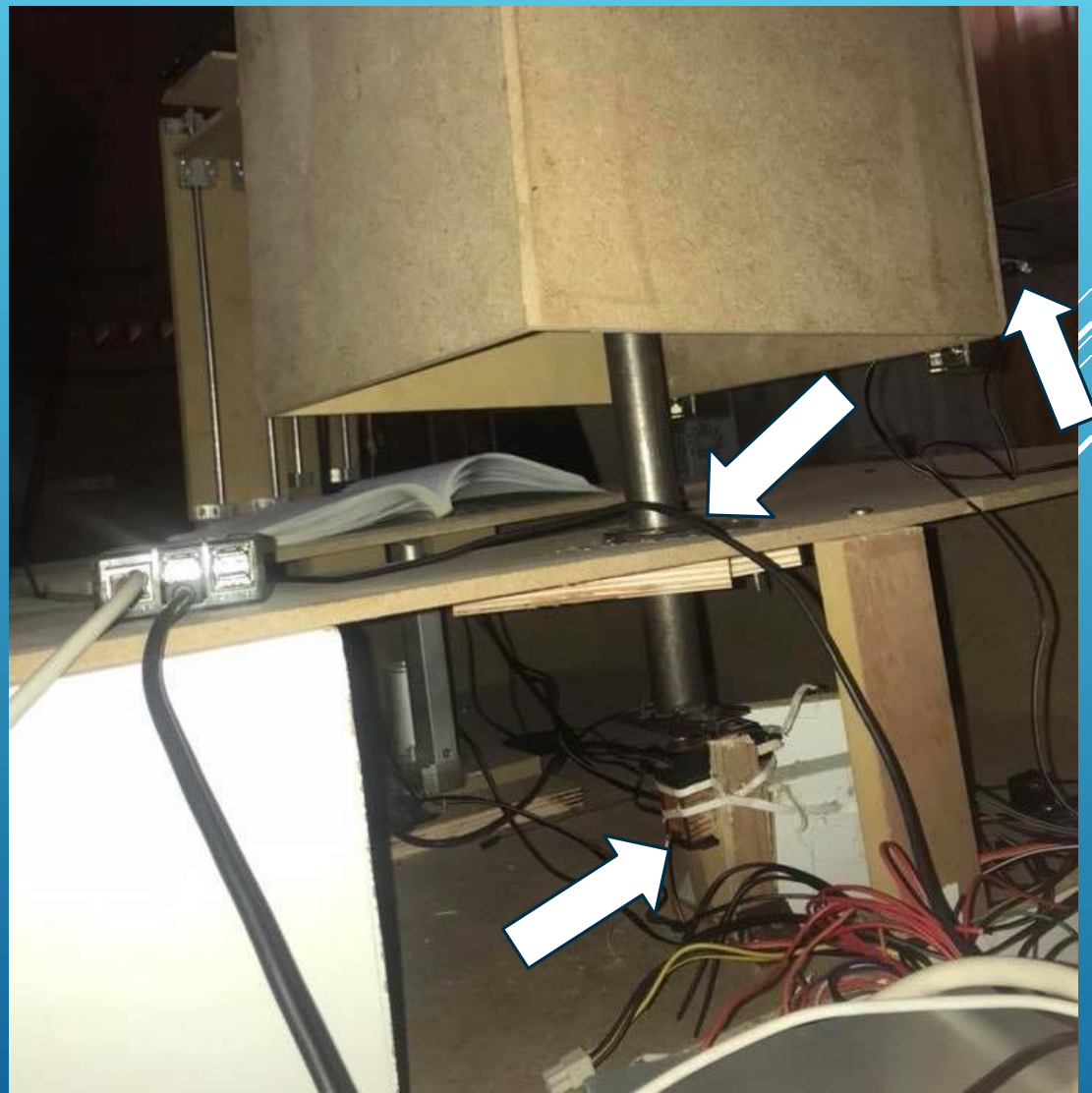
- The responsibility of this arm is to grab the page up to specific height.
- It contains a suction fan to grab the page.
- This arm will move up and down by stepper motor.
- It contain also 4 IR obstacle module.

MACHINE COMPONENTS

MACHINE COMPONENTS: ROTATOR BOX

- This rotator box is responsible to flip the pages in the first place
- The square glass will do this job.
- Also , it make the pages on the same level before taking the photo.
- This box contains 1 IR obstacle module
- The main 2 mechanical parts in this box :
  - Mechanical bearing
  - Se





MACHINE COMPONENTS: ROTATOR BOX

Servo Motor:

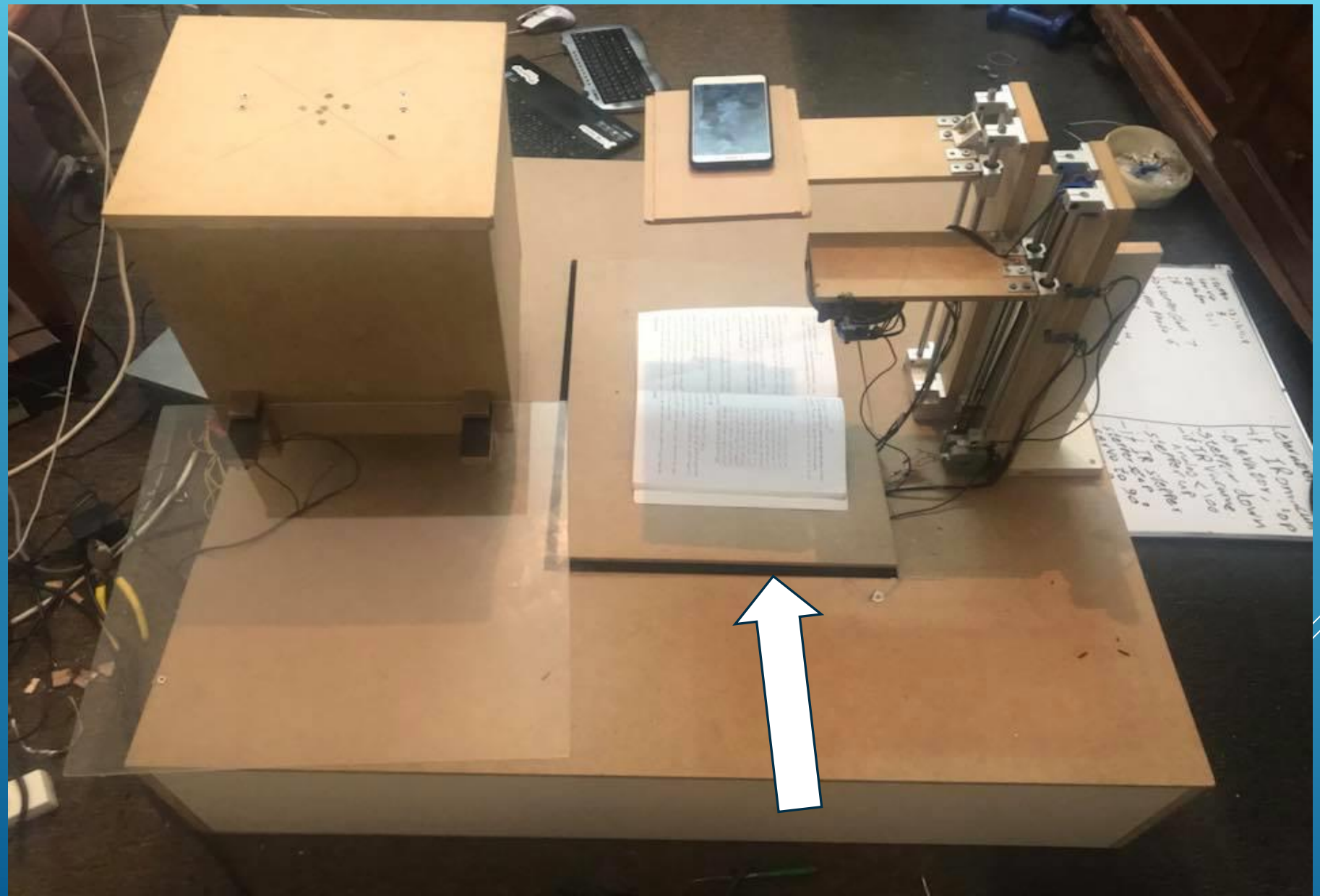
- The motor is connected to wood base to prevent it from moving when its rotating the box.
- The servo motor is connected with an iron rod to rotate the box.

MACHINE COMPONENTS: MECHANICAL BEARING

Mechanical bearing

- This mechanical part makes the rotation easier by taking all the weight carried by the motor.

MACHINE COMPONENTS

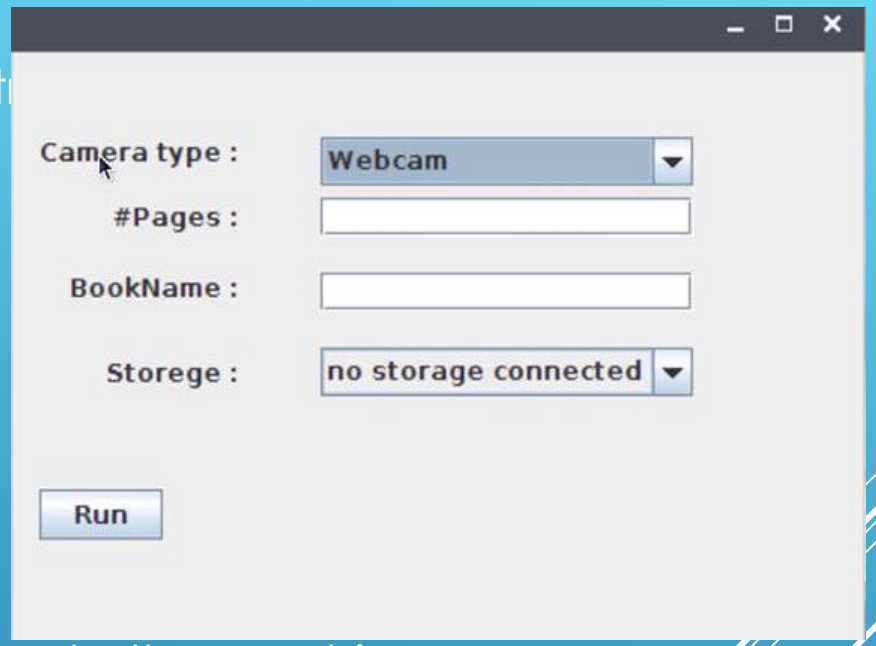


MACHINE COMPONENTS: BOOK AREA

- The book will be on the square as the previous image
- This square will go up and down during the scanning operation.
- It goes up and down by using electric linear actuator.

MACHINE RUNNING PROCESS

- At the beginning connect the machine to the electr
- On tablet connect to the TP-LINK router
- On tablet open VNC viewer application
  - Insert the following URL to host 192.168.1.5:1
  - Insert password written on the box
- After connect to the system connect your USB storage to the machine
- After that open the BookScanner.sh icon and click on the execute
  - An interface will appear showing 4 fields



MACHINE RUNNING PROCESS

DEMO TIME :D

Thank you