

EWARM



**BY FIBER-OPTIC
NETWORK**

DUCKY

THE ONLY DUCKY WITH A NON-MALICIOUS PURPOSE

THE PROBLEM

Imagine programming exams at your school...

...but this time as a faculty member

- check if all the students registered for the exam are present
- identify the students
- distribute the exams printed on paper
- monitor them - are they cheating?

**WAS THAT WHATSAPP WEB ON THAT
STUDENTS COMPUTER? WAIT... IS THIS ONE
USING CHATGPT??? HEY, YOU, DON'T COPY
YOUR FRIEND'S WORK!**

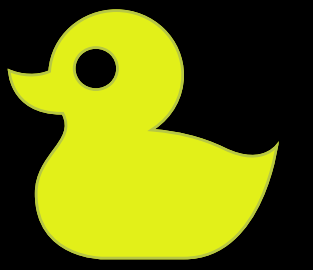
- and when they're done, you just have to collect all of their work and then grade it

Now, let's automate some of that with



EXAM DUCKY

WHAT IS EXAM DUCKY?



EXAM DUCKY

Exam Ducky is an IoT system for exam process automation, providing student identification, listing present students, test distribution, test submission, cheating monitor (listing processes and taking screenshots on students' computers), and plagiarism check.

1

**STUDENT
IDENTIFICATION**

2

**TEST DISTRIBUTION AND
SUBMISSION**

3

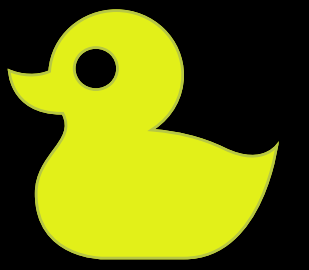
CHEATING MONITOR

4

PLAGIARISM CHECK



***ONE FOR EACH PARTICIPANT OF THE EXAM**



EXAM DUCKY

YES, AND THIS IS HOW



EVERY STUDENT IS ASSIGNED A DEVICE WITH A FINGERPRINT SENSOR, WITH
THEIR DATA ON IT.

THE FACULTY MEMBER HAS ONE TOO.

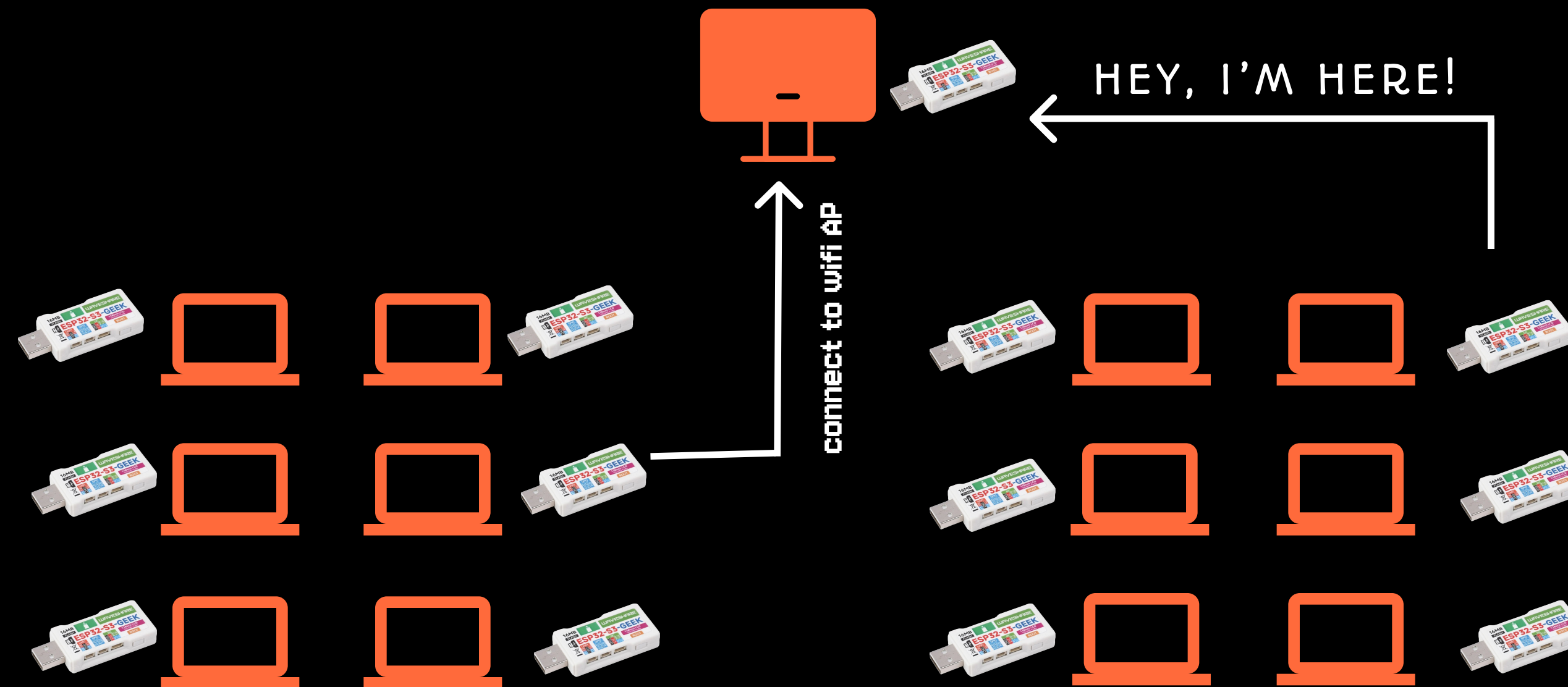
LOCAL NETWORK OF IOT DEVICES

THE FACULTY MEMBER'S DEVICE (PROFESSOR DEVICE) EMITS A WIFI ACCESS POINT.

AS SOON AS A STUDENT PLUGS THEIR DEVICE IN THE COMPUTER, IT CONNECTS TO THE PROFESSOR DEVICE.

PLUGGING THE DEVICE, THE STUDENT ALSO IDENTIFIES THEMSELVES PRESSING THE THUMB TO THE FINGERPRINT SENSOR.

THE STUDENT DEVICE INFORMS THE PROFESSOR DEVICE THAT THE STUDENT IS PRESENT.





BTW, THIS IS HOW THE FACULTY MEMBER CREATES AN EXAM

A+
=+

TEST MANAGEMENT

search for an existing test

create new test

test name

Programming 2 - Second semester

duration [min]

135

test files [zip]

group 1

P2G1.zip

group 2

P2G2.zip

process blacklist [txt]

blacklist.txt

save



AND THIS IS HOW THE EXAM IS STARTED

A+
=+

EXAM

Time left:09:38

studentexam submittedplagiarismvalid

search for an existing test

selected test

Programming 2 - Second semester

🕒 180 min

📍 RC-211

📁 P2G1.zip

📁 P2G1.zip

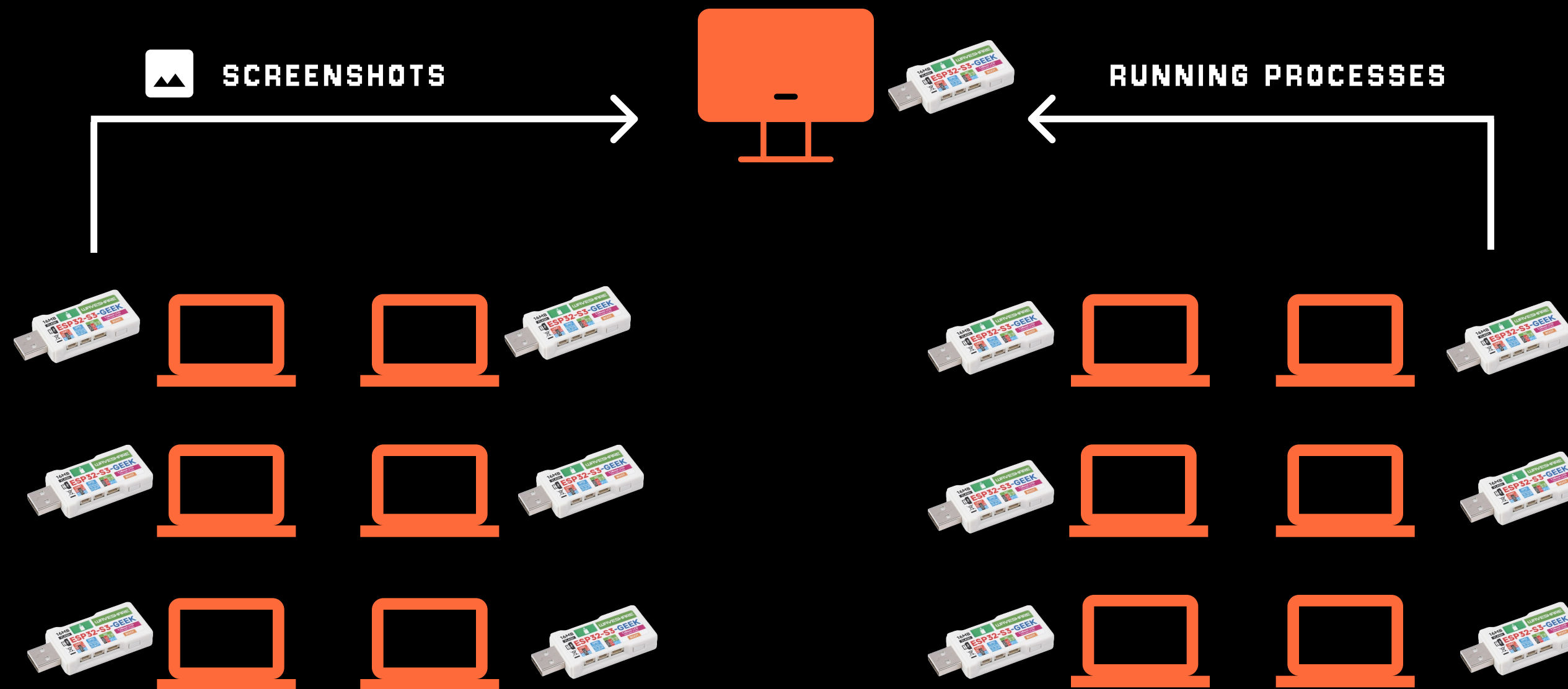
📄 blacklist.txt

START EXAM

MONITORING

STUDENT DEVICES COLLECT RUNNING PROCESSES ON THE COMPUTERS AND SEND THEM PERIODICALLY TO THE PROFESSOR DEVICE, AS WELL AS SCREENSHOTS.

THIS WAY, EVEN IF THE STUDENT COMPUTERS ARE CONNECTED TO THE INTERNET, THE FACULTY MEMBER KNOWS IF SOME FORBIDDEN WEBSITES ARE USED.





YOU CAN'T HIDE

A+

Started at:14.18

PROCESS MONITOR

Time left:09:38

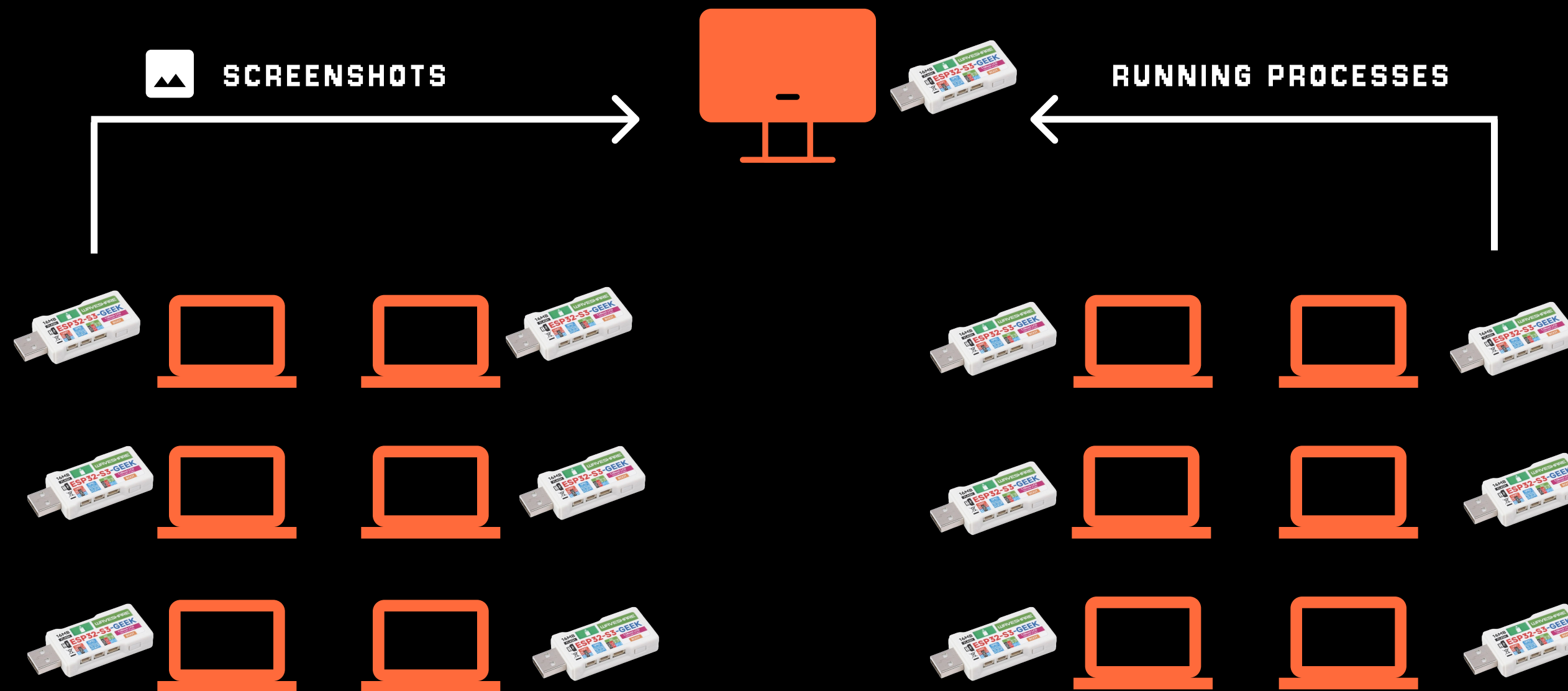
student	MAC address	blacklisted processes	latest screenshot
Stefan Jovanovic	00:B0:D0:63:C2:26	firefox.exe and 1 more	 see more >
Pavle Gasic	00:B0:D0:63:C2:26	Google Chrome and 3 more	 see more >
Matea Lukic	00:B0:D0:63:C2:26		 see more >
Maja Miljanic	00:B0:D0:63:C2:26		 see more >
Luka Krstic	00:B0:D0:63:C2:26		 see more >

TEST SUBMISSION

THE STUDENTS UPLOAD EXAM FILES TO THE STUDENT DEVICE.

THE FILES ARE SENT TO THE PROFESSOR DEVICE.

THE TESTS ARE AI-CHECKED FOR PLAGIARISM.



HAS EVERYONE SUBMITTED? HAS ANYONE COPIED SOMEONE ELSE’S WORK?

A+
=+

search for an existing test

selected test

Programming 2 - Second semester

🕒 180 min

📍 RC-211

📁 P2G1.zip

📁 P2G1.zip

📄 blacklist.txt

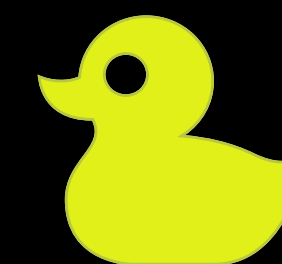
END EXAM

Started at:14.18

EXAM

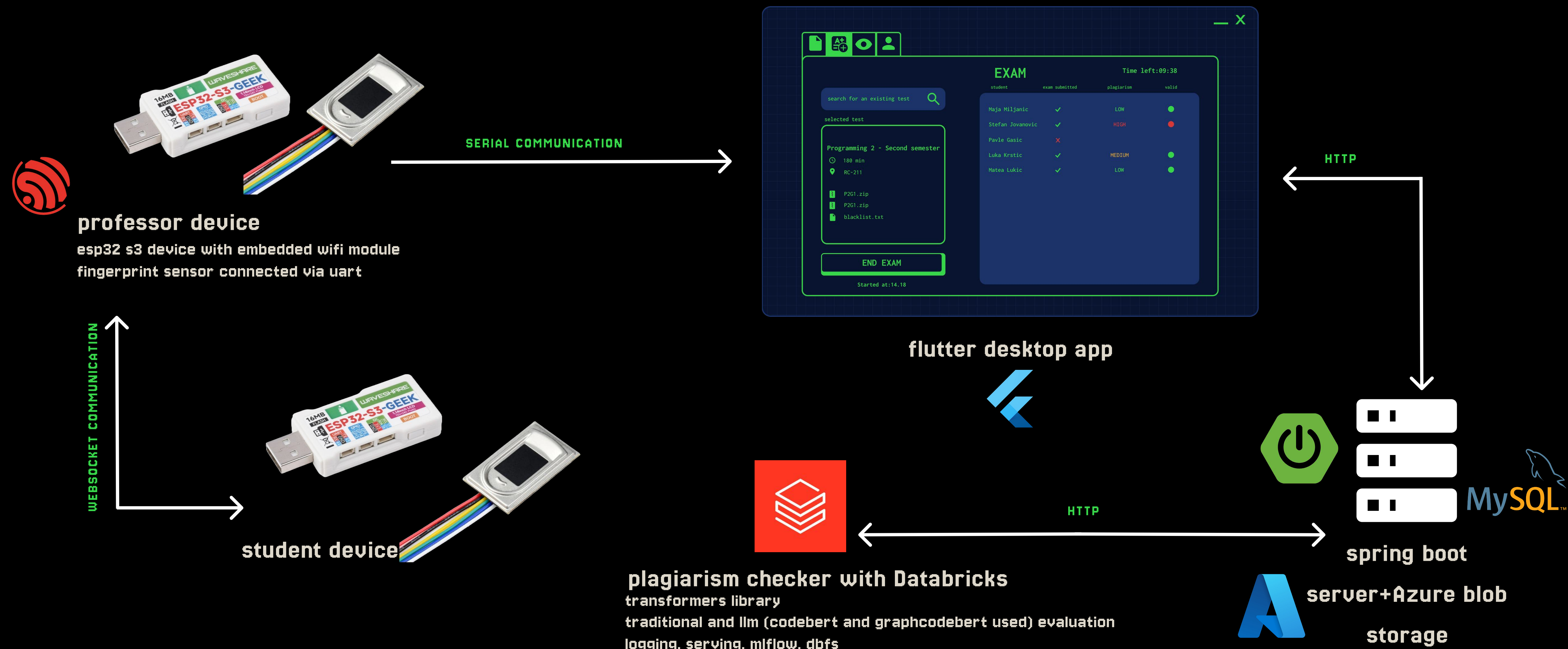
Time left:09:38

student	exam submitted	plagiarism	valid
Maja Miljanic	✓	LOW	●
Stefan Jovanovic	✓	HIGH	●
Pavle Gasic	✗		
Luka Krstic	✓	MEDIUM	●
Matea Lukic	✓	LOW	●



EXAM DUCKY

WE USED THESE TECHNOLOGIES



FIBER-OPTIC NETWORK

THANK



EXAM DUCKY

YOU

AND NO CHEATING ON EXAMS!