



INTERNET OF THINGS

Education. Experience. Innovation

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Solution Architect
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Program creation process

①

FORM WORKING GROUP

②

DEVELOP PROGRAM

③

RUN ADVERTISING CAMPAIGN

④

SETUP EDUCATIONAL FACILITIES

Work group

Computer Science
launching group (UKU)



IT experts



IT-CLUSTER educational
committee representative



Department instructors



Marketing



ADVERTISE AT
THE IT-CLUSTER
EVENTS



OPEN DAY
EVENT
MAY, 21

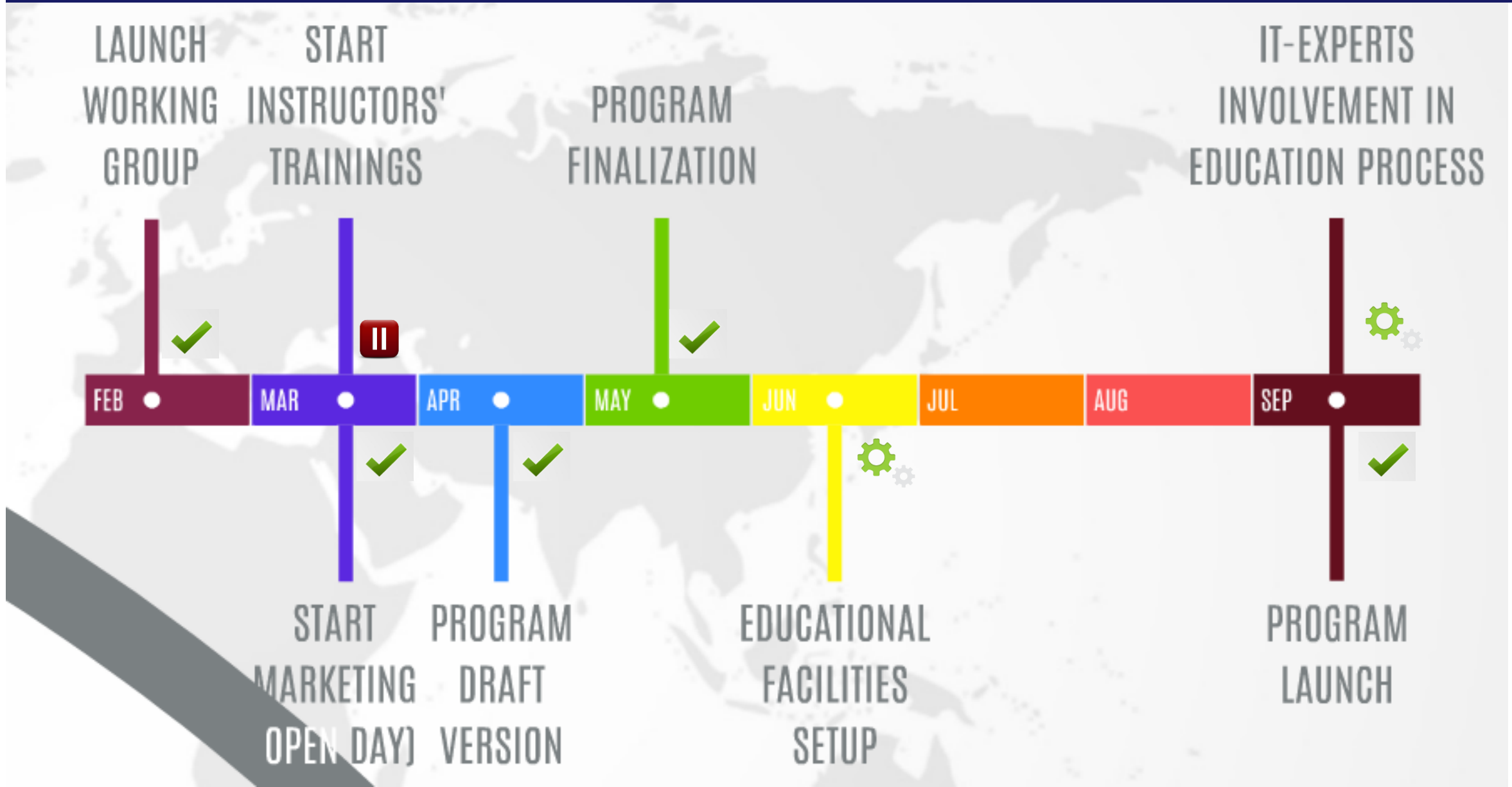


SOCIAL
NETWORKS
Facebook,
Twitter



RENOVATED
PROGRAM
WEB SITE
iot.lviv.ua

Work plan





IoT @ NULP

Specialty: Computer Science & Information Technology

Educational program: System engineering (Internet of things)

Department: Computer systems of automation

734 Application forms received

56 students

18 students received government funding

3 students received scholarships from

Lviv IT Cluster & Cypress

41:1 competition for government funding

Program goal

To train an engineer that is capable:

- Design a smart (IoT) device
- Not one, but set of devices
- Connect those devices into network
- Establish efficient information exchange between devices and cloud
- Organize device interaction with environment
- Select how to present efficiently information to the end user
- Develop the system with provide recommendation for user based on the existing IoT platforms



Programming languages: C/C++, Java, Python

Web programming

Mobile programming

User interface design

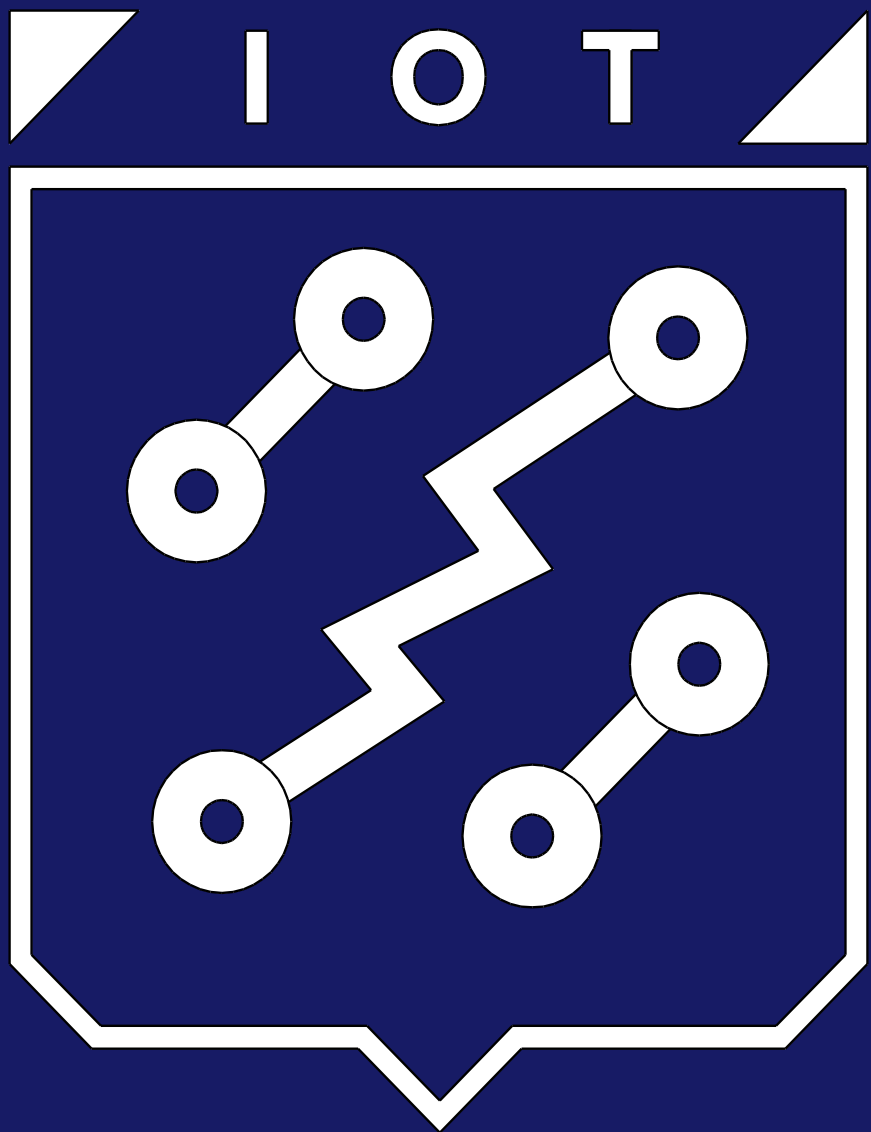
Cloud technologies

Design patterns & UML diagrams

RDBMS, BI/NoSQL

Operating systems

IoT platforms



Electronics and digital circuitry

Microcontrollers

Sensors & actuators

Design of electronic circuits and printed circuit boards

IoT device design, construction and reliability

Robotics



Teamwork and presentation skills

Economics & management in IT

Intellectual property



Information theory

Networking

IoT interfaces and data transform protocols

Digital signal processing

Information security basics

<http://iot.lviv.ua/карта-курсів>

Program features

Built on top of IT market demand

70% - renovated courses

Courses are developed based on the leader's Universities courses (MIT, Stanford, Berkley)

Education process features

Project-based education

Experienced IT specialists are involved as instructors

Practical assignments will be run in Lviv IT Cluster companies

IT Companies will supervise and consult final bachelor program execution

Employment perspective

Startup entrepreneur

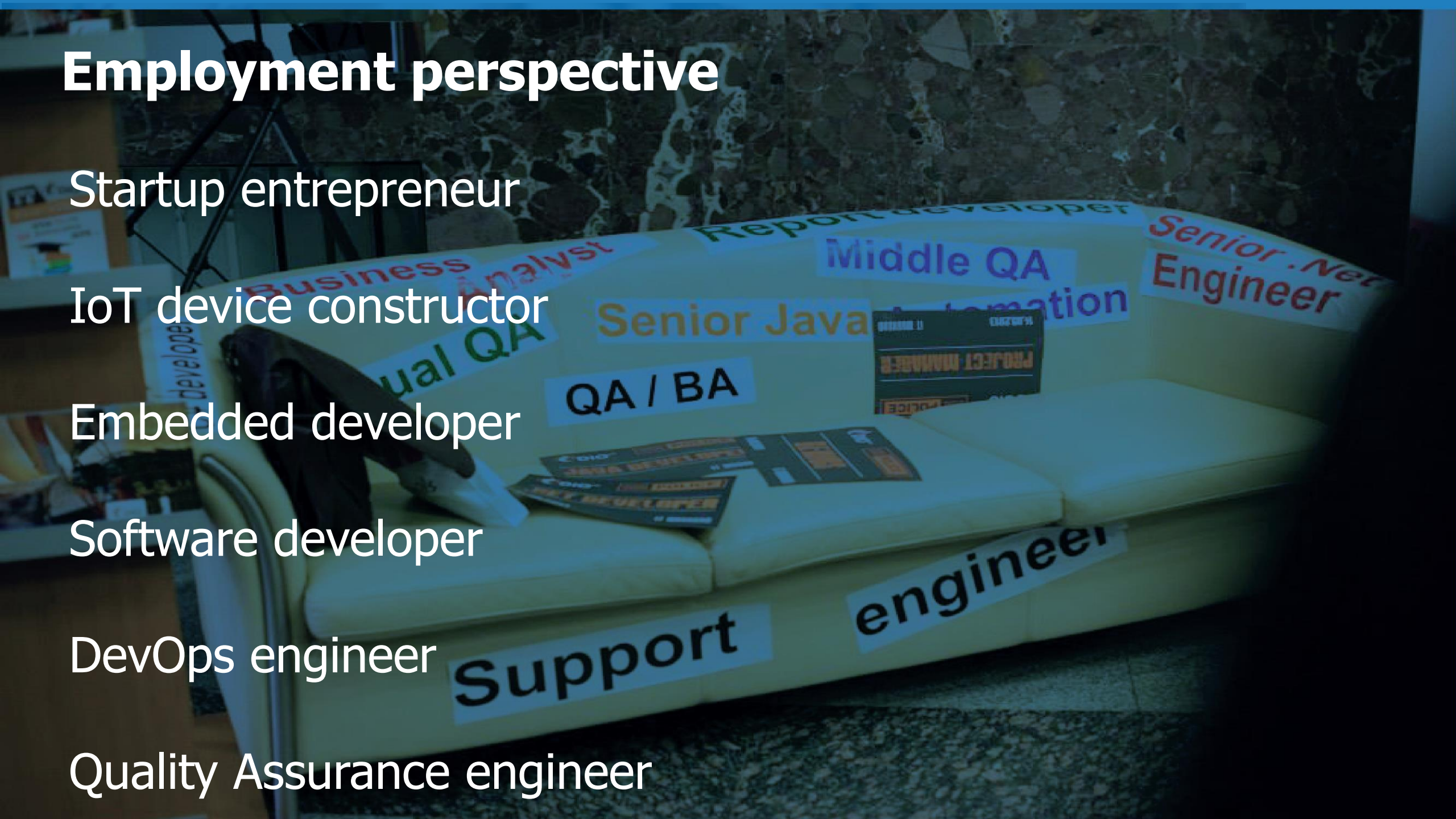
IoT device constructor

Embedded developer

Software developer

DevOps engineer

Quality Assurance engineer



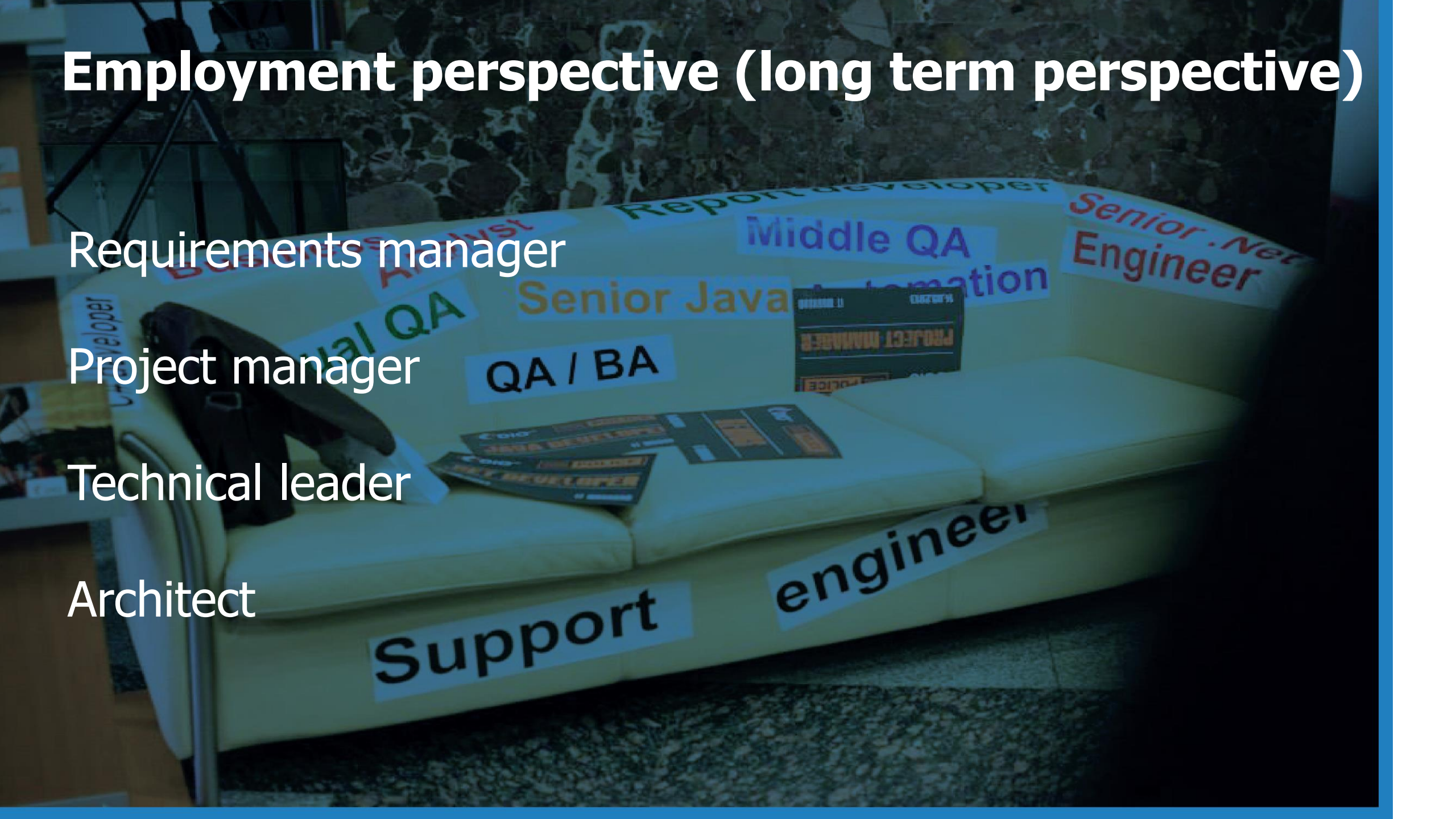
Employment perspective (long term perspective)

Requirements manager

Project manager

Technical leader

Architect



Education process: first year

Teamwork course: Practical work with IT specialists

Programming, part 1: Blended learning + Project

Intro into specialty: focused on soft skills

Programming part 2: Blended learning + Projects

Education process: Self work

50% of time – used for self-education

Preparation for lectures: watch video, read articles

Preparation for laboratory and practical lessons – implement personal/team assignments

Education process: reporting

All tasks should be completed in time (as agreed with instructor)

Intro in specialty: you'll be forced to upload results to Google Drive / Github (will talk about this in details later)

Team work: results to Google Drive

Programming, p.1 & p.2: Prometheus + Google Drive + Github

Other courses (1 year) paper reports

Education process: evaluation

Your work at practical/laboratory lessons provides 50 points (max)

Your projects are evaluated too 😊

Less 50 you could receive during examination

Education process: evaluation

0-50 points	the course is failed*
51-70 points	it's satisfactory
71-87 points	good
88-100 points	excellent

* 3 failures will result in automatic disqualification

Education platforms

VNS @ NULP

<http://prometheus.org.ua/>

<http://edx.org/>

<https://www.coursera.org>

Investigate

Implement



Analyze



Business

Process

Identify



Communication channels

Slack

Mail

Facebook

Face to face @ CSA Department

Lessons



Analyze

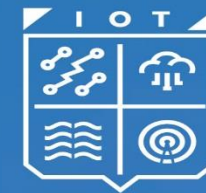


Business

Process

Identify





INTERNET
OF THINGS

Thank you for attention!

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