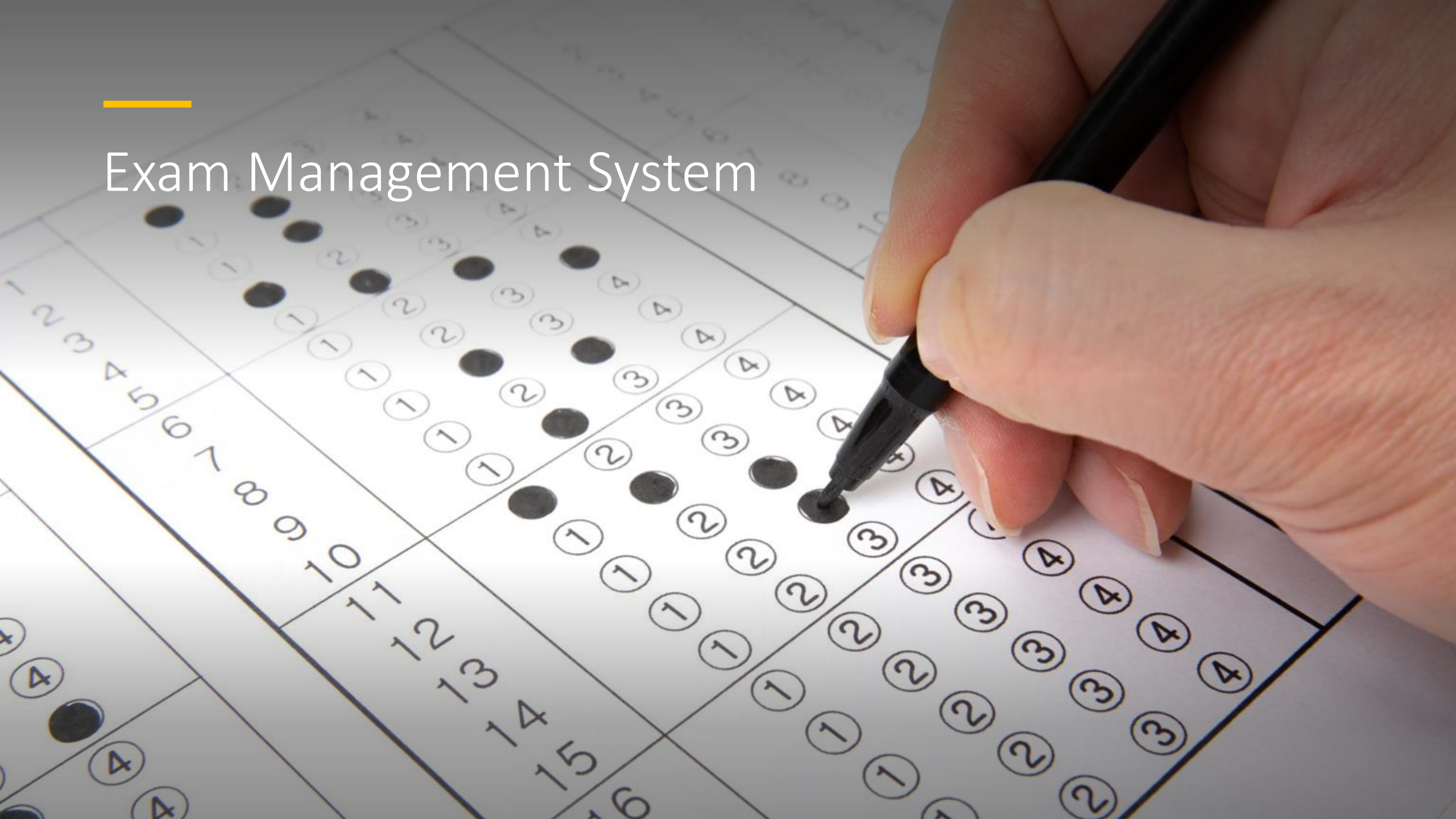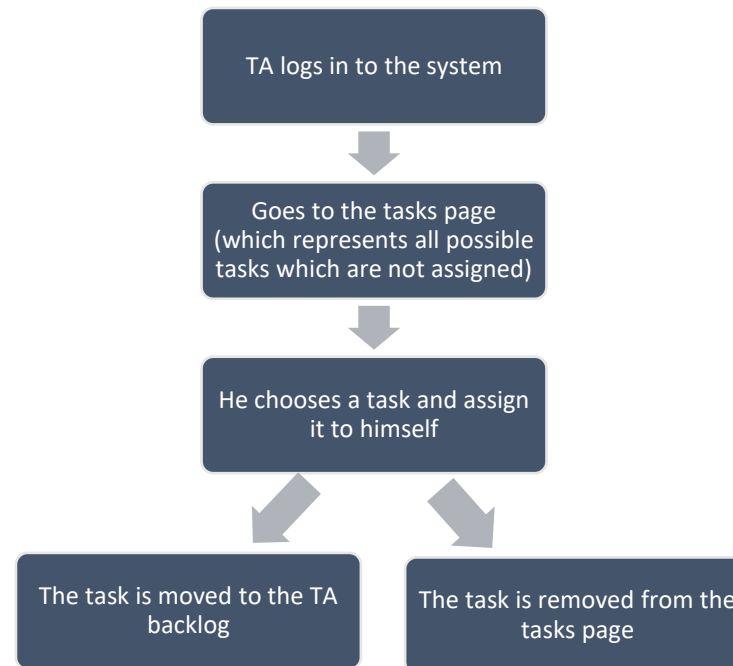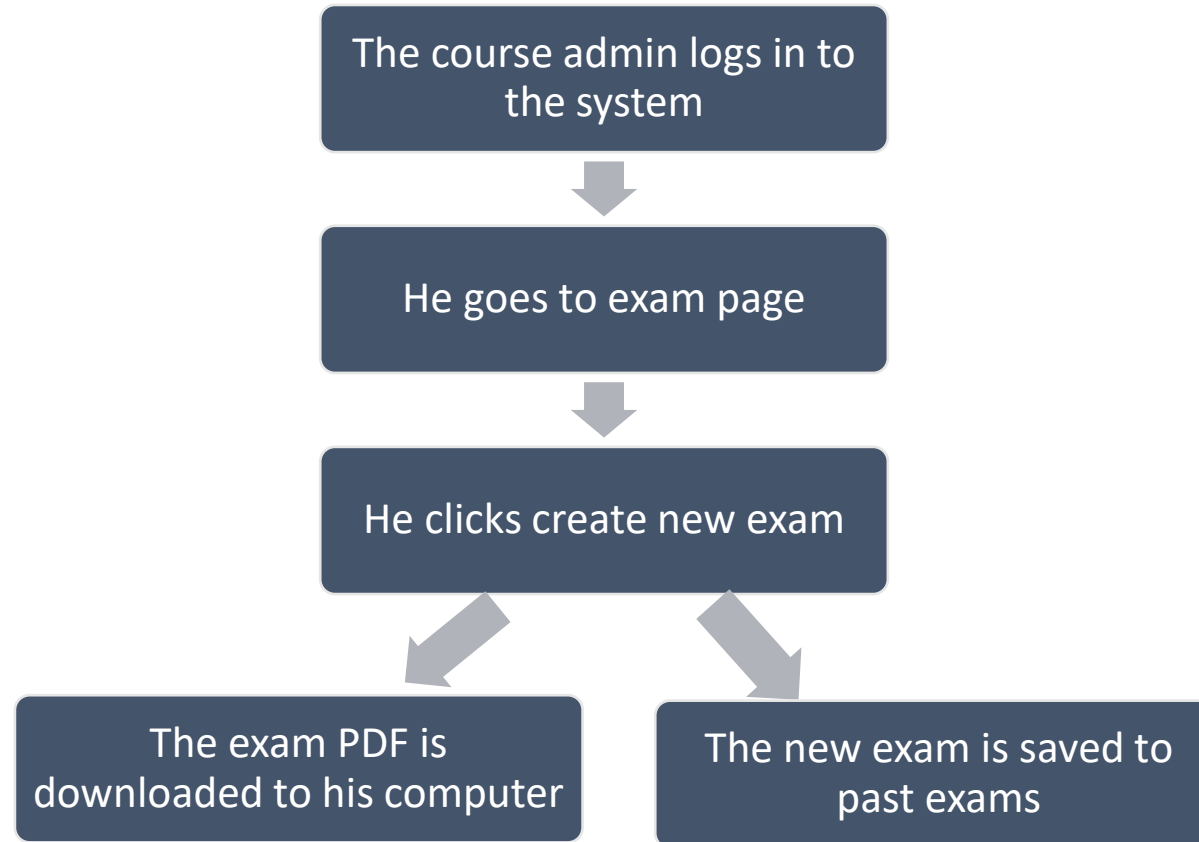# Exam Management System

Our system manages work inside of an academic course between the lecturer(s) and the TAs. Through the system you will develop, test and create multiple-choice questions, generate exams and analyze them.
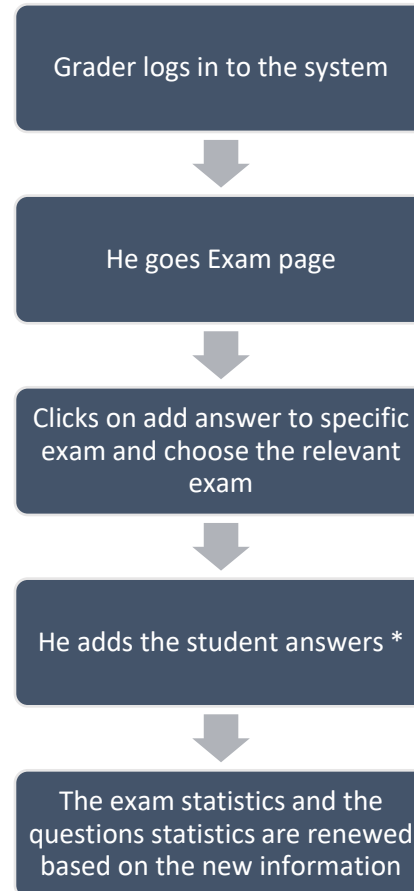
Work management flow:
TA takes a task from the task pool

Create exam

Add exam answers

Grader logs in to the system

↓

He goes Exam page

↓

Clicks on add answer to specific exam and choose the relevant exam

↓

He adds the student answers *

↓

The exam statistics and the questions statistics are renewed based on the new information

* In the future we might want to change It into scanned answers

Technological choices

Backend: **JavaScript**

Frontend: **React**

Database: **PostgreSQL**

Risks

User Adoption Challenges:

Example: Resistance from users to adapt to the new system.

Mitigation: Provide user manual + gather feedback early in the development process.

Data Security:

Example: Vulnerability to unauthorized access and leaking of sensitive information.

Mitigation: Use user authentication mechanisms to safeguard sensitive data, access will be allowed only from the university network, or by using VPN.

Web Interface:

None of the members had work as a web developer.

Mitigation: All members will read and study about prepared libraries (specifically risk) that will allow easy web interface development.

Proof Of Concept

Research:

- **Examination of Web-Based Workflow Tools:**

  - Investigate popular web-based workflow management tools.

  - Assess their capabilities for role-based dashboards and task distribution.

- **Algorithmic Task Distribution:**

- Research and develop a preliminary algorithm for task distribution

Preliminary:

- **Selection of Web-Based Framework:**

  - Based on research, choose a web-based framework suitable for developing the workflow management system.

- **Basic UI Development:**

  - Implement basic UI features, such as role-based dashboards and content organization.

  - Integrate a simple manual task assignment mechanism.

System Implementation:

1.Workflow management:

- Implement a simplified version of the workflow management system

2.LaTeX-Based Exam Creation and analysis :

- Develop a module for flexible LaTeX-based exam, key, and solution creation.

3.Database Integration:

- Establish basic database integration for handling workflow and content data.

Where are we now?

1. Started learning JS and react
2. We have agreed on the design of the backend
3. We created a preliminary server with just a login option