NpLC «Manash Kozybayev North Kazakhstan University»

Date 04.12.2025 Protocol №__

Petropavl

Curatorial hour on the distribution of topics for the creative exam in the discipline «Information and Communication Technologies» among students of the ISU(US)-23-1-a and ISU(US)-23-2-a groups

Chairman – Celal Ceken
Advisor – Semenyuk Vladislav
Secretary – Semenyuk Vladislav
Attended by: ISU(US)-23-1-a and ISU(US)-23-2-a groups

AGENDA

1. The distribution of topics for the creative exam « Information and Communication Technologies »

WE LISTENED:

1. Celal Ceken. The importance of exam preparation, assessment criteria, the work of the commission. Distribution of topics by means of a randomizer.
2. Kim Gulnar. The importance of observing the rules of academic integrity during the preparation and presentation of exam materials.

№	Project topic	Last name / First name
1	Sensor Device in an IoT System	Aitbay Abilmansur Oraluly
2	Smart Home Device in an IoT System	Ayazhanova Dilnaz Bergenovna
3	Vehicle Telemetry Data in an IoT System	Balashov Nikita Vladimirovich
4	Weather Station Data in an IoT System	Veremeychik Nikon Vyacheslavovich
5	Agricultural Field Sensor Data in an IoT System	Vereshchagin Mikhail Alexandrovich
6	Notification in a Social Media App	Zeynullin Miras Zhenisovich
7	Comment in a Social Media App	Imangazin Rustem Nurtaevich
8	Friend Request in a Social Media App	Kamaraev Timur Ramilevich
9	Message in a Social Media App	Kudaibergenov Zhan Diasovich
10	Group/Community in a Social Media App	Alim Aziz Aidaruly

11	Event in a Social Media App	Oleynikov Danila Vladislavovich
12	Push Notification in an E-Commerce System	Plyasunova Alena Andreevna
13	Order in an E-Commerce System	Pomazkov Daniil Dmitrievich
14	Shopping Cart in an E-Commerce System	Prudelyuk Artem Leontievich
15	Payment in an E-Commerce System	Ryndin Alexander Vitalievich
16	Shipment in an E-Commerce System	Sinitsina Sofia Alekseevna
17	Supplier in an E-Commerce System	Sundetov Asylkhan Adilkhanovich
18	Branch in a Banking System	Toleubay Adina Yesenkyzy
19	Employee in a Banking System	Shakhatov Kanat Serikuly
20	User Profile in a Social Media App	Sherubay Yernar Darkhanuly
21	Post in a Social Media App	Alimzhanova Aida Olegovna
22	Transaction in a Banking System	Annas Darkhan Amanboluly
23	Loan Application in a Banking System	Ayagan Elnur Beibituly
24	Credit Card in a Banking System	Bautin Kirill Alekseevich
25	Operation Log in a Banking System	Buranbaev Azat Aidarovich
26	Money Transfer in a Banking System	Esmagambet Temirlan Bulatuly
27	Inventory Item in an E-Commerce System	Zaichenko Artem Vladimirovich
28	Discount/Coupon in an E-Commerce System	Ibraev Azat Azamatovich
29	Review and Rating in an E-Commerce System	Malazhdar Aikyn Aydynuly
30	Student in an LMS	Morozov Sergey Andreevich
31	Instructor in an LMS	Mukashev Timur Erlanovich
32	Course in an LMS	Muratbekov Yernar Galymuly
33	Assignment in an LMS	Nebogin Nikita Andreevich
34	Submission in an LMS	Nesterenko Roman Vladimirovich
35	Role in an LMS	Primak Artem Alexandrovich
36	Discussion Forum Post in an LMS	Punenko Dmitry Andreevich
37	Learning Material in an LMS	Rashchupkin Nikita Pavlovich
38	Quiz Question in an LMS	Sabyrzhan Iliyas Ruslanuly
39	Certificate in an LMS	Seitov Akezhan Baurzhanovich

40	Payment in an E-Commerce System	Sergali Tamerlan Askhatuly
41	Bank Account in a Banking System	Chaikin Danil Ivanovich

2. Students' agreement with the topic

№	Last name / First name	Sign
1	Aitbay Abilmansur Oraluly	
2	Ayazhanova Dilnaz Bergenovna	
3	Balashov Nikita Vladimirovich	
4	Veremeychik Nikon Vyacheslavovich	
5	Vereshchagin Mikhail Alexandrovich	
6	Zeynullin Miras Zhenisovich	
7	Imangazin Rustem Nurtaevich	
8	Kamaraev Timur Ramilevich	
9	Kudaibergenov Zhan Diasovich	
10	Alim Aziz Aidaruly	
11	Oleynikov Danila Vladislavovich	
12	Plyasunova Alena Andreevna	
13	Pomazkov Daniil Dmitrievich	
14	Prudelyuk Artem Leontievich	
15	Ryndin Alexander Vitalievich	
16	Sinitsina Sofia Alekseevna	
17	Sundetov Asylkhan Adilkhanovich	
18	Toleubay Adina Yesenkyzy	
19	Shakhatov Kanat Serikuly	
20	Sherubay Yernar Darkhanuly	
21	Alimzhanova Aida Olegovna	
22	Annas Darkhan Amanboluly	
23	Ayagan Elnur Beibituly	

24	Bautin Kirill Alekseevich	
25	Buranbaev Azat Aidarovich	
26	Esmagambet Temirlan Bulatuly	
27	Zaichenko Artem Vladimirovich	
28	Ibraev Azat Azamatovich	
29	Malazhdar Aikyn Aydynuly	
30	Morozov Sergey Andreevich	
31	Mukashev Timur Erlanovich	
32	Muratbekov Yernar Galymuly	
33	Nebogin Nikita Andreevich	
34	Nesterenko Roman Vladimirovich	
35	Primak Artem Alexandrovich	
36	Punenko Dmitry Andreevich	
37	Rashchupkin Nikita Pavlovich	
38	Sabyrzhan Iliyas Ruslanuly	
39	Seitov Akezhan Baurzhanovich	
40	Sergali Tamerlan Askhatuly	
41	Chaikin Danil Ivanovich	

3. Assignment description

Objective:

In this project, each student will be assigned a specific object from a specific domain such as Product in an E-Commerce System. Students are required to develop a software solution that applies Object-Oriented Programming, the Repository Pattern using Interfaces, and integrates with real database systems PostgreSQL and MongoDB. Additionally, students must implement a web-based CRUD application for the entity stored in PostgreSQL or MongoDB, using Node.js, HTML, CSS, and jQuery.

System Requirements:

1. Java Application (Repository Pattern)

   - Application must perform DB CRUD operations on the entity stored by adhering repository pattern.

- The application must allow switching between repository types (PostgreSQL and MongoDB) without modifying business logic.

2. Database

- Students must construct databases and table/collection depending on implementation:
    - PostgreSQL: SQL table for the assigned concept
    - MongoDB: Collection for the assigned concept
- Each record must contain an id field and at least 3 additional attributes based on the concept.

3. Web Application (Node.js + jQuery + HTML/CSS)

- Students must develop a simple CRUD web interface communicating with a Node.js backend.
- Backend must:
    - Provide REST API endpoints:
      GET /items
      GET /items/:id
      POST /items
      PUT /items/:id
      DELETE /items/:id
    - Connect to PostgreSQL or MongoDB (**using one of them is sufficient**)
- Frontend must:
    - Be straightforward to use
    - Use jQuery or any other framework.
    - Provide Create, Read, Update, Delete actions
    - Display results dynamically

Report Structure:

While there is no standard template for the report, it must include the following essential components:

- 1. Cover Page
  Student Information: Include your full name, student ID, course name, and date of submission.
  Title of the Report: Clearly state the title of your study or project.
- 2. Study Explanation
  The report must provide the explanation of your study, including:
    - Objective: Clearly outline the purpose and goals of your study.
    - Requirement analysis
    - UML class diagram & deployment diagram
    - Design and Implementation notes
    - Conclusion: Summarize the key points and findings of your study.
    - Git repository address or the source code as an annex to the report.

4. Project evaluation criteria

№	Criterion	Description	Max Points
1	**Java Application**	**Java Application is correctly implemented.**	20
2	**Repository Pattern Abstraction (Interface + Polymorphism)**	**Java Application supports both PostgreSQL and MongoDB, without modifying client code.**	20
3	**Database Implementation**	**Application databases are constructed using PostgreSQL and MongoDB.**	10
4	**Web Service End Points**	**Web Service perform CRUD operations on the entity stored in the database.**	20
5	**Web Interfaces**	**Web application includes web interfaces to perform CRUD operations.**	10
6	**Code Quality & Structure**	**Code is clean, modular, follows best practices, and is well-documented**	10
7	**Presentation & Completeness**	**Project is fully functional and clearly presented**	10

5. Project protection regulations

The student must prepare a presentation, a 5-minute speech for the defense, and also provide the committee members with a laptop with a demonstration of your project via localhost.

Chairman **Celal Ceken**

Secretary **Semenyuk Vladislav**