

# Laboratory Work No. 1

## Topic Selection and Requirements Formation

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### “Bank Credit Department System”

## 1 System Capabilities Description

The “Bank Credit Department System” is designed to optimize the processing and analysis of processes related to bank lending. The main system functions include:

- **Loan Application Processing:** Creation, submission, and processing of applications received for a loan.
- **Scoring and Creditworthiness Assessment:** Automated analysis of the creditworthiness of the person who submitted the application.
- **Document Management:** Providing options for creating, editing, storing, and sending documents.
- **Client Communication:** The ability to contact clients through all available communication channels (chat, SMS, messengers, social networks, etc.).
- **Reporting and Analytics:** Creation of reports for credit portfolio evaluation and monitoring of its status.
- **Integration with External Systems:** Interaction with other credit organizations, government agencies, etc.

## 2 Main Actors

- **Clients:** Individuals and legal entities submitting a loan application.
- **Credit Specialists:** Employees responsible for processing and analyzing loan applications.
- **Client Managers:** Employees who communicate with clients, guiding them from start to finish.

- **System Administrators:** Technical specialists maintaining system operability and working on improving its fault tolerance.
- **Lawyers:** Specialists responsible for the legal aspects of all agreements and documents.
- **Security Specialists:** Specialists responsible for the system's security, data protection, and prevention of fraud and cyber-attacks.
- **Analytics Department:** External service of specialists engaged in financial analysis and forecasting of the economic situation, providing information about department productivity, and responsible for reporting.

## 3 Actions, Accesses, and Capabilities for Selected Roles

### 3.1 Clients

- **Actions:** Create, modify, and submit an application; provide documents.
- **Accesses:** Personal user account.
- **Capabilities:** Monitor the application status, communicate with specialists via communication channels (chat or email).

### 3.2 Credit Specialists

- **Actions:** Process applications, make decisions regarding loan provision.
- **Accesses:** Application management system, client documents, scoring system.
- **Capabilities:** View, modify applications, compile reports, and provide them to management.

### 3.3 Client Managers

- **Actions:** Communicate with clients, provide consultations on loan products.
- **Accesses:** Client documents, chat, corporate email.
- **Capabilities:** Create and edit applications, request and provide documents.

### 3.4 System Administrators

- **Actions:** System maintenance, setup of corporate computers, setup and maintenance of servers, troubleshooting, error monitoring.
- **Accesses:** Full access to the system and its settings.

- **Capabilities:** System configuration, user rights management, data security provision.

### 3.5 Lawyers

- **Actions:** Creation, verification, and preparation of legal documents, legal consultations.
- **Accesses:** Document database.
- **Capabilities:** View, create, and edit documents.

### 3.6 Security Specialists

- **Actions:** Ensure protection against all types of attacks, fraud, and monitor the system.
- **Accesses:** Full access to the security system and data.
- **Capabilities:** Prevent attacks, change user access rights, control data.

### 3.7 Analytics Department

- **Actions:** Analyze and forecast the economic situation, data analysis, portfolio monitoring, employee performance monitoring, strategic decision-making.
- **Accesses:** Access to data related to the financial aspects of the department, general credit department data, analysis tools.
- **Capabilities:** Create, edit, and provide reports.

## 4 Application Value Description

- **Speed Up Application Processing:** The automation of the system helps specialists analyze applications faster and make decisions.
- **Increase the Accuracy of Creditworthiness Assessments:** Enhances the bank's credit department security from fraudulent individuals, whose actions lead to financial losses.
- **Improve Client Interaction:** Supporting clients at all stages improves service quality and client trust.
- **Ensure Transparency and Control:** Eliminates the possibility of falsification and fraud by company employees through multi-specialist oversight at each application stage.

- **Enhance Data Security:** Integration with external systems enhances data security and protects confidential information.
- **Optimize Personnel Management:** The ability to monitor staff and maintain instant communication increases department efficiency.