

TASK 1

Questions 1, 3. Choose existing organization and suggest business challenge that could be solved by implementing Information System.

Kazpost

Joint Stock Company "Kazpost" is a Kazakh company, operator of the Kazakhstan national postal network. The headquarters is in the city of Astana. Member of the Universal Postal Union.

Business challenge:

The business challenge for Kazpost is to reduce postal volumes in the era of electronic communications and the need to modernize infrastructure to improve delivery efficiency.

Problems and Solutions:

A) Development of online services:

For example, in order to send a parcel by mail, you need to bring the parcel, indicate the weight, type of item, addresses, numbers, and so on. To speed up queues and avoid lengthy parcel verification processes, you can create software or applications where you can fill out the form and all related things online.

B) Support for innovation:

Also, the recipient's problem is that some warehouses are not organized and the recipient must leave important document data. Based on data from the Internet and the impressions of my friend in China, each parcel has its own unique ID, which only the sender and recipient know; to receive the parcel, you just need to show this ID. This significantly optimizes post offices for issuing parcels. To do this, you need to pay attention to information security.

C) Effective resource management - reducing delivery time:

Another rare problem is improper logistics transportation of parcels. Associated post offices pass the package to each other until they reach the sender, but the packages always pass through large sorting centers. New postal departments allow for the creation of new transportation routes, so their interrelationships need to be reconsidered.

Question 2. Should we, as a company, invest in that Information System? Why yes/not?

Yes, because this method of transmitting parcels is almost the only one and for further development it is necessary to modernize postal services.

Question 3. What should be done from management, organization and technology perspective to implement that Information System?

Answered in Q1.

In short, creating an application, a customer-oriented information system, improving the quality of personnel, revising new logistics routes, speeding up queues.

Question 4. What business problems will the proposed solution lead to?

Of course, the introduction of such services can lead to serious expenses (low budget), as well as the emergence of weaknesses in the security of customer data and parcels (online services). Also, the implementation of the system itself may be difficult due to insufficient customer support and strong differences from the previous management system (compatibility and transition to a new system).

Task 2

Automatic payment of utilities

Functional requirements:

User Authentication: Users must be authenticated before creating an additional wallet. Authentication may include biometric verification, PIN or password.

Bill Verification: The system should allow users to upload or enter utility bills and invoices.

Creating a Wallet: Users can create an additional wallet to pay bills. Creating a wallet must require user confirmation.

Automatic Debit: Users can allow the wallet to automatically debit the required amount to pay bills. Before processing payments, the system must check the availability of funds in the wallet.

Transaction Confirmation: After payment, the system should send a confirmation notification to the user. In case of non-payment of payment, users must be notified of the refusal and the reason.

Payment History: All payment transactions, including amounts, recipients, and timestamps, must be recorded in the payment history. Users should be able to view their payment history.

Automatic Reminder: The app sends advance notification of upcoming bill payments.

Non-functional requirements:

Security: The system must meet high standards of fraud protection. The user's personal information must be encrypted and stored securely. Compliance with data privacy regulations (eg GDPR) is mandatory.

Availability: The service must be available on all devices. The system must be able to serve a large number of clients simultaneously.

Error Handling: Users should be provided with clear error messages in the event of payment failure or other problems. Suggestions or actions to resolve errors should be included in error messages.

Availability and reliability: The service must have high uptime and be available 24/7.

Redundancy and failover mechanisms must ensure reliability.

User Experience: The user interface should be intuitive and user-friendly. User actions should have a fast response time.

Shortly →

Functional Requirements:

If the user wishes, it is possible to create an additional wallet that automatically debits the required amount to pay all bills. This requires user *authentication*, *verification* of invoices and receipts, *confirmation* of the user for payment and further *notification* of the completion of the transaction or its rejection.

Nonfunctional requirements:

Let's say a banking application has *access to information* about prices and utility bills, it has *high standards for protecting* against fraud and storing personal information using *data encryption*. *All actions and amounts must be recorded* in the payment history. For convenient use, the service must be *available on all devices* and *reliable* in constantly serving a large number of clients. *Error handling* should be clear to users and *offer possible solutions* to the problem.