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Бейнеде адамның қалпын анықтау және бағалау алгоритмдері

Аңдатпа. Мақалада адамның бейнедегі және бейнедегі кейпін анықтау және бағалау алгоритмдерін жасаудың негізгі тұжырымдамасы берілген.

Кілт сөздер: бейне, адамның қалпын анықтау алгоритмдері.

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Algorithms for determining and evaluating human position on image and video sequence

Abstract. The article presents the basic concept of developing algorithms for determining and evaluating the position of a person on an image and a video sequence.

Key words: Video sequence, algorithms for determining a person's pose.

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DEVELOPMENT OF WAREHOUSE STORAGE SYSTEM FOR TEMPORARILY KEEPING HOME INVENTORY

Abstract. In this project, the mobile applications “Qoima” is presented new methods and algorithms for the warehouse storage system mobile application in order to increase the efficiency of temporary keeping home items. Introduced main specifications and requirements about warehouse management system, novelty of work in our market, also interface of mobile application and evaluation of effectiveness of automation are described.

Key words: warehouse management system, inventory management system automation storage system, user interface, IMS, UML.

Buying on instinct and bringing back home what you've bought in the supermarket is a human trait. You would space them in several zones of your apartment. It might be in your lobby or dining room, kitchen area, garden, bathroom and just about every other spot. In the meantime, there would be a period when you'd be missing control of certain items in your residence. Some can also lie unnoticeably to your attention. This is not only normal to you but is actually happening in most families.

Developing warehouse storage management system for temporarily keeping home inventory is based on the organizing, documenting and keep tracking home items in storage or across multiple properties which allow automatically retrieve product information, a unique and time-saving feature that streamlines the inventory process.

Developing and testing of new methods and algorithms for the warehouse storage system mobile application in order to increase the efficiency of temporary keeping home items.

The formulated goal required the solution of the following tasks:

- analyzing of existing research and development in the field of storage systems;
- development of a function where customer can find out the location of warehouses;
- implementation of a system where client build inventory by scanning the QR-codes;
- implementation of a system where client create a property record with photos of each item;
- development of a payment system by the volume and weight of inventory.

Novelty of work and personal contribution:

- function that provides organize items based on collections they're stored in and tag them for easier searching;
- set reminder an alert on items that people leave for rent;
- creating inventory by scanning QR-code and keep accurate details such as: barcode name, description information;
- record the value of each item and track depreciation for an accurate valuation items at any point in time.

Using a household inventory app can support you manage your possessions and even measure the total amount of your properties and it can be a saver if you are ever in a position where you need to replace your personal belongings after a loss.

There are many scientific researches on this subject [1, 2], in which it is explained that the division's warehouse still uses paper records for registration and storage. During the development of the mobile application "Qoima" that shown on the figure 1, we took into account the fact that the use of a mobile application is the best and fastest solution to automate this problem [3,4].

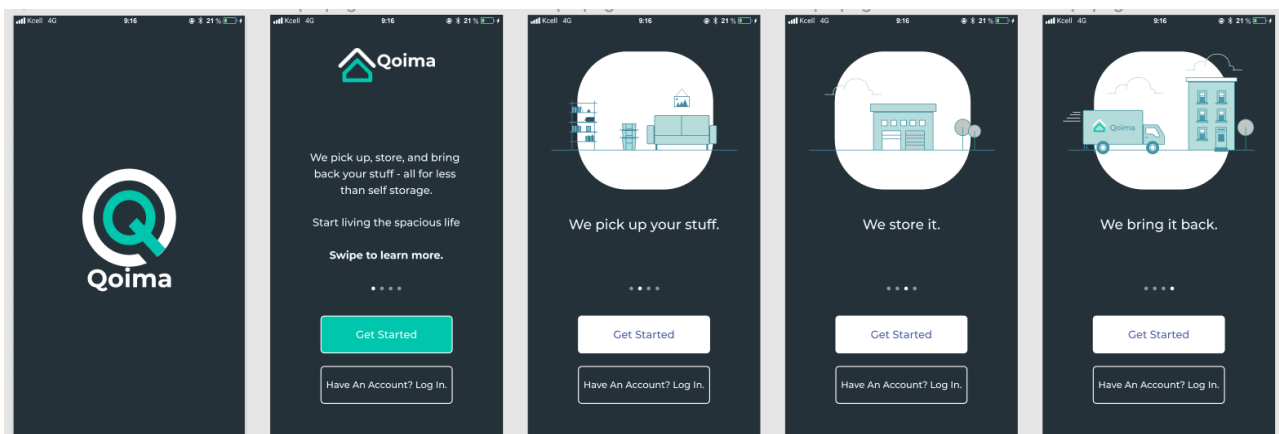


Figure 1 - Mockup of mobile app "Qoima"

Aim of experiment is testing of the effectiveness of the developed software, in other word how customers saving time and effectiveness of the developed software using application named by "Qoima". This mobile app will be useful and ease of use than other analogies. A home inventory can help you organize and assess the value of the personal belongings inside your home. Once you know the value of your belongings, you can choose the appropriate insurance limits to help protect your stuff should the worst happen. Result of evaluation of effectiveness of automation shown on Table 1 and Figure 2.

Table 1 - Evaluation of automation efficiency (by time)

Experiment indicators	T1 – the total value of the average without application, min	T2– the total value of the average time using applications, min	Deviation +,- min.	Efficiency, N
Search renting warehouse	150	10	-140min	15
Payment	20	5	-15min	4
Delivery items	0	30	+30min	0
Locking and unlock with QR-code	1	0.3	- 1.2min	5
Sorting the items	31	5	- 26min	6.2
Entry in the database	25	4	-21min	6.25
Subtotal	227.5min	54.3min	-162.2 min	4.18 times

To calculate how many times the developed program allows you to reduce the time you need to use the following Formula 1:

$$N = \frac{T_1}{T_2} = 4.18 \quad (1)$$

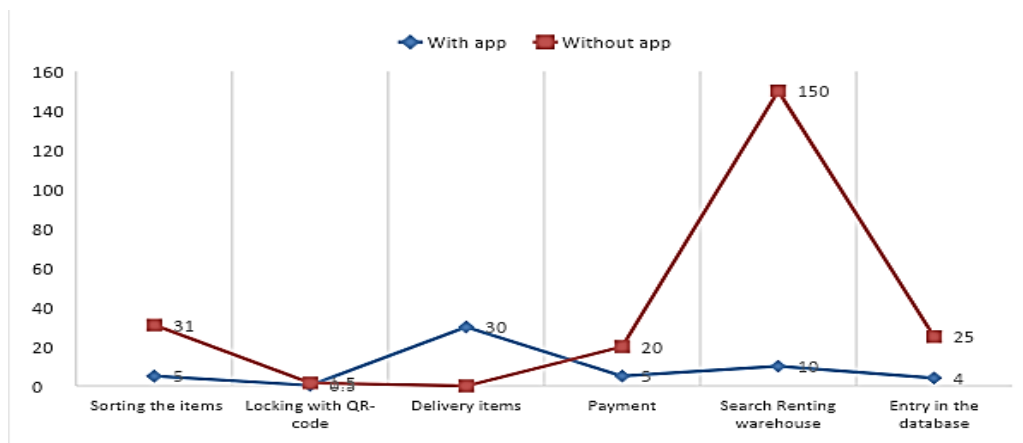


Figure 2 – Comparison of the efficiency with and without application

In the result of experiment, we calculated efficiency of time of the total value of the average without application and using application. Efficiency was equal to 4,18. More deviation we can see on the diagram in experiment indicators such as search renting warehouse, delivery items and sorting the items. It means, that you can save 4,18 more times using our application than without application.

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Үй жабдықтарына арналған уақытша сақтау жүйесін дамыту

Аңдатпа. Осы жобада "Qoima" мобильдік қосымшасының үй тұрмысындағы заттарды уақытша сақтаудың тиімділігін арттыру мақсатында сақтау жүйесі жұмысының жаңа әдістері мен алгоритмдері мобильді қосымшада ұсынылған.

Кілт сөздер: қойманы басқару жүйесі, қорларды басқару жүйесі, автоматтандырылған сақтау жүйесі, пайдаланушы интерфейсі, IMS, UML.

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Разработка системы временного хранения для предметов быта

Аннотация. В данном проекте мобильного приложения "Qoima" представлены новые методы и алгоритмы работы системы складского хранения мобильного приложения с целью повышения эффективности временного хранения предметов домашнего обихода. Представлены основные технические характеристики и требования к системе управления складом, новизна работы на нашем рынке, а также интерфейс мобильного приложения и оценка эффективности автоматизации.

Ключевые слова: система управления складом, система управления запасами, автоматизированная система хранения, пользовательский интерфейс, IMS, UML.

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ПОКОЛЕНИЕ Z И ИСКУССТВЕННЫЙ ИНТЕЛЛЕКТ В XXI ВЕКЕ

Аннотация: В предлагаемой статье автор поднимает тематику искусственного интеллекта как одну из основных внедрений в современное время. В статье приводятся факты стремительного развития искусственного интеллекта – как важного фактора выполнения сложных конструк-