Thus the problem of creating more effective application for planning vacation is actual. The goal is to improve the efficiency of the working process in modern conditions through the usage of new information technologies, avoiding excessive multi-functional, but giving opportunities for empowerment, that provides ease of using and accessibility for users of different systems and with different activities.

Restrictions:

− no Internet requirement;

− cross-platform.

The criterion of effectiveness of the development:

− reducing the time spent on initial setup;

− increase apprised;

− simplicity of design.

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Scientific adviser **Viktar Liauchuk**, ph.d. in technics, associate professor

**TECHNICAL ASPECTS OF IMPLEMENTATION
OF INFORMATION SYSTEM OF THE VACATION PLANNING
FOR THE COMPANY «IBA GOMEL»**

Рассматриваются технические детали реализации приложения для планирования отпусков. Данное приложение разработано для предприятия «ИБА Гомель» и находится в тестовой эксплуатации.

The information system of the vacation planning was developed for the company «IBA Gomel». It allows employees to send leave and vacation requests to management by simply logging in to the application. This feature provides employees with more freedom to ask for the leave time they desire for personal events, and provides management with an efficient. This data is kept in a centralized location and is automatically accounted for during employee scheduling.

For the development of this application a standard set of software and technologies for was used.

The project is an application in the Java programming language (JSE 8, JEE 7). Integrated development environment is Eclipse Neon (latest stable) with plugins: JBoss Tools, Vaadin and DBeaver. Framework Vaadin 7.7.6 (latest stable) was used to develop a user interface. With Vaadin, leverage java language, professional tooling and skills to build web user interface. No

need to touch markup languages or JavaScript. Typical server-side Vaadin applications use server-side components that are rendered on the client-side using their counterpart widgets. A server-side component must manage state synchronization between the widget on the client-side, in addition to any server-side logic.

Apache Tomcat 9.0 is an application Server. It is an open-source Java Servlet Container. Tomcat implements several Java EE specifications including Java Servlet, JavaServer Pages, Java EL, and WebSocket, and provides a "pure Java" HTTP web server environment in which Java code can run.

PostgreSQL 9.6 was selected as the database for storing the application information. To build the project Apache Maven 3.3.9 was used. SCRUM was chosen as the development process. SCRUM is an agile way to manage a project, usually software development.

At the moment the application is under testing.

V. Kalatsei («Fr. Skorina GSU», Gomel)
Scientific adviser **Aleksandr Kucherov,** senior lecturer

MICROSERVICES ARCHITECTURE

Приводится обзор микросервисной архитектуры, которая в последнее время очень широко используется при разработке программного обеспечения. Рассматриваются преимущества данного подхода по сравнению с альтернативными технологиями.

Microservices is a specialization of an implementation approach for service-oriented architectures (SOA) used to build flexible, independently deployable software systems. Services in a microservice architecture (MSA) are processes that communicate with each other over a network in order to fulfill a goal. These services use technology-agnostic protocols. The microservices approach is a first realization of SOA that followed the introduction of DevOps and is becoming more popular for building continuously deployed systems.

In a microservices architecture, services should have a small granularity and the protocols should be lightweight. A central microservices property that appears in multiple definitions is that services should be independently deployable. The benefit of distributing different responsibilities of the system into different smaller services is that it enhances the cohesion and decreases the coupling. This makes it easier to change and add functions and qualities