Vinnytsia National Technical University

Software for increasing the vocabulary of children and learning foreign languages

Part 1. Development of software for desktops

Part 2. Development of software for mobile devices

Performed by: a students of 2nd course of 3ACIT-18m group Y. Opolskyi, V. Karpenko Supervisor: PhD. As. Prof. I. Bogach * The aim of the study is to develop the new information system that uses new highly efficient learning tools received by analysis of the most effective learning tools and methods.

To achieve this goal the *following tasks* have been resolved:

- * To analyze modern state of the implementation information systems into the learning process;
- * To analyze modern information systems of the foreign language learning and methods of the vocabulary of kids replenishment, to make comparative analysis, find advantages and disadvantages;
- * To design universal information system designed for foreign language learning and vocabulary of kids replenishment based on analyses.
- * To inquire modern approaches and technologies that can be used in development of information system;
- * To develop information system using inquired technologies and instruments;
- * To test developed information system and analyze it effectiveness and expediency of implementation.

- *The scientific novelty of the work is the design and development of a new information system for teaching children using new highly effective learning tools based on comparisons of the most modern methods.
- *Object of the study the process of the foreign language learning and vocabulary replenishment of kids.
- *Subject of the study methods and instruments of foreign languages learning and vocabulary replenishment of children.



Analysis of existing methods

- *Zaitsev Method
- *Maria-Montessory method
- *Olga Soboleva method
- *Doman Method

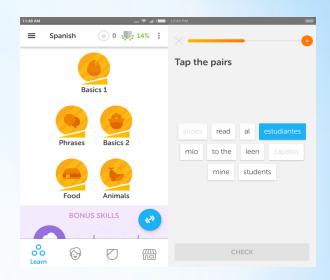




Analysis of existing solutions

- *LinguaLeo
- *Duolingo
- *Babbel
- *Busuu
- *British Council
- *Memrise





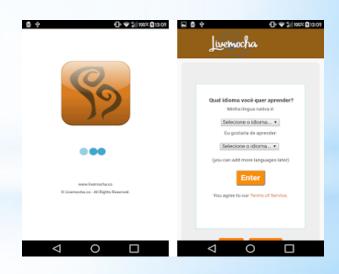




Figure 1 – Use case UML diagram

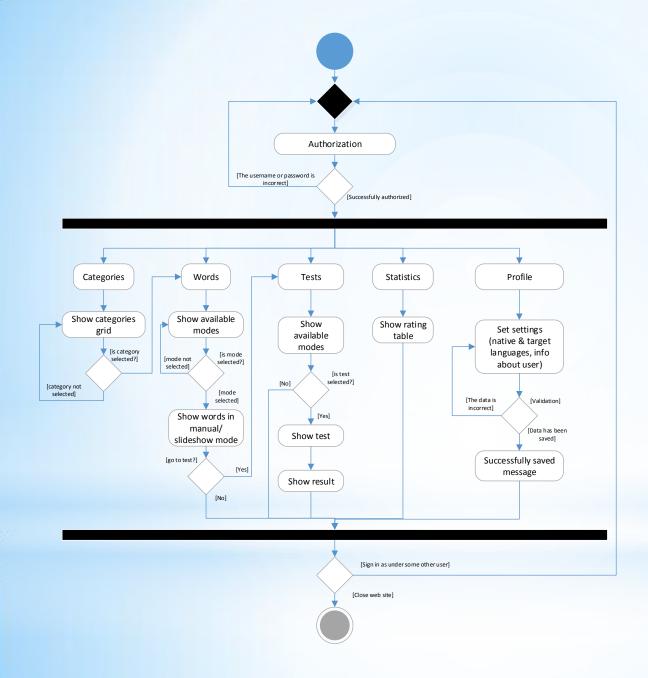


Figure 2 - Activity UML diagram

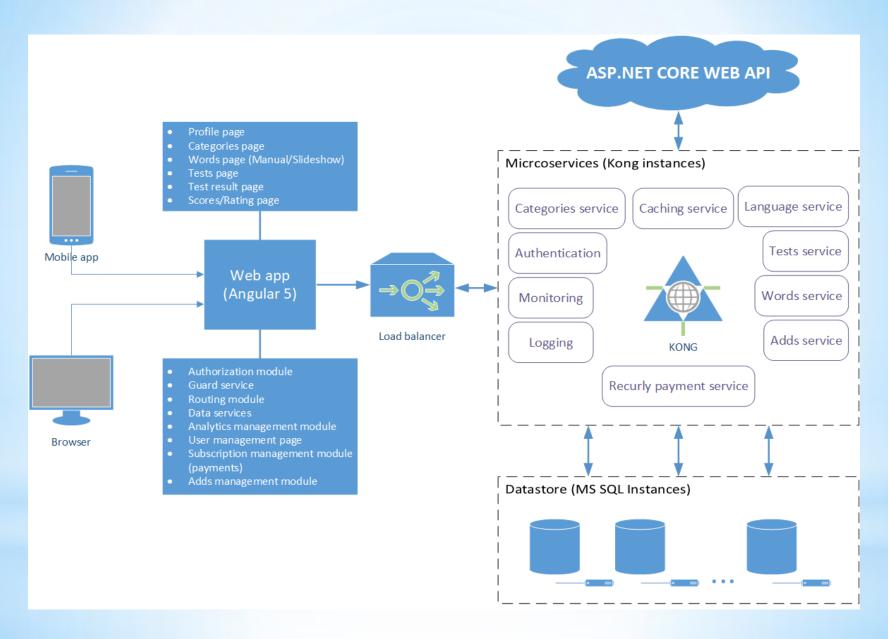


Figure 3 - Client-server architecture

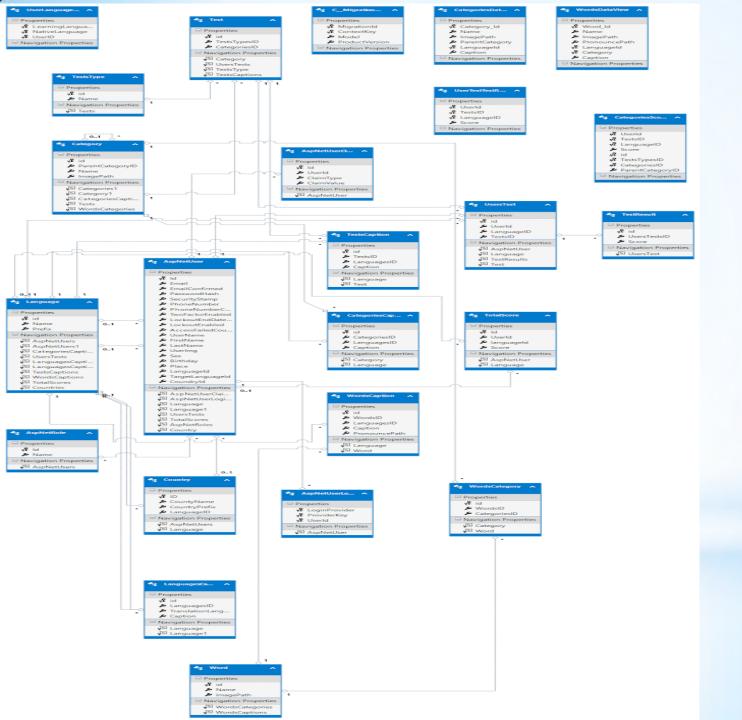


Figure 4 – Database Structure

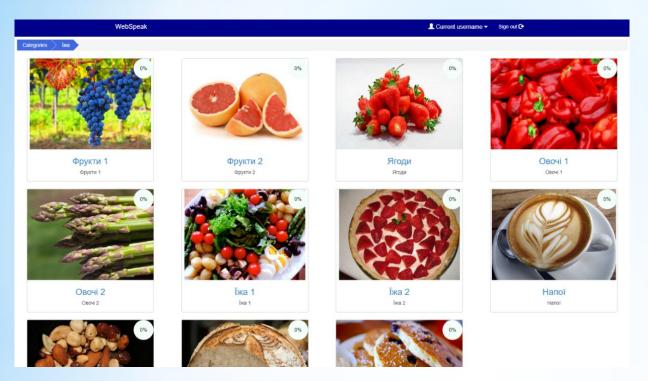


Figure 5 – Main categories page

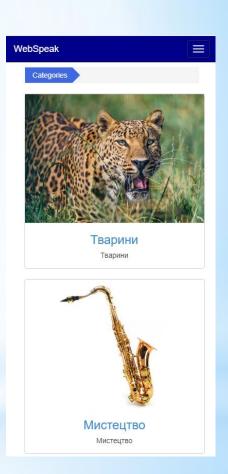
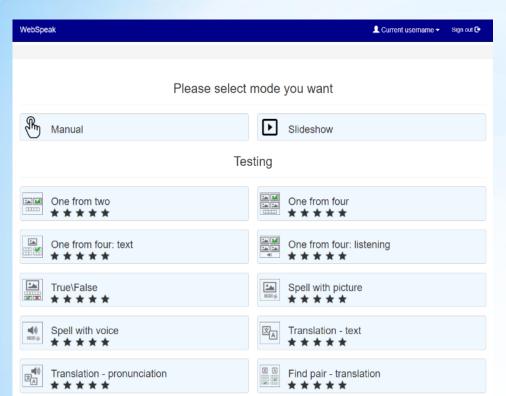


Figure 6 – Mobile devices view



Examples of different type of tests

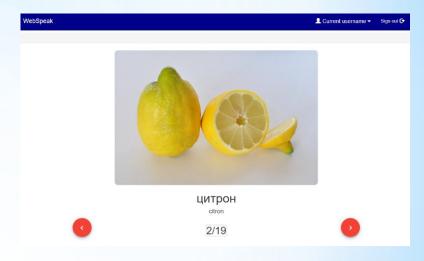
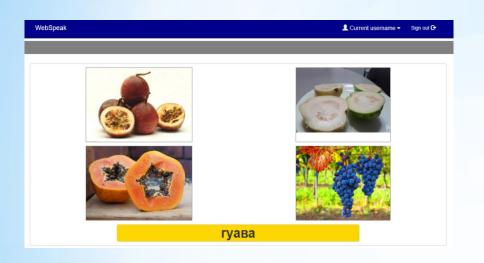


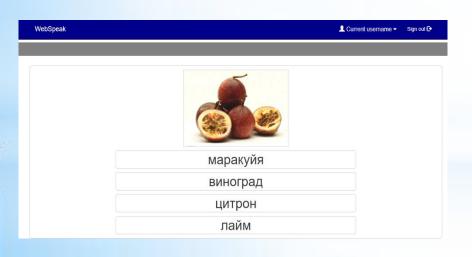
Figure 7 – View, tests selecting modes



Examples of different types of tests

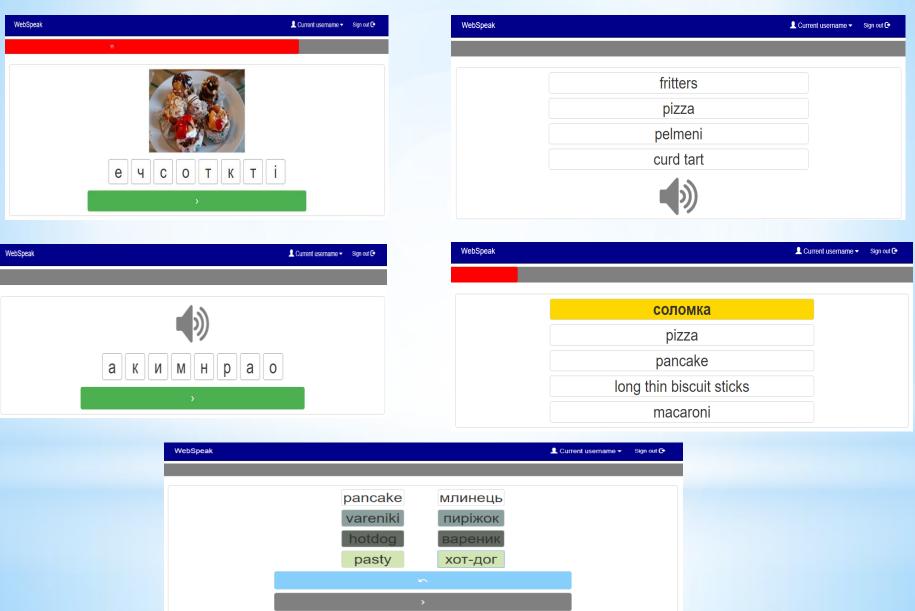








Examples of different types of tests



WebSpeak ≡	
New User Registration	
Email*	
Phone Number	
User name*	
Password*	
Confirm Password*	
Native Language	
Ukrainian ▼	
Target Language	
Ukrainian ▼	
Create Login	

Figure 8 – Sign up page

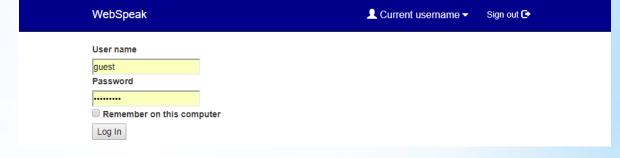


Figure 9 – Sign in page

Mobile application screens



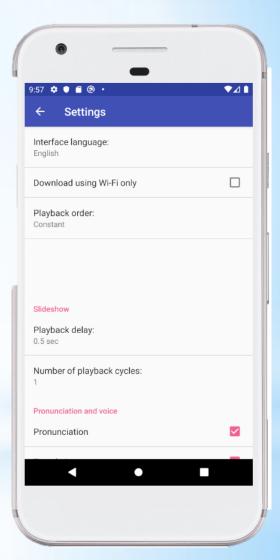




Mobile application screens







*The main scientific and technical result of the work - new information system was presented, which, unlike existing analogues, increases the efficiency of learning foreign languages and the vocabulary of children replenishment by using new highly effective methods of learning, obtained by analyzing the most effective methods of language learning used nowadays.

*Thanks for attention