Laboratory work № 5
Compiling a bug report
(4 hours)

Purpose: to acquire practical skills in applying various manual techniques testing and description of detected defects in the form of bug reports.

Theoretical part

Functional testing is a type of targeted testing to verify compliance with the functional requirements of the software providing (software) its real characteristics. The main task Functional testing is confirmation that software the product being developed has all the functionality needed for the customer.

Depending on the purpose, functional testing can be performed: on the basis functional requirements specified in the requirements specification. At the same time for testing test cases (testcases) are created, the compilation of which takes into account the priority of software functions, which must be covered by tests. So you can be sure that all functions of the developed product work correctly with use different types of input data, their combinations, quantities, based on business processes, which should provide the application. In this case, it is important not so efficiency of separate functions of software, as correctness of the performed operations, given the scenariosuse of the system. Testing in this will be based on options for using the system (usecases). Described the above aspects are implemented through the following areas and levels of testing:

modular (component);
integration;
systemic;
regression;
reception.

Non-functional testing is the testing of properties that are not belong to the functionality of the systemdetermined non-functional requirements that characterize the product in the following respects:

reliability (system response to unforeseen situations);
productivity (system performance under different loads);
convenience (convenience work with the application in terms of the user);
scalability (horizontal or vertical requirements
application scaling);
security (security of user data);
portability (possibility of transfer to different platforms).

These properties of the system can be investigated using the following types testing:

Installation testing - verification of success installation of the application, its configuration and removal, which reduces the risks loss of user data, loss of program performance etc.

Usability testing – characterizes system for ease of use by the end user.

Configuration testing - a study of software performance systems in terms of different software configurations.

Failover and Recovery Testing - study of the software system for recovery from errors, failures.

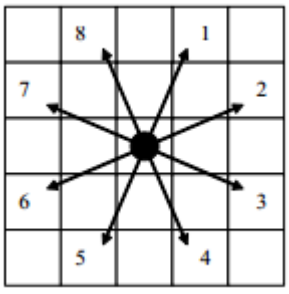
Evaluation of the response of the protective properties of the program.

The structure of the report on laboratory work and the order of work

1. Download the desktop program "KNIGHT" from the materials of PNS.
2. Install KNIGHT on your computer.
3. Write in the report a brief description of the functionality of this program (full description of the principle of operation, available via the menu "Help."
4. Conduct testing "KNIGHT" using different techniques, find as many bugs as possible.
5. Submit all bugs found in the form of bug reports in the report.

1. Description of the object of testing the software product "KNIGHT"

The task of the program is to find all the options for traversing the board with a horse covered with the maximum possible number of cells from a given position. The principle of the program: the branches are selected and checked. What is a branch? This is a sequence of moves, each of which is assigned a sequence number in accordance with the following figure:



Controls of the main form

Start button - starts the calculation.

Choose Decision combobox - designed to select the solution to be played.

Play button - starts playing the solution.

The playback speed is regulated by the track bar Slow Play - Fast Play.

The Animate check box controls the type of playback (with or without animation). He valid only for Knight View Mode.

Menu

File | Select Start Position - switches the program to start selection mode positions. The cursor takes the form of a cross and when you click on the board, the starting position moves to the appropriate cell.

File | Go - starts the calculation.

File | Clear - cleans the board.

File | Play Decisions - launches the playback solution.

File | Options ... - calls the Options dialog.

File | Exit - exit the program.

Help | About - calls the About dialog.

Options dialog

Lines Number - the size of the side of the board (3..10).

Cell Side - the size of the cell side in pixels (30..100).

Delay Between Moves, ms - pause between moves when calculating (0..5000). Used to make it easy to understand how the program works.

It is logical to apply together with the selected Show Graphics during Calculations.

Show Branches Detailed Info - show detailed information about the branches of calculations.

Show Graphics during Calculations - show graphs during calculations.

Write Branches To File - write branches of calculations to a file.

Write Max Branches To File - write the solution to a file.

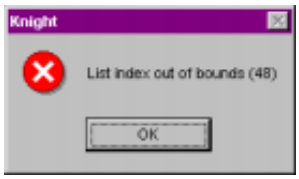
View Mode - display mode

Numbers - colored squares with numbers;

Knights - colored horse figures with numbers.

2. Sample bug report

Title	Knight: input field Choose decision: error message
Category Functional, interface, text	Functional
Frequency Always, often, rarely, no can be repeated	Always

Priority High, medium, low	High
Description Steps to repeat	1. Run the program 2. In the Choose Decision field, select - 48 3. Click the "Play" button 4. An error message appears 
Remark	The program should run without this message