Course: System Programming

Module 3. Multithreading and Asynchrony

Topic: Multithreading and Asynchrony . Part 2

Task 1

Create an app Dancing Progress Bars. The app displays a set of progress bars. Their number is determined by the user. When the button is clicked, the progress bars begin to fill up (the degree of filling up and color are determined randomly). Use multithreading.

Task 2

Simulate horse racing. Five horses participate in the race. Each horse is a progress bar. The race begins when the Start button is clicked. The speed of each horse is determined randomly during the race. Display a scoring chart at the end. Use multithreading.

Task 3

Create an app to display all Fibonacci numbers from 0 to the one specified by the user. Use a window interface and asynchrony.

Task 4

Create an app for searching for a word within some file. The word and a path to the file are specified by the user. Use a window interface and asynchrony. The search result is the displayed number of times the word occurs in the file.

Task 5

Create an app for searching for a word in files of some directory. Entering subdirectories is required. The word and a path to the directory are specified by the user. Use a window interface and asynchrony. The search result is the displayed report in the following format:

File name: ...
Path to the file: ...
Number of occurrences of the word: ...