
COMPARISON OF MULTITHREADING MODELS IN SCALA PROGRAMMING LANGUAGE

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Abstract

The article deals with typical problems of multithreading and shows the use of multithreading in Scala programming language. The study tested two different models of multithreading — the one based on the thread pool and the other based on the futures. In our research we give their comparative characteristics and indicate how the use of these models can help the programmer, and what difficulties may arise. Moreover, we describe advantages and disadvantages of each model and give the examples of the code, which clearly show how the concurrency problems are solved in each case. The efficiency of each model was tested on the example of a specific task

Keywords

Multithreading, Scala, thread pool, futures

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References

- [1] Shildt G. Java 8. Polnoe rukovodstvo [Java 8. Full guide]. Moscow, Vil'yams Publ., 2015. 1376 p. (in Russ.).
- [2] Gosling Dzh., Dzhoy B., Stil G.L., Bracha G., Bakli A. Yazyk programmirovaniya Java SE 8 [Programming language Java SE 8. Detailed description]. Moscow, Vil'yams Publ., 2015. 672 p. (in Russ.).
- [3] Eriksen M. Effective Scala. Twitter: website. URL: <http://twitter.github.io/effectivescala/> (accessed 19.12.2016).
- [4] Khorstmann K.S. Funktsional'noe programmirovaniye. SCALA dlya neterpelivnykh [Functional programming. SCALA for the impatient]. Moscow, DMK Press Publ., 2013. 408 p. (in Russ.).
- [5] Scala documentation. Scala-lang: website. URL: <https://www.scala-lang.org/documentation/> (accessed 19.12.2016).

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