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ABSTRACT

Of the Master thesis on subject:

Managing soft and hard bounced e-mails

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When e-mails are used as a way of communication, the sender of the message has no way of being sure, that the message he/she has sent has been successfully received. E-mails that cannot be received could be divided into two groups – hard bounce and soft bounce. *Hard bounce* are e-mails, that cannot be received at all. This could be caused by a non existing domain, a network connection problem, not valid address of the recipient, or when the recipient's e-mail server has blocked the sender's e-mail server. *Soft bounce* are e-mails, that have reached the recipient's e-mail server (the address is valid), but have not reached the recipient. This could be

caused by an overloaded e-mail server, full mailbox of the recipient, or by an e-mail, whose size exceeds the allowed size limits. In most of the cases, when a hard or a soft bounce has taken place, an error message is sent to the sender of the original e-mail. Unfortunately there are also some cases, when such error message is not sent (for example if the receiver's e-mail server has filtered the message as a SPAM, no error message is typically sent back to the sender). Let's call such an e-mail lost.

The objective of the Master thesis at hand is to analyze the problems caused by the hard and the soft bounces. As a result of this analysis a software solution for the hard and soft bounce problem is designed and developed. There are many types of software that work on the latter by keeping track and working on the received e-mails, but without offering a solution on the above mentioned lost e-mails problem. To handle this problem, the software developed through this thesis keeps track on both sent and received e-mails.

In the thesis the hard and soft bounce problems are analyzed and the already existing software solutions are considered. The design, realization and some tests of the software solution are also examined in it. At its end the results are analyzed and the main advantages and disadvantages of the offered solution are shown.

During the development of the software solution are used Java, Java RMI, Swing and a MySQL database.