

## **ABSTRACT**

Regular expression (regex) is an expression of a regular language which is a simple language on chomsky 's hierarchy. Regular Regular expression is formed by special characters known as metacharacter. Regex pattern can replace a long source code with a simple pattern because it has rule and definition for each metacharacter.

This final project use regex to handle data input validation problems. Result of REMAskEdit is valid or not valid based on a certain specification. Validation process convert regular expression until a deteministic finite automata (DFA) is obtained, DFA will used as transsition diagram for data input validations.

Data input validation is implemented in a REMaskEdit component, it's an inheritance of TCustomEdit class in Borland Delphi 7. The component are tested by validating some data, such as : NIM (student id), birthdate, postal code, telephone number, and e-mail address. The data used are taken from test case of student data input form. The next step is comparing the capability of REMaskEdit with EditMask, a standart component in Borland Delphi 7. Based on its capability, REMaskEdit can be used as another alternative beside EditMask.

Keyword : data input validation, regular expression, component, DFA