**DOKUZ EYLUL UNIVERSITY**

**ENGINEERING FACULTY**

**DEPARTMENT OF COMPUTER ENGINEERING**

**CME 2101 – Project-Based Learning III**

PROJECT REPORT

**PROJECT NAME**

LOGIC EXPRESSİON SIMPLIFICATION TOOL

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**ABSTRACT**

Initially, project team start file operations and importing library operations.Then,basic parts of javafx were learned.Some of javafx

components were implemented.Such as using buttons,labels,layouts,etc.Reading boolean expression and truth table files were accomplished.Basic screen template was completed.Thus,

project team are concentrated on simplification methods. Accepting logic expression from GUI is used for simplification algorithms. The algorithm contains one and two dimensional array data structure. Logic expression was converted to binary number.Similarity rate between numbers provides using laws of boolean algebra.For example,absorptive law,identity law,complement law,Idempotent law.One of the simplification methods is achieved.The other method is karnaugh map. The algorithm contains one and two dimensional array data structure. Every condition is controlled.

**CLASS DIAGRAMS**



**MAIN**



**KARNAUGH**



**SIMPLFY**



**TTNODE**



**IMPLEMENTATION**







**COMPLETION REPORT**

File operations were done in first week.The operation is implemented with GUI.Boolean Simplification is accomplished.Karnaugh map is finished ,but simplification is not implemented completely to GUI. Karnaugh map is just used for 4 inputs.

**CONCLUSION AND FUTURE WORK**

Project wasn’t finished completely because It was not enough time.If we have more time,we can decovolop project about implementation karnaughmap and simplifier codes to GUI. The project could be more dynamic.It could be organized for input size.