A

PROJECT REPORT

ON

K-MAPS

SUBMITTED IN PARTIAL FULFILMENT FOR THE COMPLETION OF

B.E IV SEMESTER

IN

INFORMATION TECHNOLOGY

BY

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UNDER THE GUIDANCE OF

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CERTIFICATE

This is to certify that the project work entitled "K-MAPS" submitted by **N.ARUN REDDY (160117737035),B.ARAVIND KUMAR(160117737033)** in partial fulfilment of the requirements for the completion of IV Sem **B.E.** in **INFORMATION TECHNOLOGY** to **CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY(A)**, affiliated to **OSMANIA UNIVERSITY**, Hyderabad, is a record of bonafied work carried out by them under my supervision and guidance. The results embodied in this report have not been submitted to any other University for the award of any other Degree or Diploma.

Project Guide
Ms.Y.Gnyana Deepa
Asst. Professor, Dept. of IT,
CBIT, Hyderabad.

Head of the Department
Dr. Suresh Pabboju
Professor, Dept. of IT,
CBIT, Hyderabad.

DECLARATION

I hereby declare that the mini project which we have done was under the supervision of the faculty of our college.

No part of our project has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated.

Name: Arun Reddy(160117737035)

Name: Aravind Kumar(160117737033)

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We take this opportunity to remember and acknowledge the cooperation, good will and support both moral and technical extended by several individuals out of which this project evolved. We shall always cherish my associate on with them.

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We are very much thankful to my parents who helped me with utmost friendliness and warmth always. They kept our spirit flying high and persistently encouraged us to undertake and complete this project.

ABSTRACT

Karnaugh Maps is a technique used for getting simplified equation in digital electronics. Karnaugh Maps project decreases the human effort by giving correct error free answers to the user.This technique is used to solve the problems of any number of variables,but in this user is restricted upto four variables

User should have some basic idea of boolean algebra and its properties.This project uses some basic concepts of the java

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1.INTRODUCTION

1.1 Motivation

Solving of a k-map is a time taking taking process when we solve it manually.Getting error free answers also very hard while solving manually So,we have created this project so that user can simply give the question and get their answer within no time and with no errors.User can solve a lot of time while solving this problems

1.2 What is a k-map

A Karnaugh Map is a grid-like representation of a truth table. It is really just another way of presenting a truth table, but the mode of presentation gives more insight. A Karnaugh map has zero and one entries at different positions. Each position in a grid corresponds to a truth table entry.

1.3 Existing System

We have some applications related to this project on Playstore eg:k-map solver,k-map dynamic.In this project,we have used java GUI User gives his/her respective question in binary values which are shown on output screen. After giving the user can see the answer on the samescreen in a simpilified form.

1.4 Objective

The main objective of the project is to reduce the manual effort while solving k-maps and to get error free answers so that user can save his time while solving big problems

2. SOFTWARE REQUIREMENT SPECIFICATION

The requirements specification is a technical specification of requirements for the software products. It is the first step in the requirements analysis process it lists the requirements of a particular software system including functional, performance and security requirements. The requirements also provide usage scenarios from a user, an operational and an administrative perspective. The purpose of software requirements specification is to provide a detailed overview of the software project, its parameters and goals. This describes the project target audience and its user interface, hardware and software requirements. It defines how the client, team and audience see the project and its functionality.

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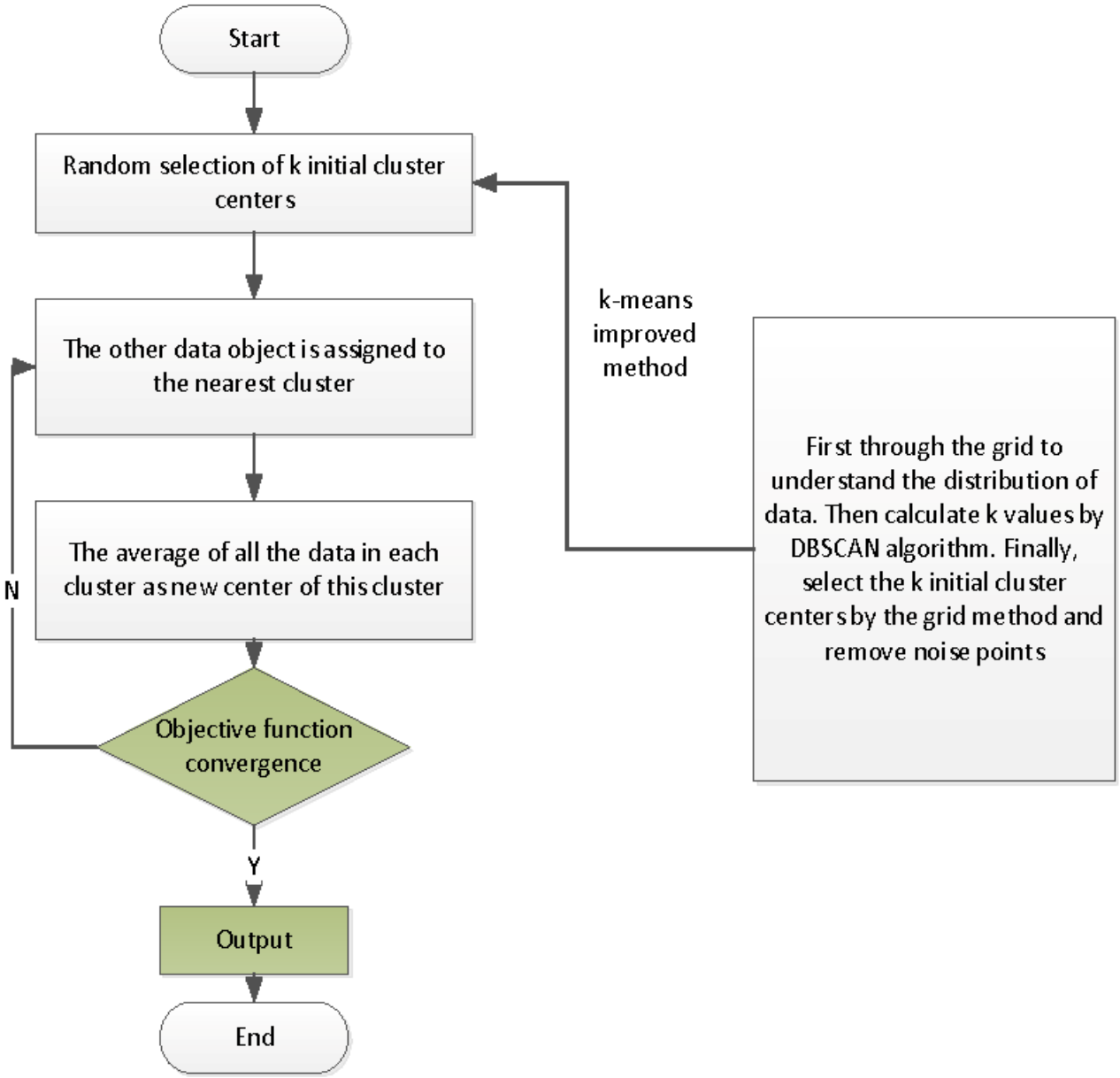
Operating System	Windows 07 and above
Programming Languages	JAVA
Processor	Intel(R) Core(TM) i3 CPU M 350 @2.27GHz
RAM	128KB
Disk Space	5 MB

3.SYSTEM DESIGN



4. IMPLEMENTATION

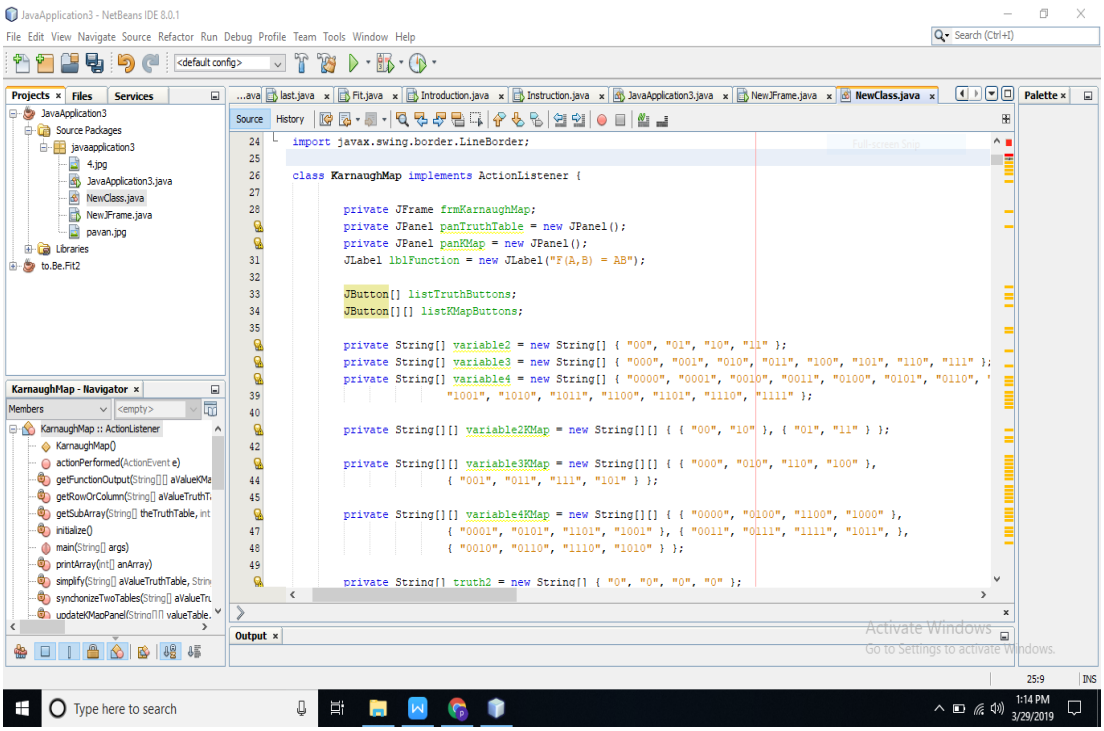


Fig-1 Action listener for karnaughmap class

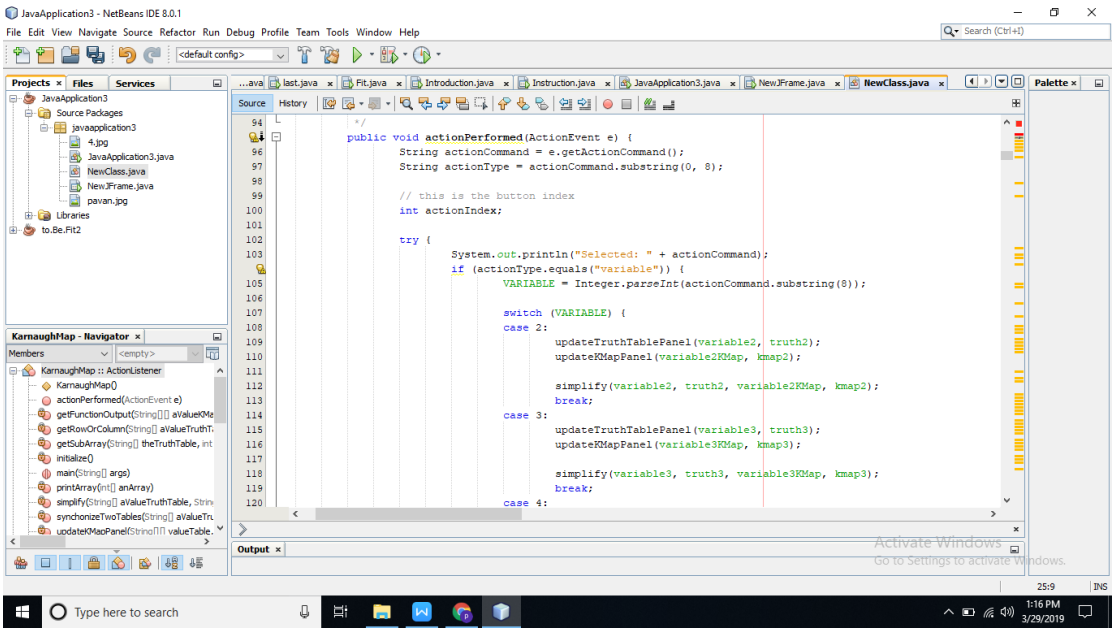


Fig-2 actionPerformed

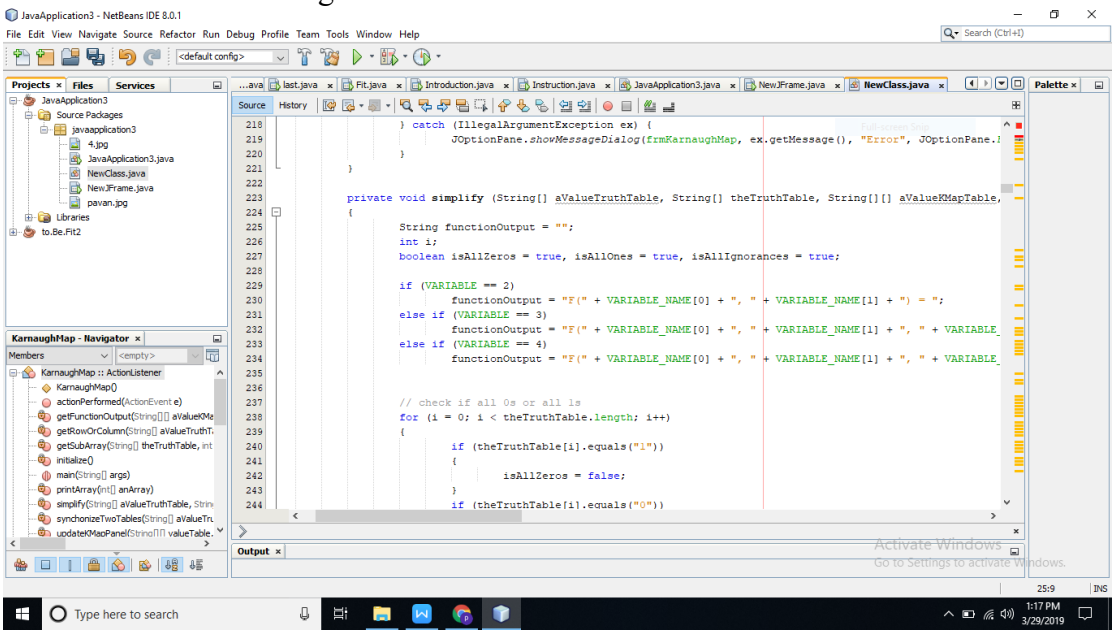


Fig-3 Simplify class

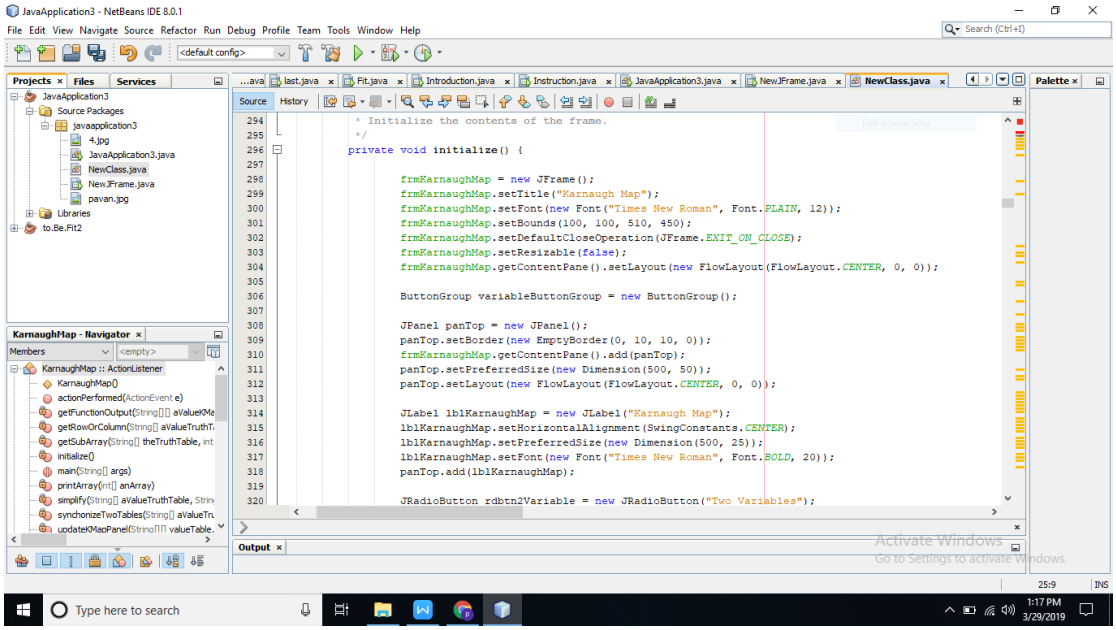


Fig-4 Initialise

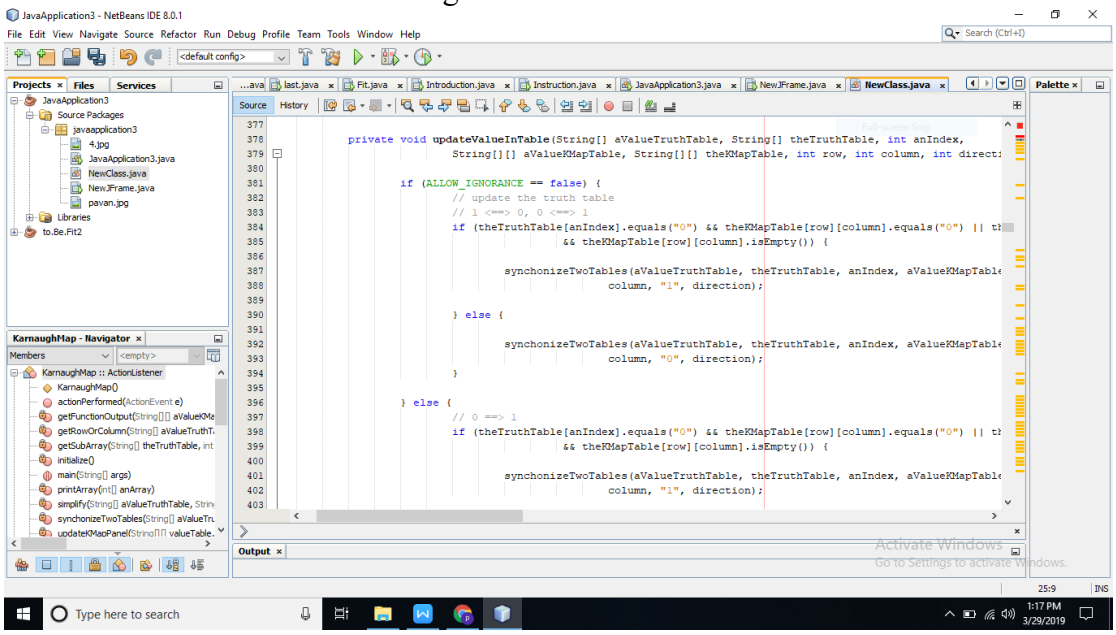


Fig-5 Updatevalue in table

5.TESTING AND RESULTS

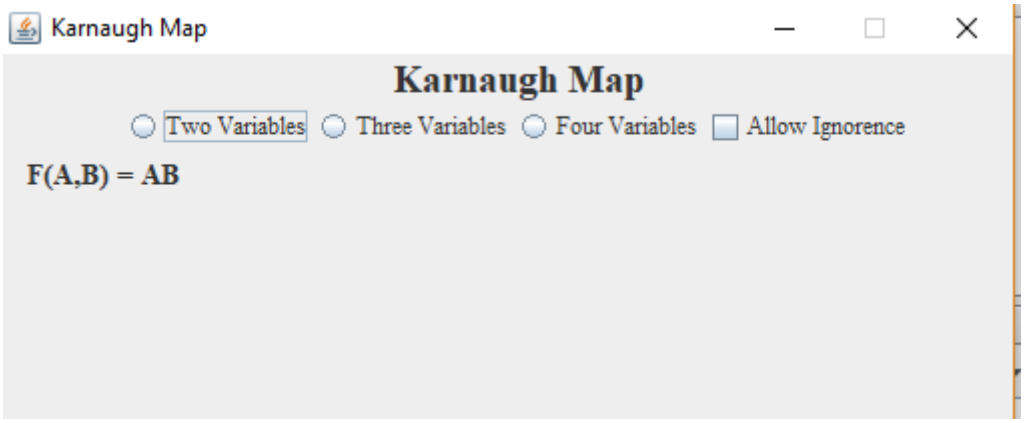


Fig 1 Selection of variables

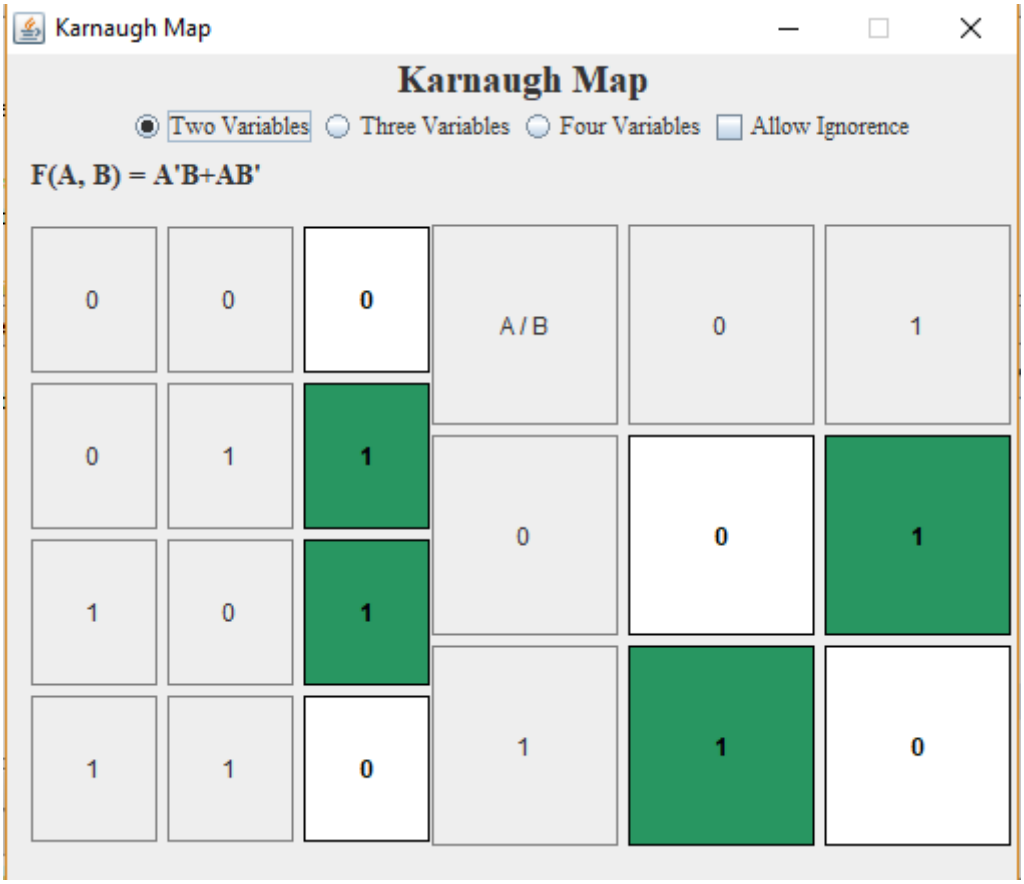


Fig 2 Result for two variables

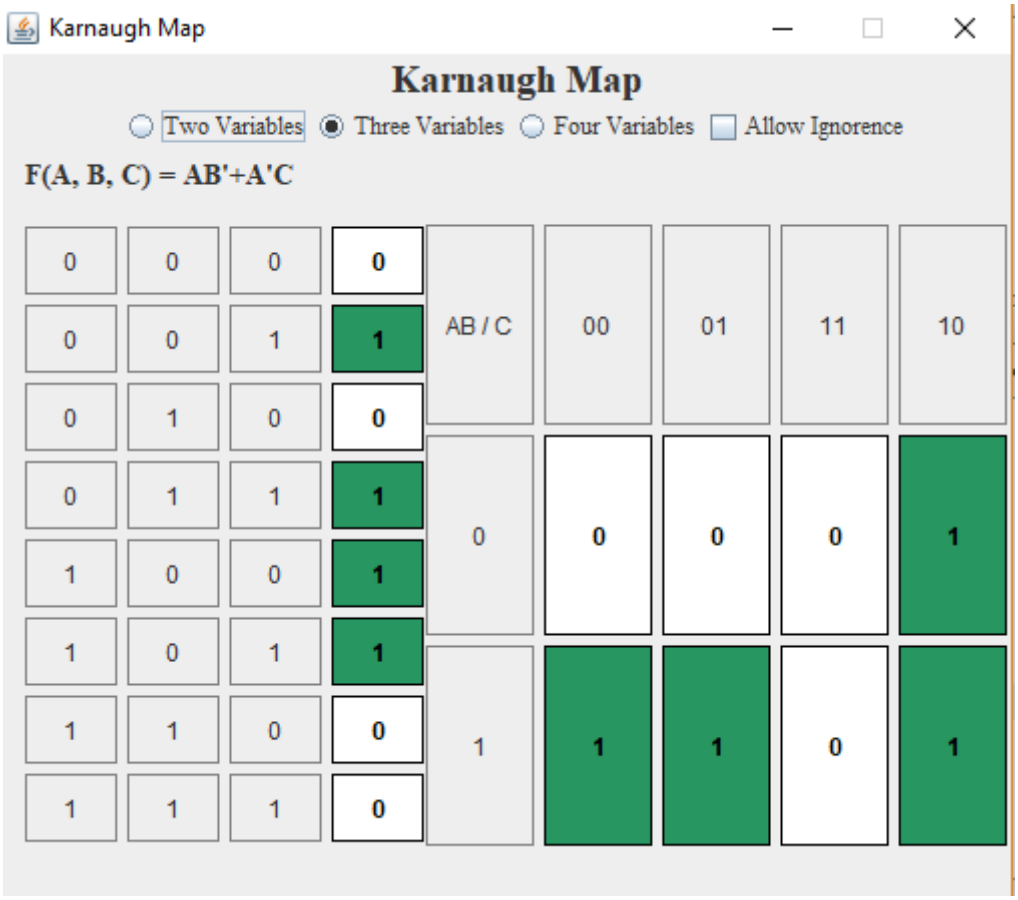


Fig 3 Result for three variables

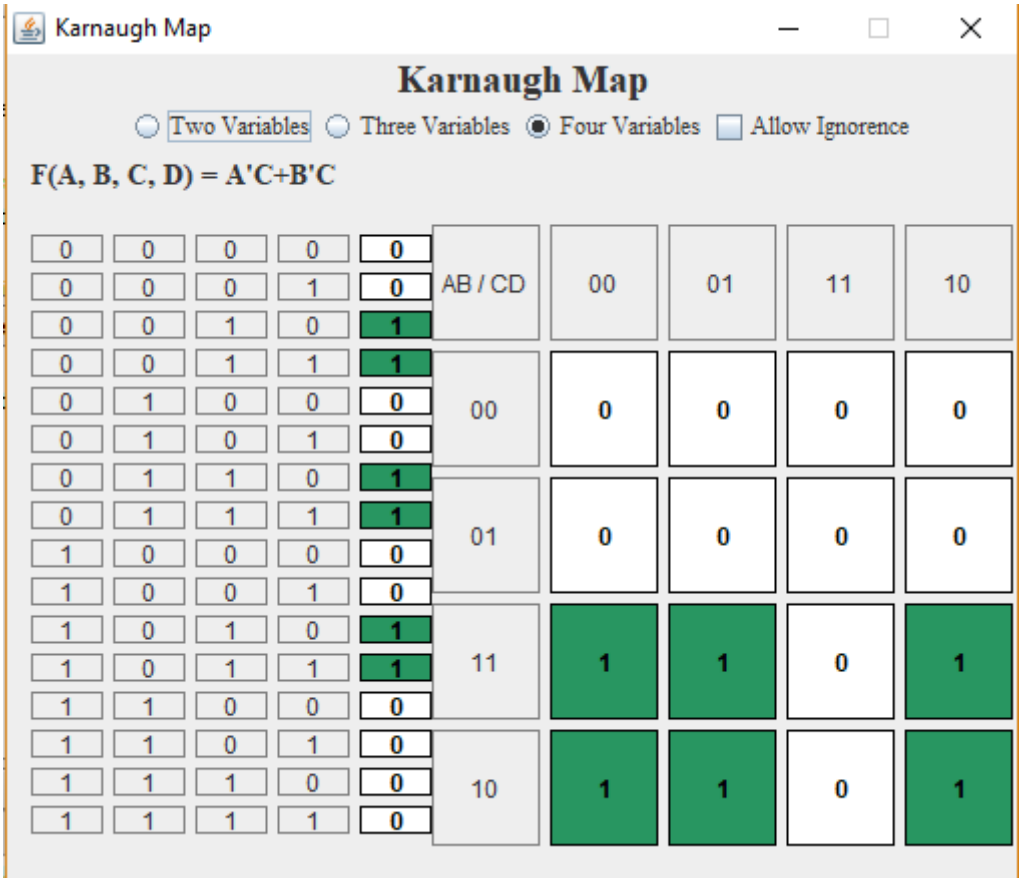


Fig 4 Result for four variables

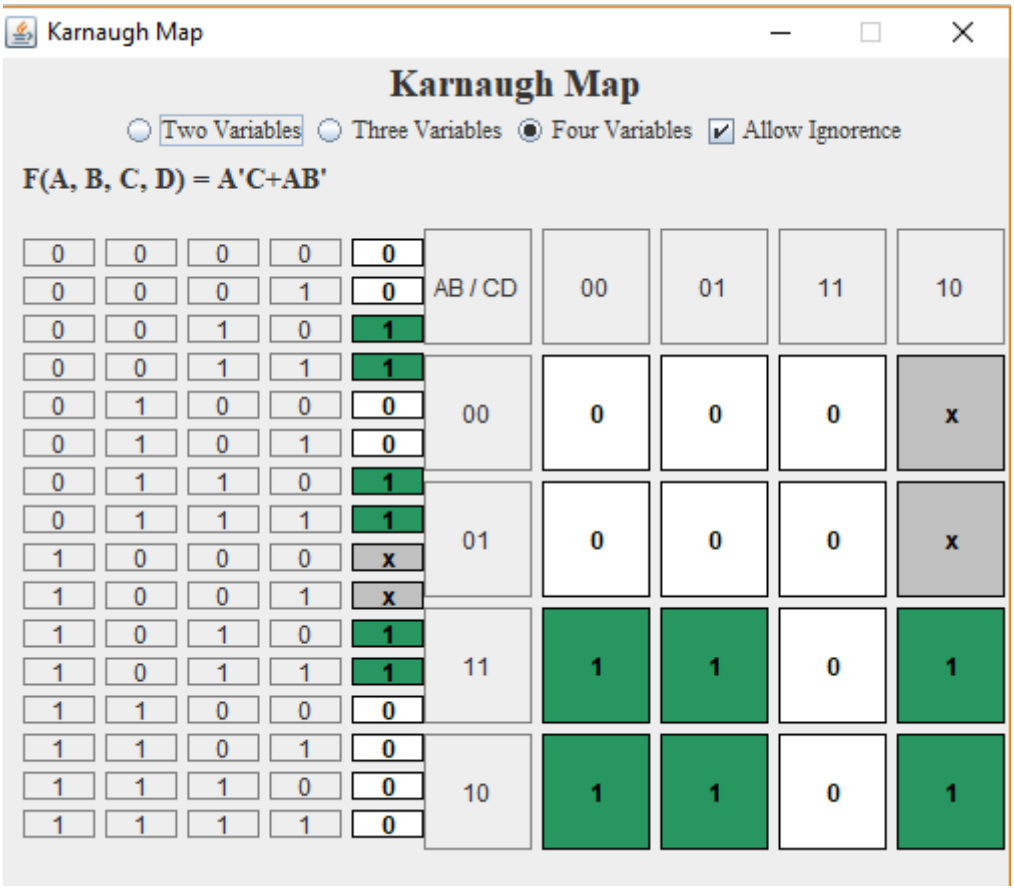


Fig 5 Result of four variables allowing ignorance

6.CONCLUSION AND FUTURE SCOPE

The project has been completed by implementation and analyzation of code and has been verified by using various inputs.Time consuming is less and space not much occupied.This is a systematic process.Its always leads to single minimal solution.This application avoids the manual work and the problems concern with it.The karnaugh map reduces the need for extensive calculation by taking advantage of humans pattern-recognition capability.Karnaugh map with more than 5 variables is more tedious and difficult to understand but modern methods made these easy and consumes very less time when compares to previous one. Thus making code short and simple.

7.BIBLIOGRAPHY

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