KIET GROUP OF INSTITUTIONS, GHAZIABAD

COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

PROJECT BASED LEARNING

On

K-MAP SIMPLIFIER

SUBJECT: DISCRETE STRUCTURE & LOGIC LAB
(KCS-303)

Submitted By:

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Aim: To prepare a k-map simplifier for solving Boolean expressions.

Objective: To simplify the algebraic expressions in Boolean functions without having to resort to complex theorems or equation manipulations that makes it easier to map out parameter values and arrive at a simplified Boolean expressions.

Abstract:

- The project would begin with the development of a comprehensive list of all the important details that need to be captured during a solving simple k-map such as Boolean expressions , POS or SOP .
- We would then create the user interface for select min. terms for finding simplified expressions.
- Once the user interface is completed, we would use quine- mcCluskey algo which is used for minimization of Boolean function.
- In quine algo we use min terms and prime implicant functions for finding essential prime implicant function.

Finally, the project would be deployed, either in the form of a website, for use in solvinf Boolean expressions.

Basic principle: It uses quine mcCluskey algorithm for simplify k-map . In this algo we use min. terms and prime implicant to find essential prime implicant function.

Methodology:

- **Programming languages**:- Depending on the platform and the level of complexity of the project programming language java scipt , css is used. Which is to be implemented on visual studio code platform.

- **Fronted web development frameworks**:- HTML is used to create the user interface and user experience for the k-map simplifier.

Project Output