DIGITAL ELECTRONICS II
GROUP 14

TRAFFIC LIGHT SYSTEM DISPLAYING A FOUR WAY CONTROL

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INTRODUCTION

- Traffic signal are used to control the flow of vehicles due to the increase of transportation vehicles.
- The project is carried along the inter urban road of Buea that is from UB junction to Malingo junction.
- The main objective is to avoid collision of vehicles and ease the movement of vehicles along this stretch of road.

PROCEDURE

- Since we are designing a four way system it means we need two traffic lights which thereby causes the system to be a mod6 thereby we need 3 flip flop to represent all states.
- From our system we took traffic 1= traffic 3 and traffic 2 = traffic 4 due to the fact that they lie on the same intersection.
- JK flip flop are used along side with various AND,NOT and OR gates to build the system.

TRUTH TABLE OF THE SYSTEM

Q0	Q1	Q2	R1	Y1	G1	R2	Y2	G2
0	0	0	0	0	1	1	0	0
0	0	1	1	0	0	0	0	1
0	1	0	0	0	1	1	0	0
0	1	1	1	0	0	0	0	1
1	0	0	0	0	1	1	0	0
1	0	1	0	0	1	1	0	0
1	1	0	0	1	0	1	1	0
1	1	1	1	1	0	0	1	0

CONCLUSION

- However the system could be improved such that we don't take into consideration the peak hours because we cant preview what would happen during the day.
- Furthermore such a system is important because it helps reduce road congestion and facilitates the job of forces of law and order

The traffic light simulation for a four way junction