

NAME: MUHAMMAD UMAR

ROLL NO: 19B-136-CS

COURSE TITLE: DIGITAL LOGIC DESIGN

COURSE CODE: CS-123

INSTRUTOR NAME: ENGR. MUHAMMAD HAMMAD MUNAMI

DEPATMENT: COMPUTER SCIENCE

YEAR: SPRING 2020

BATCH: 19

SECTION: B

SBMISSION DATE: 14-JUL-2020

PROJECT REPORT

SIMULATION OF ROCK PAPER AND SCISSORS



“In the name of ALLAH the most Beneficent and the Most Merciful”

GROUP MEMBERS:

MUHAMMAD UMAR

UMAIR ULLAH KHAN

USMAN AHMED KHAN

SYED MUHAMMAD ZAID

ROLL NO:

19B-136-CS

19B-095-CS

19B-072-CS

19B-140-CS

INSTRUCTOR NAME:

ENGR. MUHAMMAD HAMMAD MUNAMI.

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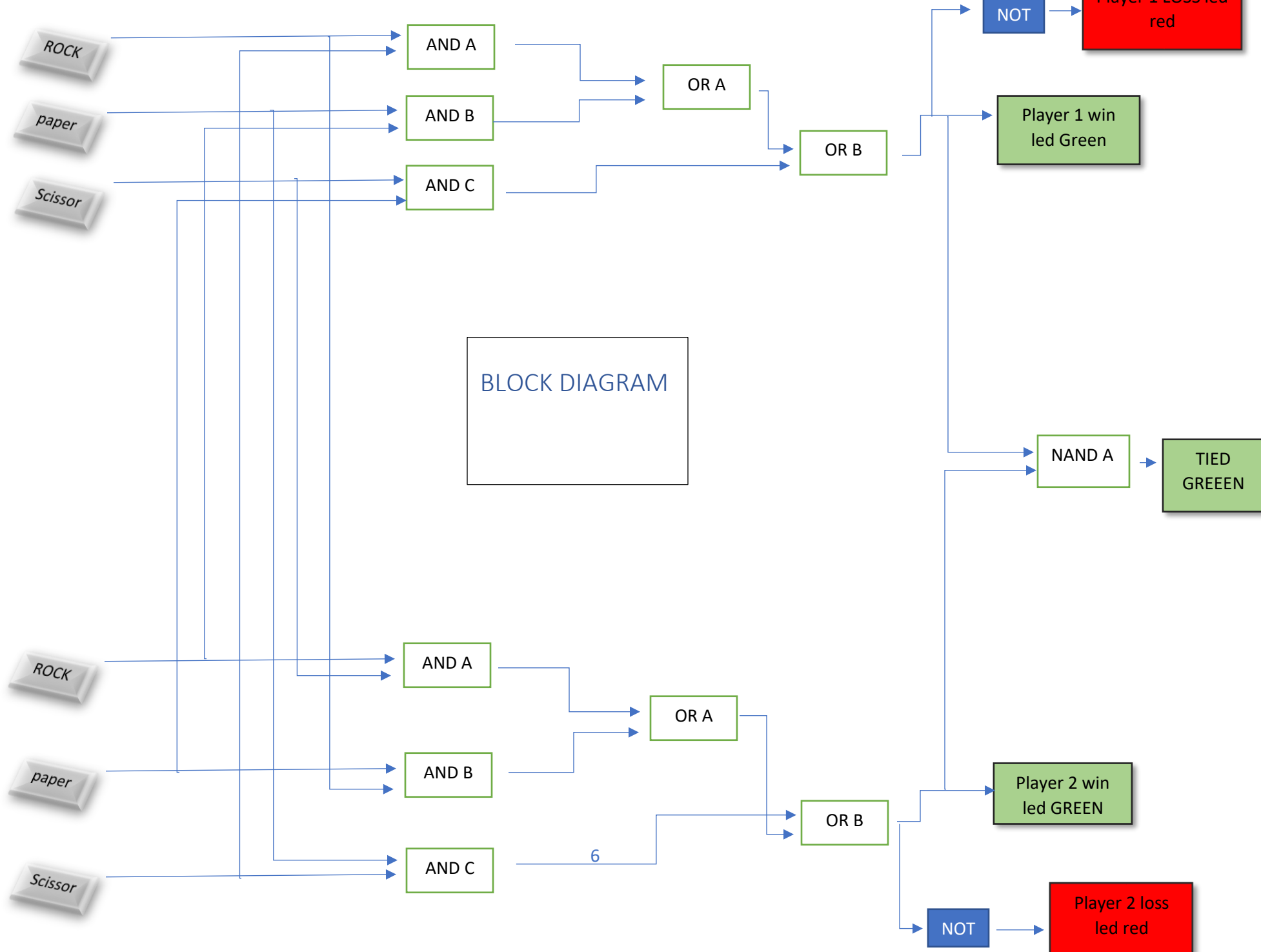
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MOTIVATION:

Did you know that this game first appeared in China in the 17th century? Yes, it was not invented in Europe or America but in Asia. Europe started to play this game only in 19th century. We often played this game in our childhood in schools probably to settle disputes with our friends but we played it with our hands. Now we create that game with using logical gates. To get pro in this game you need to be a good psychologist to predict the next choice of your opponent. Well there is a robot in japan which analyze your hand movement and he always wins. Do you think you beat him??

TRUTH TABLE:

<u>PLAYER 1 INPUT</u>			<u>PLAYER 2 INPUT</u>			<u>OUTPUT</u>			
ROCK1	PAPER1	SCISSOR1	ROCK2	PAPER2	SCISSOR2	1WINS	2WINS	TIE	NO RESULT
0	0	0	0	0	0	0	0	0	1
0	0	1	0	0	0	0	0	0	1
0	1	0	0	0	0	0	0	0	1
1	0	0	0	0	0	0	0	0	1
0	0	0	0	0	1	0	0	0	1
0	0	1	0	0	1	0	0	1	0
0	1	0	0	0	1	0	1	0	0
1	0	0	0	0	1	1	0	0	0
0	0	0	0	1	0	0	0	0	1
0	0	1	0	1	0	1	0	0	0
0	1	0	0	1	0	0	0	1	0
1	0	0	0	1	0	0	1	0	0
0	0	0	1	0	0	0	0	1	1
0	0	1	1	0	0	0	1	0	0
0	1	0	1	0	0	1	0	0	0
1	0	0	1	0	0	0	0	1	0



PROJECT DESCRIPTION:

The project is easy to understand and fun to play basically over here we have two players that are playing this game and we are using six inputs , we have six AND gates , we are using four OR gates and one NOR gate. For seeing the output we have placed leds just to see who is winning a game. Now see how it works.

➔ For player 1 we have three inputs:

1 INPUT REPRESENTS ROCK , 2 INPUT REPRESENT PAPER , 3 INPUT REPRESENT SCISSOR

➔ Similarly For player 2 we have three inputs:

1 INPUT REPRESENTS ROCK , 2 INPUT REPRESENT PAPER , 3 INPUT REPRESENT SCISSOR

Now this table will represent that only on these conditions player 1 will win if and only if he presses this and player 2 presses this:

Player 1 WINS IF:

PLAYER 1	PLAYER 2
ROCK	SCISSOR
PAPER	ROCK
SCISSOR	PAPER

Now this table will represent that only on these conditions player 2 will win if and only if he presses this and player 1 presses this:

Player 2 WINS IF:

PLAYER 1	PLAYER 2
SCISSOR	ROCK
ROCK	PAPER
PAPER	SCISSOR

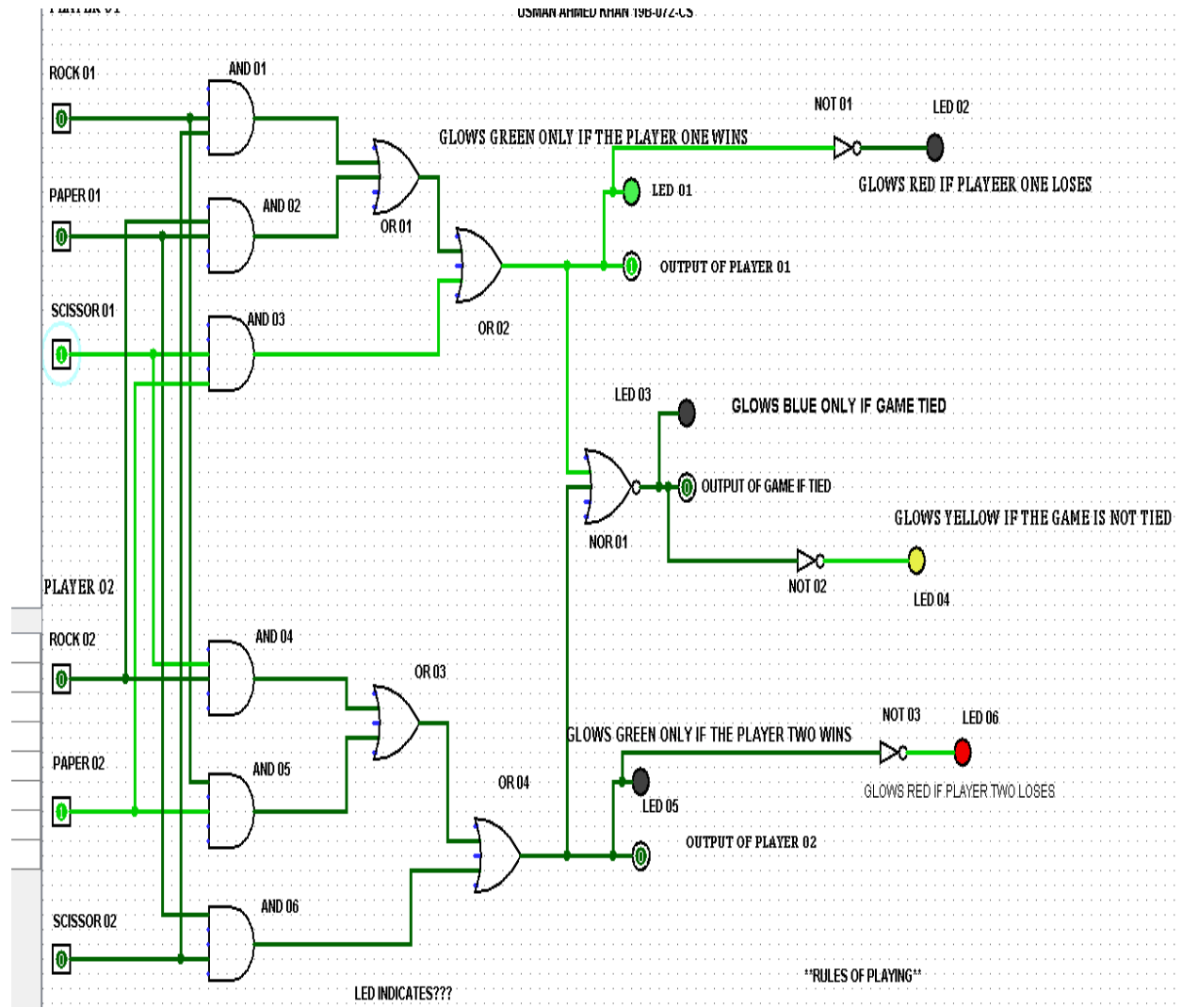
But if both the player gives the same input it means the game will be draw.

TROUBLESHOOTING DESCRIPTION:

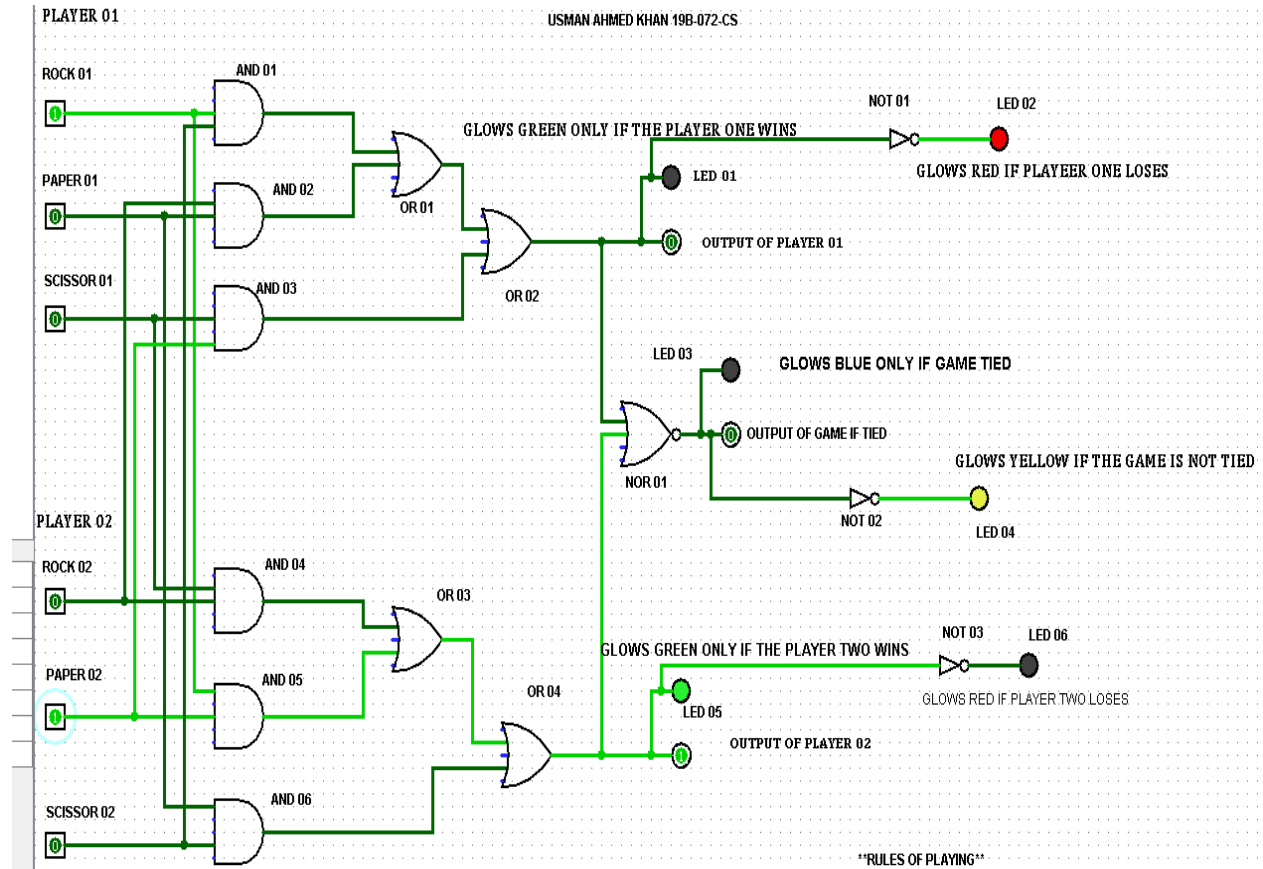
This project was not very hard to attempt. But we got stuck in two to three places which includes how to give the result of if the game is tied and also to in the display of result. We used many references of different websites, and videos but could not get any satisfactory result. Then we realized that we were using wrong logical gates at some places that cost us the wrong result. We also got stuck in the situation where we were expecting a tie in the result and we found out that the player one is getting victory. Then one of our group member realized that there was a error in the connection of gates. That was also fixed by the help of that group member. These were the two trouble shooting done by us in the simulation of our project.

SIMULATIONS:

SIMULATION IF PLAYER ONE WINS



SIMULATION IF PLAYER TWO WINS



SIMULATION IF GAME IS TIED

