**NAND GATE IMPLEMENTATION**

|  |  |  |  |
| --- | --- | --- | --- |
| D | CLK | Out | Prev |
| 0 | 1 | 0 | X |
| C:\Users\system123\Desktop\breadboard\exp10\nand\D0CLK1.JPG | | | |
| 1 | 0 | 0 | 0 |
| C:\Users\system123\Desktop\breadboard\exp10\nand\D1CLK0PrevD0.JPG | | | |
| 1 | 1 | 1 | X |
| C:\Users\system123\Desktop\breadboard\exp10\nand\D1CLK1.JPG | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| J | K | CLK | Reset | Out | Prev |
| 0 | 0 | 1 | 1 | 01 | 01 |
| C:\Users\system123\Desktop\breadboard\exp10\nand\JK00CLK1R1Prev01.JPG | | | | | |
| 0 | 0 | 1 | 1 | 10 | 10 |
| C:\Users\system123\Desktop\breadboard\exp10\nand\JK00CLK1R1Prev10.JPG | | | | | |
| 0 | 1 | 1 | 1 | 01 | X |
| C:\Users\system123\Desktop\breadboard\exp10\nand\JK01CLK1R1.JPG | | | | | |
| 1 | 0 | 1 | 1 | 10 | X |
| C:\Users\system123\Desktop\breadboard\exp10\nand\JK10CLK1R1.JPG | | | | | |
| 1 | 1 | 1 | 1 | 10 | 01 |
| C:\Users\system123\Desktop\breadboard\exp10\nand\JK11CLK1R1Toggle.JPG | | | | | |
| 1 | 1 | 1 | 1 | 01 | 10 |
| C:\Users\system123\Desktop\breadboard\exp10\nand\JK11CLK1R1Toggle2.JPG | | | | | |
| x | x | x | 0 | 01 | X |
| C:\Users\system123\Desktop\breadboard\exp10\nand\JKR0.JPG | | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S | R | CLK | Out | Prev |
| 0 | 0 | 1 | 10 | 10 |
| C:\Users\system123\Desktop\breadboard\exp10\nand\SR00CLK1.JPG | | | | |
| X | x | 0 | 10 | 10 |
| C:\Users\system123\Desktop\breadboard\exp10\nand\SR01CLK0.JPG | | | | |
| 1 | 0 | 1 | 10 | 10 |
| C:\Users\system123\Desktop\breadboard\exp10\nand\SR01CLK1.JPG | | | | |
| 0 | 1 | 1 | 01 | x |
| C:\Users\system123\Desktop\breadboard\exp10\nand\SR10CLK1.JPG | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| T | CLK | Reset | Output | Prev |
| x | x | 0 | 01 | X |
| C:\Users\system123\Desktop\breadboard\exp10\nand\T0CLK1R0.JPG | | | | |
| 0 | 1 | 1 | 01 | 01 |
| C:\Users\system123\Desktop\breadboard\exp10\nand\T0CLK1R1.JPG | | | | |
| 1 | 1 | 1 | 10 | 01 |
| C:\Users\system123\Desktop\breadboard\exp10\nand\T1CLK1R1(1)-Prev0.JPG | | | | |
| 1 | 1 | 1 | 01 | 10 |
| C:\Users\system123\Desktop\breadboard\exp10\nand\T1CLK1R1(1)-Prev1.JPG | | | | |

**NOR GATE IMPLEMENTATION**

|  |  |  |  |
| --- | --- | --- | --- |
| D | CLK | Out | Prev |
| 0 | 0 | 01 | 01 |
| C:\Users\system123\Desktop\breadboard\exp10\nor\D0CLK0.JPG | | | |
| 1 | 0 | 0 | 1 |
| C:\Users\system123\Desktop\breadboard\exp10\nor\D1CLK0Prev1.JPG | | | |
| 1 | 1 | 1 | X |
| C:\Users\system123\Desktop\breadboard\exp10\nor\D1CLK1.JPG | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| J | K | CLK | Reset | Out | Prev |
| 0 | 0 | 1 | 1 | 10 | 10 |
| C:\Users\system123\Desktop\breadboard\exp10\nor\JK00CLK1Reset1Prev10.JPG | | | | | |
| 0 | 1 | 1 | 1 | 01 | x |
| C:\Users\system123\Desktop\breadboard\exp10\nor\JK01CLK1Reset1.JPG | | | | | |
| 1 | 0 | 1 | 1 | 10 | X |
| C:\Users\system123\Desktop\breadboard\exp10\nor\JK10CLK1Reset1.JPG | | | | | |
| 1 | 1 | 0(to keep out stable) | 1 | 01 | 10 |
| C:\Users\system123\Desktop\breadboard\exp10\nor\JK11CLK0Reset1Prev10.JPG | | | | | |
| 1 | 1 | 0(to keep out stable) | 1 | 10 | 01 |
| C:\Users\system123\Desktop\breadboard\exp10\nor\JK11CLK0Reset1Prev01.JPG | | | | | |
| x | x | x | 0 | 01 | X |
| C:\Users\system123\Desktop\breadboard\exp10\nor\JKReset0.JPG | | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S | R | CLK | Out | Prev |
| 0 | 0 | 1 | 01 | 01 |
| C:\Users\system123\Desktop\breadboard\exp10\nor\SR00CLK1Prev01.JPG | | | | |
| 0 | 1 | 1 | 01(here Q,Q’ are interchanged) | x |
| C:\Users\system123\Desktop\breadboard\exp10\nor\SR01CLK1.JPG | | | | |
| 1 | 0 | 1 | 10(here Q,Q’ are interchanged) | x |
| C:\Users\system123\Desktop\breadboard\exp10\nor\SR10CLK1.JPG | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| T | CLK | Reset | Output | Prev |
| x | x | 0 | 01 | X |
| C:\Users\system123\Desktop\breadboard\exp10\nor\TReset0.JPG | | | | |
| 1 | 0(to keep Output stable) | 1 | 10 | 01 |
| C:\Users\system123\Desktop\breadboard\exp10\nor\T1CLK0R1Prev10.JPG | | | | |
| 1 | 0(to keep Output stable) | 1 | 01 | 10 |
| C:\Users\system123\Desktop\breadboard\exp10\nor\T1CLK0R1Prev01.JPG | | | | |