## **Program Output:**

```
MAIN MENU
MAIN MENU
                            -----
_____
                           1 - NOT gate
1 - NOT gate
                           2 - AND gate
2 - AND gate
                           3 - OR gate
                            4 - NAND gate
3 - OR gate
                           5 - NOR gate
 - NAND gate
                           6 - Half-Adder
5 - NOR gate
6 - Half-Adder
                           7 - Full-Adder
                             - Multiplexer
 - Full-Adder
                           9 - Exit

    Multiplexer

                           Enter your choice: 2
9 - Exit
                           Enter total number of inputs(maximum 8): 2
Enter your choice: 1
                           Enter inputs [0 or 1]:0 1
Enter input[0 or 1]: 0
                            Table:
                           Inputs
                                            Output
Table:
                                   0
                                            0
Input
         Output
                                   0
         1
                           0
                                   1
                                            0
         0
                                    1
                                            1
                           Output: 0
Output: 1
```

```
MAIN MENU
                                             MAIN MENU
                                             _____
____
                                             1 - NOT gate
1 - NOT gate
2 - AND gate
                                             2 - AND gate
3 - OR gate
                                             3 - OR gate
4 - NAND gate
                                             4 - NAND gate
5 - NOR gate
                                              - NOR gate
                                               - Half-Adder
6 - Half-Adder
                                             7 - Full-Adder
7 - Full-Adder
                                              - Multiplexer
8 - Multiplexer
                                             9 - Exit
9 - Exit
Enter your choice: 3
                                             Enter your choice: 4
                                             Enter total number of inputs(maximum 8): 2
Enter total number of inputs(maximum 8): 2
                                             Enter inputs [0 or 1]:0 1
Enter inputs [0 or 1]:0 1
                                             Table:
Table:
Inputs
                Output
                                             Inputs
                                                             Output
        0
                                                     0
                0
                                                             1
1
        0
                                                     0
                1
                                             0
                                                     1
                                                             1
                1
                                             1
                                                     1
                                                             0
        1
                1
                                             Output: 1
Output: 1
```

```
MAIN MENU
                                              MAIN MENU
                                                                                MAIN MENU
                                               _____
_____
                                                                                1 - NOT gate
                                               1 - NOT gate
1 - NOT gate
                                                                                2 - AND gate
                                              2 - AND gate
2 - AND gate
                                                                                3 - OR gate
                                               3 - OR gate
3 - OR gate
                                                                                4 - NAND gate
                                               4 - NAND gate
                                                                                5 - NOR gate
4 - NAND gate
5 - NOR gate
                                              5 - NOR gate
                                                                                 - Half-Adder
                                                                                 - Full-Adder
                                                - Half-Adder
6 - Half-Adder
                                                                                8 - Multiplexer
                                               7 - Full-Adder
 - Full-Adder
                                                                                9 - Exit
                                              8 - Multiplexer

    Multiplexer

                                                                                Enter your choice: 7
                                              9 - Exit
9 - Exit
                                                                                Enter three inputs [0 or 1]:0 1 0
                                              Enter your choice: 6
Enter your choice: 5
                                              Enter two inputs [0 or 1]:0 1
                                                                                Table:
Enter total number of inputs(maximum 8): 2
                                                                                Inputs
                                                                                                     Carry
                                                                                                             Sum
Enter inputs [0 or 1]:0 1
                                                                                              1
                                                                                                             1
                                               Table:
                                                                                       1
                                                                                              0
                                                                                                     1
                                                                                                             0
                                               Inputs
                                                               Carry
                                                                        Sum
Table:
                                                                                       0
                                                                                                      1
                                                                                                             0
                                                                        0
                                                       1
                                                                1
Inputs
                 Output
                                                                                       0
                                                                                              0
                                                                                                     0
                                               1
                                                       0
                                                                0
                                                                        1
0
        0
                 1
                                              0
                                                                                0
                                                       1
                                                                0
                                                                        1
                                                                                       1
                                                                                              0
                                                                                                     0
1
        0
                 0
                                                                                       0
                                                                                                      0
                                              0
                                                                0
                                                       0
                                                                        0
0
                 0
        1
                                                                                       0
                                                                                                      0
                                                                                              0
1
        1
                 0
                                              Sum: 1
                                                                                Sum: 1
                                              Carry: 0
Output: 0
                                                                                Carry: 0
MAIN MENU
                                                           MAIN MENU
____
                                                            1 - NOT gate
                                                           1 - NOT gate
2 - AND gate
3 - OR gate

    AND gate

4 - NAND gate
                                                             - OR gate
5 - NOR gate
                                                           4 - NAND gate
```

## 6 - Half-Adder 7 - Full-Adder 8 - Multiplexer 9 - Exit Enter your choice: 8 Enter four inputs [0 or 1]:1 1 1 1 Enter two selectors [0 or 1]:0 1 Table: Select Input Output 0 0 0 0 0 1 1 0 1 0 0 1 0 1 1 1 0 0 1 0 0 1 0 1 0 0 1 Output: 1

5 - NOR gate

6 - Half-Adder

- Full-Adder

- Multiplexer

9 - Exit

Enter your choice: 9

... Program finished with exit code 0 Press ENTER to exit console.