## 3-Input Majority Function

1 if a majority of the inputs are 1,0 otherwise

| A | B | C |  | Majority |
| :---: | :---: | :---: | :---: | :---: |
| 0 | 0 | 0 |  | 0 |
| 0 | 0 | 1 | 0 |  |
| 0 | 1 | 0 |  | 0 |
| 0 | 1 | 1 |  | 1 |
| 1 | 0 | 0 | 0 |  |
| 1 | 0 | 1 |  | 1 |
| 1 | 1 | 0 | 1 |  |
| 1 | 1 | 1 | 1 |  |

## 2-level AND-OR implementation

1. An AND-gate for each row of the table with 1 in the output column
2. All inputs ( $A, B, C$ ) wired to the inputs of each AND-gate
3. Each AND-gate output wired to an input of a single OR-gate
4. "Program" the inputs of each AND-gate to implement one min-term (row) of the table

