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| --- | --- | --- | --- | --- |
|  | Inputs | | | Output |
| Cases | Reset | PL | PI | InstAdd |
| A | 1 | 0/1 | 0/1 | Reset Value (4) |
| B | 0 | 0/1 | 1 | InstAdd+1 |
| C | 0 | 1 | 0 | InstAdd + Displacement |

The PC takes in a Displacement value and inputs PI, PL and Reset. When Reset = 1, the program counter is reset toa predetermined value, for this simulation it is the last digit of my student number.

The program counter can be incremented by setting PI to 1.

The program counter can be displaced by an amount equal to the displacement value if PI and Reset both = 0 and PL = 1. This is what happens when a branch statement is performed.