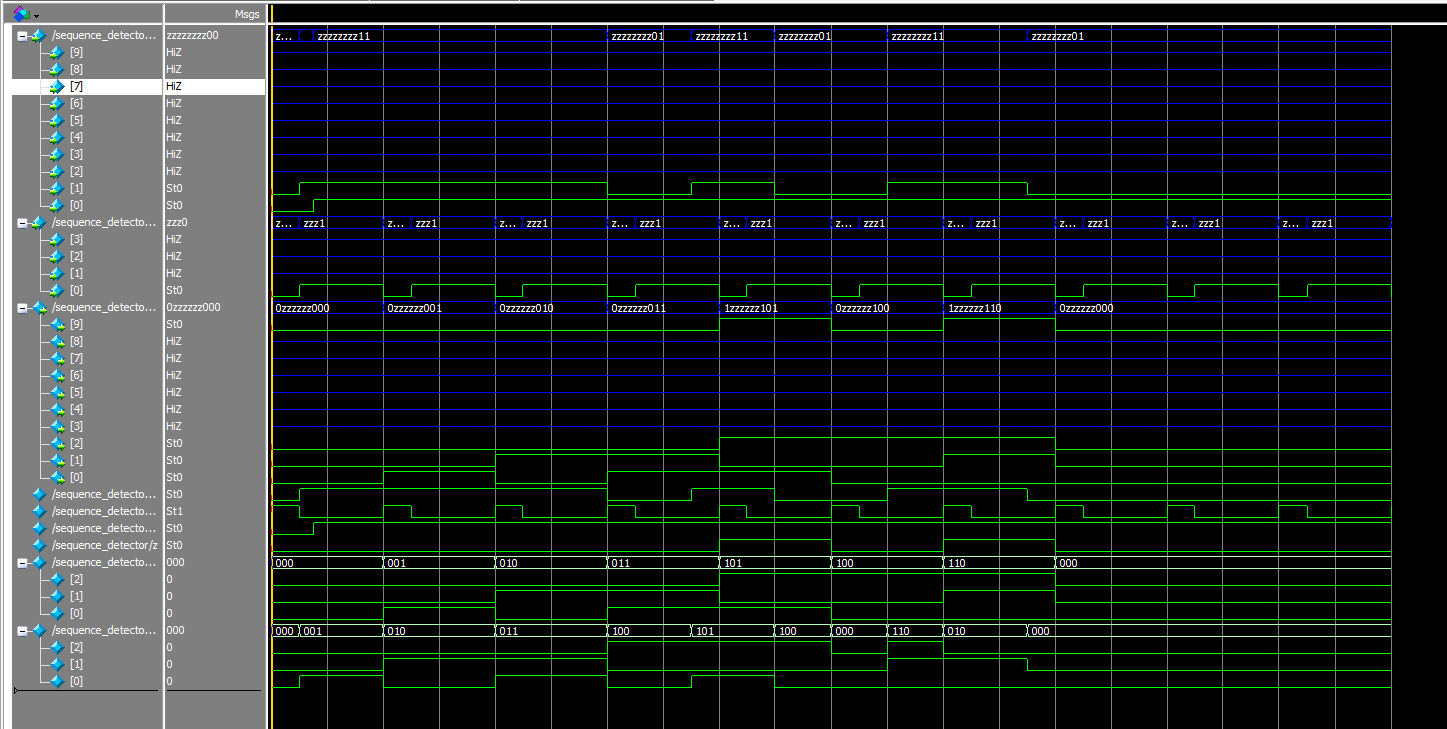
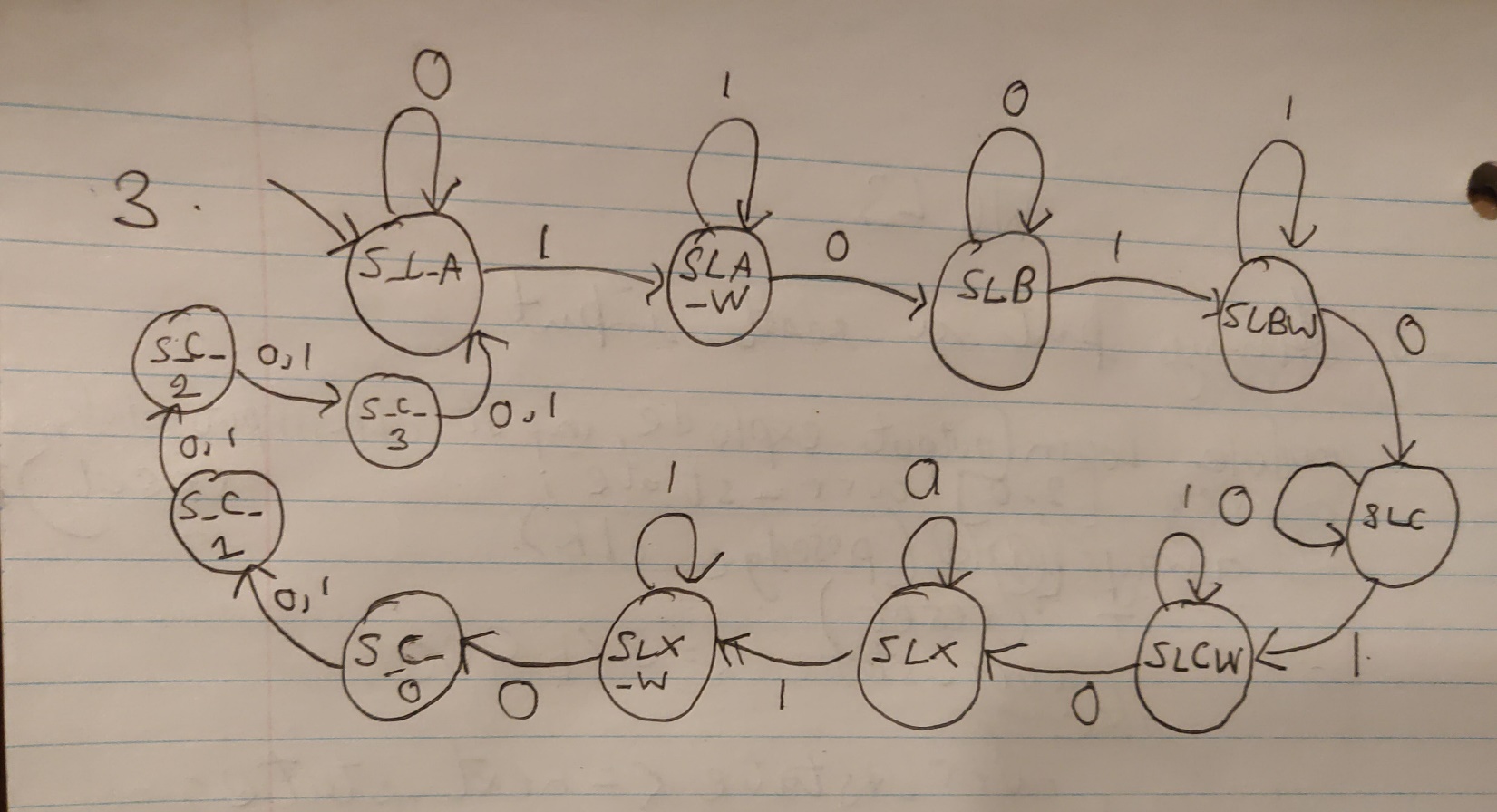
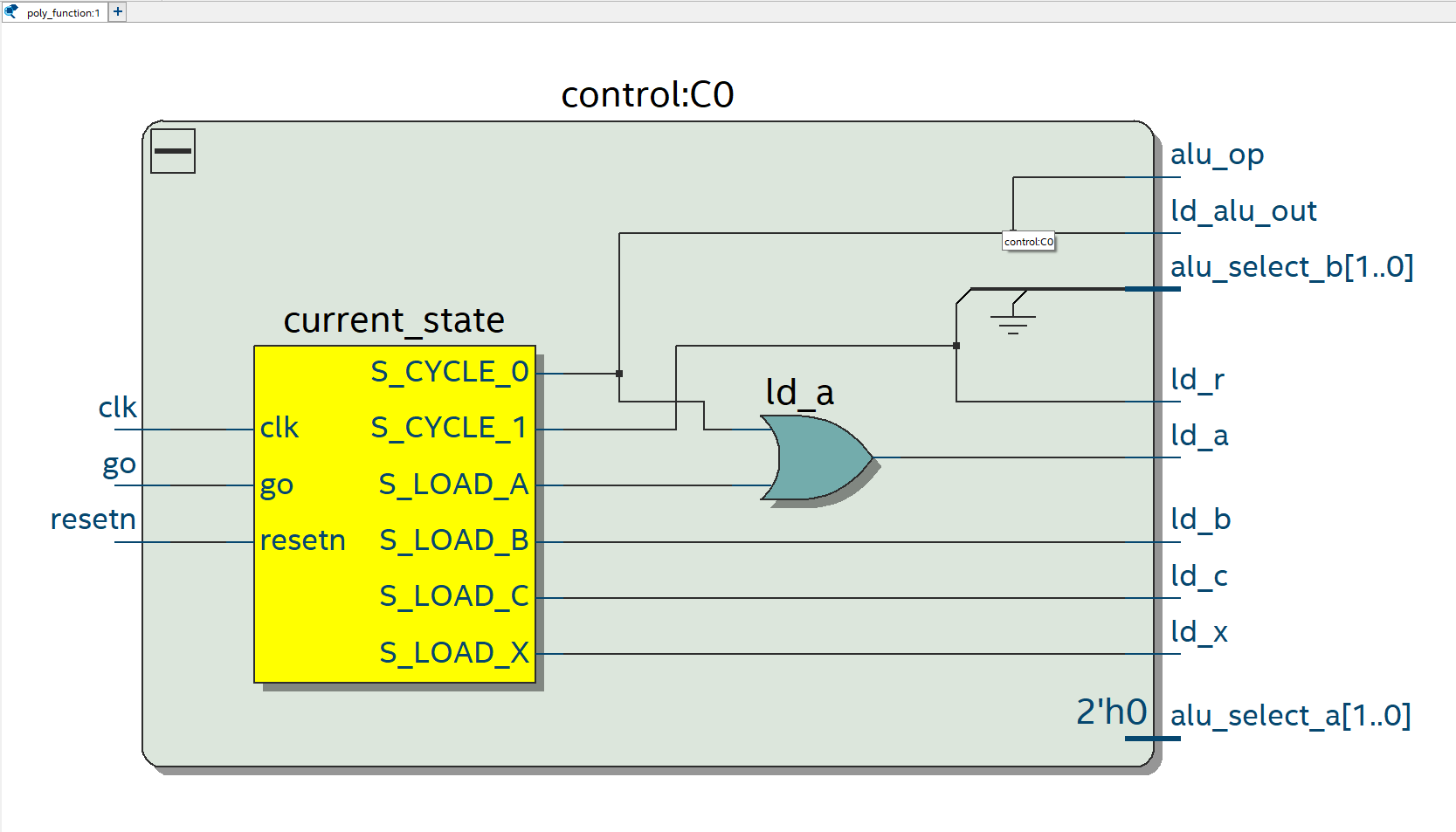
|  |  |  |
| --- | --- | --- |
| **Current State** | **Switch Input** | **Output State** |
| 000 | 0 | 000 |
| 000 | 1 | 001 |
| 001 | 0 | 000 |
| 001 | 1 | 010 |
| 010 | 0 | 100 |
| 010 | 1 | 011 |
| 011 | 0 | 110 |
| 011 | 1 | 101 |
| 100 | 0 | 000 |
| 100 | 1 | 110 |
| 101 | 0 | 100 |
| 101 | 1 | 101 |
| 110 | 0 | 000 |
| 110 | 1 | 010 |



|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Cycle** | **Value** | **Alu\_select\_a** | **Alu\_select\_b** | **B** | **R** |
| 0 | A\*X | 00 | 11 | B | - |
| 1 | A\*X+B | 00 | 01 | A\*X+B | - |
| 2 | X\*(A\*X+B) | 11 | 01 | X\*(A\*X+B) | - |
| 3 | X\*(A\*X+B)+C | 01 | 10 | X\*(A\*X+B) | X\*(A\*X+B) + C |





A close up of a mans face

Description automatically generated

