Project 1

Gage Farmer - ECE 3561

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Solutions

# Problem 1

# Problem 2

# Problem 3

This is a Mealy machine since the INPUT signal runs directly into the output Q1

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| INPUT | PRE | J2 | S2 | Q2 | AND1 | AND2 | OR1 | S3 | Q0 | Q1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 |
| 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | Stay | 0 |
| 1 | 0 | 1 | 0 | Toggle | 0 | 0 | 0 | 0 | Stay | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | Toggle | 1 |