

Excitation Table for J-K Flip-Flops

| Q | Q' | J | K |
|---|----|----------|----------|
| 0 | 0 | 0 | <i>d</i> |
| 0 | 1 | 1 | <i>d</i> |
| 1 | 0 | <i>d</i> | 1 |
| 1 | 1 | <i>d</i> | 0 |

Truth Table:

| | A | B | x | A' | B' | z | JA | KA | JB | KB |
|---|---|---|---|----|----|---|----|----|----|----|
| 0 | 0 | 0 | 0 | | | | | | | |
| 1 | 0 | 0 | 1 | | | | | | | |
| 2 | 0 | 1 | 0 | | | | | | | |
| 3 | 0 | 1 | 1 | | | | | | | |
| 4 | 1 | 0 | 0 | | | | | | | |
| 5 | 1 | 0 | 1 | | | | | | | |
| 6 | 1 | 1 | 0 | | | | | | | |
| 7 | 1 | 1 | 1 | | | | | | | |

Question:

Should you use D flip-flops or J-K flip-flops to implement this circuit? Why?