

```

digraph Automaton
{
    node[fontsize=20]      edge[fontsize=20, arrowhead = open]
    rankdir = LR;
    size = "10.000000, 8.000000";
    center = 1;
    nodesep = "0.2"

    0 [shape=doublecircle, style=bold, fontsize=20, margin=0]
    1 [shape=doublecircle, style=solid, fontsize=20, margin=0]
    2 [shape=doublecircle, style=solid, fontsize=20, margin=0]
    3 [shape=doublecircle, style=solid, fontsize=20, margin=0]
    4 [shape=doublecircle, style=solid, fontsize=20, margin=0]
    5 [shape=doublecircle, style=solid, fontsize=20, margin=0]
    6 [shape=doublecircle, style=solid, fontsize=20, margin=0]
    7 [shape=doublecircle, style=solid, fontsize=20, margin=0]
    8 [shape=doublecircle, style=solid, fontsize=20, margin=0]
    9 [shape=doublecircle, style=solid, fontsize=20, margin=0]

    0 -> 0 [label="0"]
    0 -> 1 [label="1"]
    0 -> 2 [label=<1 - &beta;>]
    1 -> 3 [label="0"]
    1 -> 4 [label="1"]
    1 -> 6 [label=<1 - &beta;>]
    2 -> 3 [label="1"]
    2 -> 4 [label="2"]
    2 -> 5 [label=<1 - &beta;>]
    2 -> 6 [label=<2 - &beta;>]
    3 -> 8 [label="k"]
    3 -> 0 [label=<k - &beta;>]
    3 -> 1 [label=<k+1 - &beta;>]
    4 -> 7 [label="k"]
    4 -> 3 [label=<k - &beta;>]
    4 -> 4 [label=<k+1 - &beta;>]
    5 -> 0 [label=<k+1 - &beta;>]
    5 -> 1 [label=<k+2 - &beta;>]
    6 -> 3 [label=<k+1 - &beta;>]
    6 -> 4 [label=<k+2 - &beta;>]
    7 -> 8 [label="k-1"]
    7 -> 9 [label="k"]
    7 -> 0 [label=<k-1 - &beta;>]
    7 -> 1 [label=<k - &beta;>]
    8 -> 1 [label="0"]
    8 -> 0 [label="-1"]
    9 -> 4 [label="0"]
    9 -> 3 [label="-1"]
}

```