# Homework - 03

**Question:**   Design the state diagram for the recursive auto-associator discussed in class.

**Solution:**   Following image contains the state diagram for the inputs $S_i$ where $i \in \{0, 1, 2, ..., 15\}$
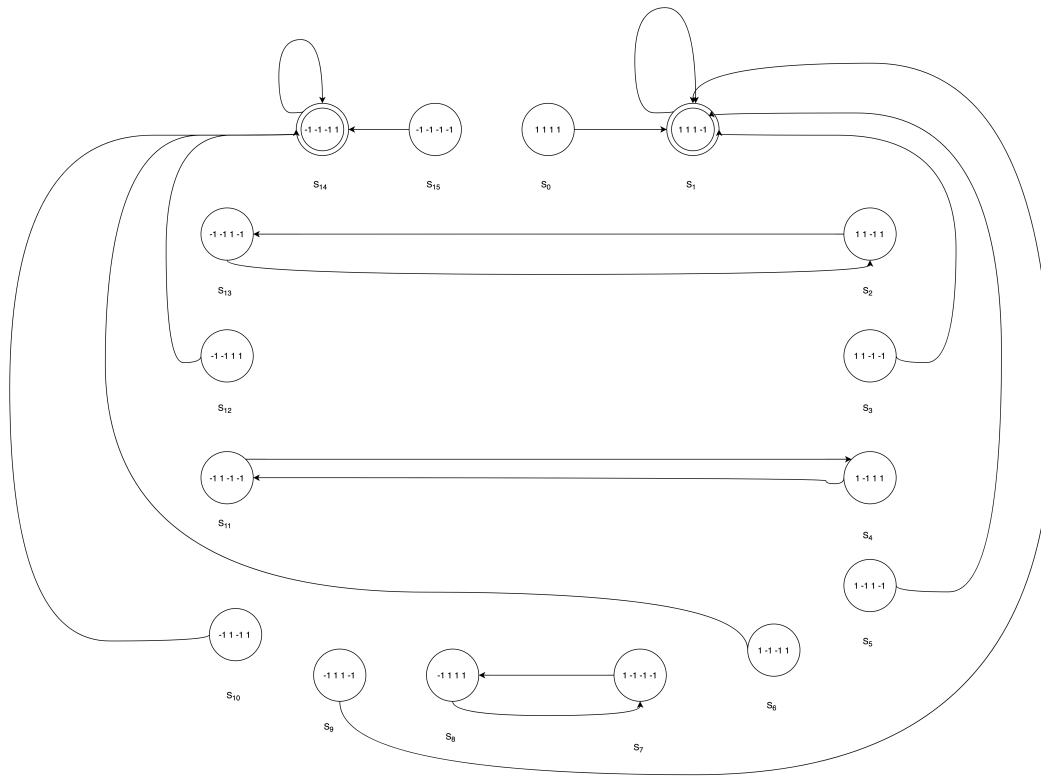


Figure 1: State Diagram

The correct outputs are $S_1$ and $S_{14}$. Rest of them are incorrect outputs and oscillate between themselves.