

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Assignment3Theory
{
    class State
    {
        public State()
        {
        }

        public State(string Name, string aState, string bState, bool accepting)
        {
            stateName = Name;
            StateA = aState;
            StateB = bState;
            Final = accepting;
        }

        public State(string Name, string aState, State ParmA, string bState, State ParmB, bool
accepting)
        {
            stateName = Name;
            StateA = aState;
            NextA = ParmA;
            NextB = ParmB;
            StateB = bState;
            Final = accepting;
        }

        /// <summary>
        /// What is my state number
        /// </summary>
        public string stateName
        {
            get;
            set;
        }

        /// <summary>
        /// if an a is next where do we go
        /// </summary>
        public string StateA
        {
            get;
            set;
        }

        /// <summary>
        /// if a b is next where do we go
```

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/// </summary>
public string StateB
{
    get;
    set;
}

public State NextA
{
    get;
    set;
}

public State NextB
{
    get;
    set;
}

/// <summary>
/// is this a final state
/// </summary>
public bool Final
{
    get;
    set;
}

/// <summary>
/// Figures out what the next state is
/// </summary>
/// <param name="input"></param>
/// <returns></returns>
public string nextState(char input)
{
    if (input == 'a')
    {
        return StateA;
    }
    else
    {
        return StateB;
    }
}

public override string ToString()
{
    return " State Number: " + stateName + " Next A: " + StateA + " Next B: " + StateB +
        " Accepting: " + Final;
}
}
```