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// Introduction to Windows and Web Applications in C#
// demonstration student/address/state from class 5
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using System;
using System.IO;

public enum State
{
    Washington,
    Oregon,
    Idaho,
    Montana,
    Wyoming
}

public struct Address
{
    // public fields
    public string City;
    public State State;

    // one of two constructors
    public Address(string city, State state)
    {
        City = city;
        State = state;
    }

    // one of two constructors. uses Enum.Parse to convert a string
    // to an element of the State enumeration
    public Address(string city, string state)
    {
        City = city;
        State = (State)Enum.Parse(typeof(State), state, true);
    }

    public void WriteToFile(StreamWriter writer)
    {
        writer.WriteLine(City);
        writer.WriteLine(State);
    }

    public static Address ReadFromFile(StreamReader reader)
    {
        string city = reader.ReadLine();
        State state = (State)Enum.Parse(typeof(State), reader.ReadLine(), true);
        return new Address(city, state);
    }

    // override the default System.Object.ToString()
    // to display the details of this address
    public override string ToString()
    {
        string output = string.Format("{0}\n{1}\n", City, State);
        return output;
    }
}

```