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package csp.constraints;

import java.util.Arrays;
import java.util.List;

import TGGLanguage.csp.Variable;
import TGGLanguage.csp.impl.ConstraintImpl;

public class IndexToLevel extends ConstraintImpl {

    private List<String> levels = Arrays.asList(new String[] { "beginner",
        "advanced", "master" });

    @Override
    public void solve() {

        Variable var_index = getVariables().get(0);
        Variable var_level = getVariables().get(1);

        String bindingStates = getBindingStates();

        if (bindingStates.equals("BB")) {
            int index = convertIndex();
            String level = var_level.stringValue();
            setValid(levels.get(index).equals(level));
        } else if (bindingStates.equals("FB")) {
            String level = var_level.stringValue();
            int index = levels.indexOf(level);
            if (index == -1) {
                setValid(false);
            } else {
                var_index.setValue(index);
                var_index.setBound(true);
                setValid(true);
            }
        } else if (bindingStates.equals("BF")) {
            int index = convertIndex();
            if (index < 0 || index > 2) {
                setValid(false);
            } else {
                var_level.setValue(levels.get(index));
                var_level.setBound(true);
                setValid(true);
            }
        }
    }

    private int convertIndex() {
        return new Double(getVariables().get(0).stringValue()).intValue();
    }
}

```