THE SWAPPING PROBLEM

Version 2

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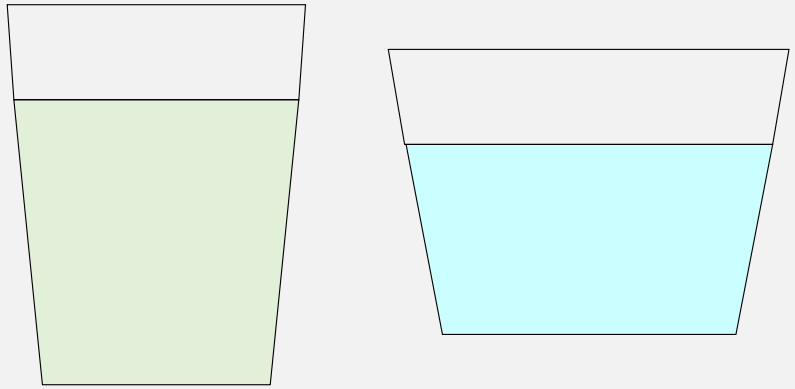
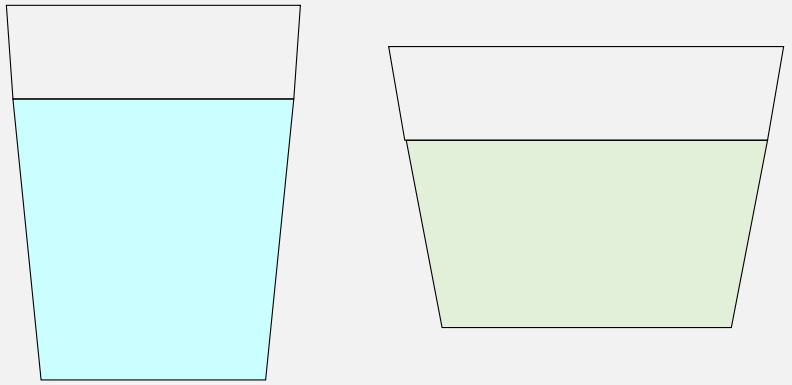
THE PROBLEM

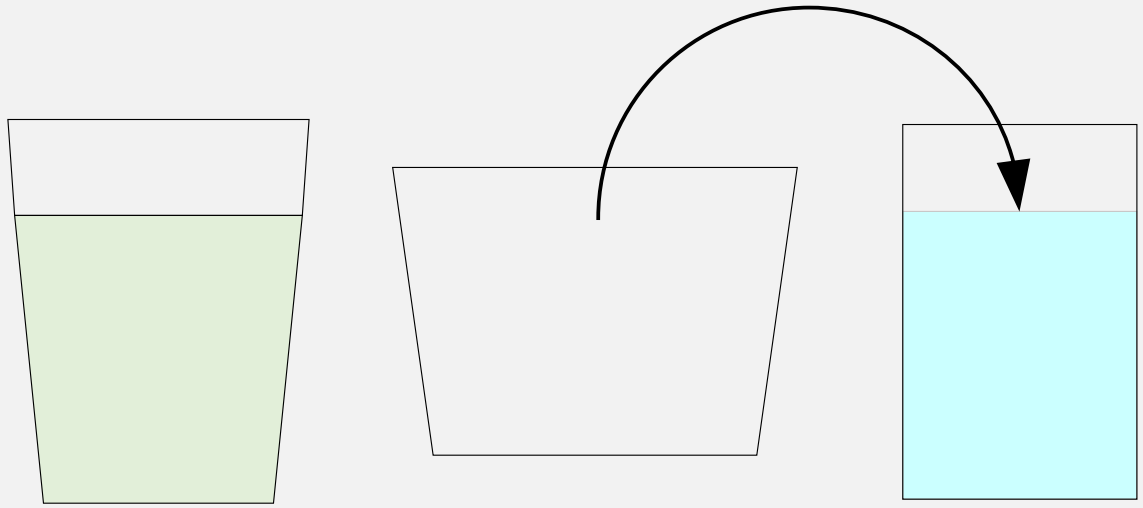
INITIAL STATE



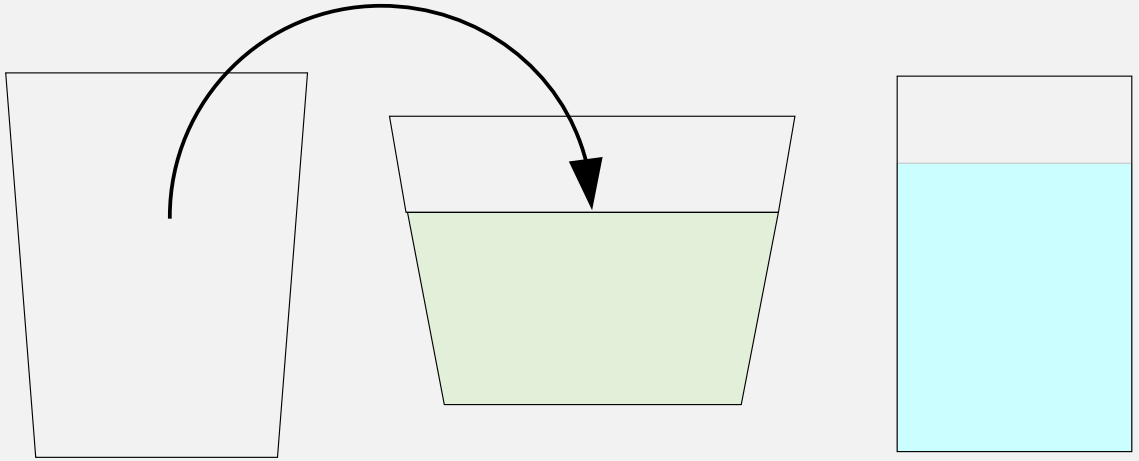
GOAL (SOLUTION) STATE



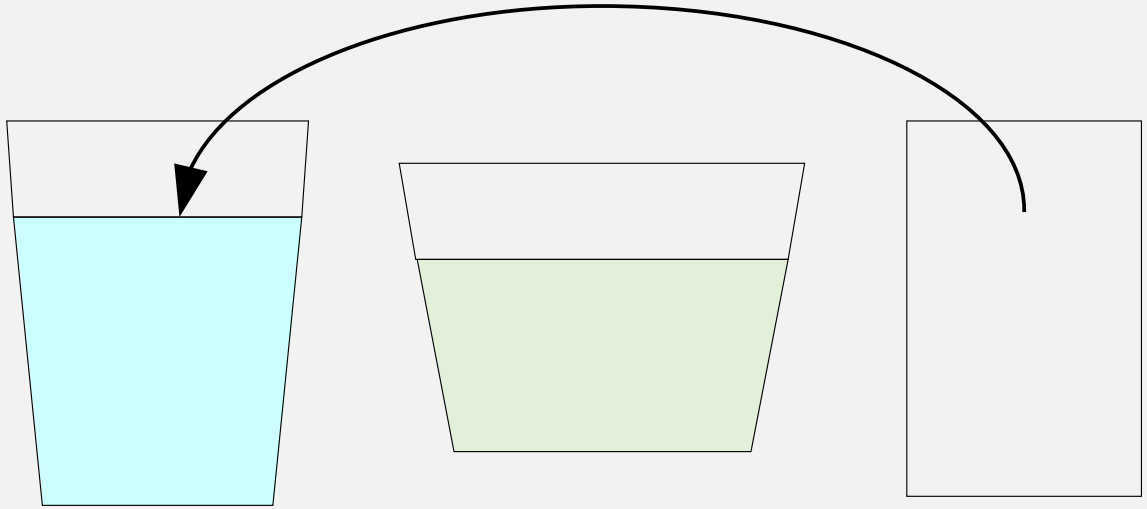
STEP 1



STEP 2



STEP 3



SWAPPING VARIABLES: A PROGRAMMING SOLUTION

SETUP

```
T  x1 = …;
T  x2 = …;
```

SOLUTION

```
T  temp = x1;      // step 1
x1 = x2;           // step 2
x2 = temp;         // step 3
```

SWAPPING STRUCTURES

```
struct student
{
        int         id;
        string      name;
        double      gpa;
};
```

```
student    s1 = { 123, "dilbert", 3.0 };
student    s2 = { 987, "alice", 4.0 };

student temp = s2;
s2 = s1;
s1 = temp;
```