

Braces

CS110C

Max Luttrell, CCSF

problem: balanced braces

- C++ uses curly braces to delimit groups of statements
- Let's treat a C++ program as one long string. How can we determine if its braces are balanced?
 - Example: {abc{de}fg{hij}k} is balanced
 - Example: {abc{de}fg{hijk} is not balanced
- Conditions:
 - Each } must match a previously-seen {
 - When you get to the end, all {'s have been matched

ADT stack use balanced braces

- Here's a start...

```
for (each character c in the string)
{
    if (c is a '{')
        aStack.push('{')
    else if (c is a '}')
        aStack.pop()
}
```


ADT stack use balanced braces

```
boolean balancedSoFar = true
for (each character c in the string)
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if (balancedSoFar and aStack.isEmpty())
    string is balanced
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{ a { b } c }

string

aStack

true

balancedSoFar

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    }
}

if (balancedSoFar & aStack.isEmpty())
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false

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