Zoe Lavoie

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2. stack.push(“Joe”)

Stack.push(“Jane”)

Stack.push(“Jill”)

The statement stack.push(“Joe”) adds the string Joe into the stack as the first element, then Jane is added on top, and finally Jill is added on top of both of those.

3. After the operations done on the two stacks:

The elements in stack s (from bottom to top): a b b

The elements in stack t (only contains one element so it is at the top): d

4. (From top to bottom): Jill , Jill, Jill, Jess, Jane

5.

a. 2\*3\*4=24: The value produced by the code is 24.

b. The code evaluates the factorial of a given number.

12. We can use a stack to check the number of 1’s and 0’s are equal in a binary string. Read each character from the binary string, then if the stack is empty push the read character into the stack. If the stack is not empty and top of the stack is same as the next input character, push the input character into the stack. If the top of the stack is not the same as the next input character then pop off one character from the stack. Repeat until the end of the string. When done, if the stack is empty than the number of 0’s and 1’s were equal, but if there are 0’s left in the stack then there were more 0’s than 1’s, or if there are 1’s left in the stack then there were more 1’s than 0’s.