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//Palindrome
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import java.util.Scanner;
public class Palindrome {

	public static void main(String[] args) {
		// TODO Auto-generated method stub

		long a = 0, b = 0, b1 = 0, c = 0;
		String input;
		String forward = new String ("");

		Scanner sc  = new Scanner (System.in);

		System.out.println("Enter the phrase");
		input = sc.nextLine();

		for (int k = 0; k < input.length(); k++) {
			if (isLetter (input.charAt(k)) == true) {

				forward += Character.toString ((char) input.charAt(k));

			}

			else {
				forward = forward;
			}
		}

		a = System.nanoTime();

		algorithm1 (forward);
		b = System.nanoTime() - a;
		b1 = System.nanoTime();

		algorithm2 (forward);
		c = System.nanoTime() - b1;

		System.out.println(b + " and " + c);

		if (b < c) {
			System.out.println("Algorithm1 is more efficient");
		}
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        else if (b > c) {
                System.out.println("Algorithm2 is more efficient");
        }

        else if (b == c) {
                System.out.println("Both are the same!");
        }

        else {
                System.out.println("INVALID");
        }

}


public static boolean isLetter (char c) {
        if ((c >= 65 && c <= 90) || (c >= 97 && c <= 122)) {
                return true;
        }

        else {
                return false;
        }
}

public static boolean algorithm1 (String original) {

        String backward = new String ("");

        for (int k = original.length() - 1; k > -1; k-- ) {
                backward += Character.toString ((char) original.charAt(k));

        }

        if (original.equals (backward)) {
                return true;
        }

        else {
                return false;
        }


}
```

```
	public static boolean algorithm2 (String original) {

		int b = -1;

		for (int n = 0; n < original.length(); n++ ) {
			for (int m = original.length() - 1; m > -1; m-- ) {

				if (original.charAt(m) == original.charAt(n) ) {
					b = 1;
				}

				else {
					b = 0;
				}
			}
		}

		if (b == 1) {
			return true;
		}

		else {
			return false;
		}


	}


}
```