Basic Java Syntax - Example Program

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// To run:
// 1. View -> Tool Windows -> Terminal
// 2. In Terminal window, type:
      java -cp out/production/WordPalindrome PalindromeChecker
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 * date: 4/21/2019
 * */
import java.util.Scanner;
public class PalindromeChecker {
  private static final String WHITESPACE_PATTERN = "\\s+";
  private String[] words;
  public PalindromeChecker(String s) {
    words = clean(s).split(WHITESPACE_PATTERN);
  private String clean(String s) {
    return s.toLowerCase().trim();
  boolean isPalindrome() {
    int last = words.length - 1;
    for (int i = 0; i < last - i; i++) {
      String word1 = words[i];
      String word2 = words[last - i];
      if (!word1.equals(word2)) {
        return false;
    }
    return true;
  private String generateResultMessage() {
    return isPalindrome() ?
        "It_is_a_word_palindrome!" :
        "It is NOT a word palindrome";
  public static void main(String[] args) {
    Scanner scanner = new Scanner(System.in);
    System.out.println(
        "Type_a_phrase_to_see_if_it_is_a_word-level_palindrome..." +
            "Press Ctrl-D to end.");
    while (scanner.hasNextLine()) {
      PalindromeChecker checker = new PalindromeChecker(scanner.nextLine());
      System.out.println(checker.generateResultMessage());
    System.out.println("Goodbye!");
```

Questions:

}

- 1. What does it mean that the WHITESPACE_PATTERN field has been declared static?
- 2. What does it mean that WHITESPACE_PATTERN has been declared final?
- 3. How many constructors does the PalindromeChecker class have?
- 4. What does it mean that the clean method has been declared private?
- 5. What is the scope of the isPalindrome method?
- 6. Can the signature of the main method be changed?
- 7. Which class methods do not take any parameters?
- 8. Which class methods do not declare any local variables?
- 9. How many PalinromeChecker objects will be created when the program executes?
- 10. Translate the body of generateResultMessage into an if-then statement.
- 11. What does clean(s).split(WHITESPACE_PATTERN) in PalindromeChecker accomplish?
- 12. What method is used to print to standard output?
- 13. What is the scope of variable i in the isPalindrome method?
- 14. Translate the for loop from isPalindrome into English.