**Practice Exercise on Characters and Strings**

**Questions**

1. What is the initial capacity of the following string builder?

StringBuilder sb = new StringBuilder("Able was I ere I saw Elba."); 26

1. Consider the following string:

String hannah = "Did Hannah see bees? Hannah did.";

* 1. What is the value displayed by the expression hannah.length()?
  2. What is the value returned by the method call hannah.charAt(12)?
  3. Write an expression that refers to the letter b in the string referred to by hannah.

1. How long is the string returned by the following expression? What is the string?

"Was it a car or a cat I saw?".substring(9, 12)

1. In the following program, called [ComputeResult](https://docs.oracle.com/javase/tutorial/java/data/QandE/ComputeResult.java" \t "_blank), what is the value of result after each numbered line executes?
2. public class ComputeResult {
3. public static void main(String[] args) {
4. String original = "software";
5. StringBuilder result = new StringBuilder("hi");
6. int index = original.indexOf('a');
7. /\*1\*/ result.setCharAt(0, original.charAt(0));
8. /\*2\*/ result.setCharAt(1, original.charAt(original.length()-1));
9. /\*3\*/ result.insert(1, original.charAt(4));
10. /\*4\*/ result.append(original.substring(1,4));
11. /\*5\*/ result.insert(3, (original.substring(index, index+2) + " "));
12. System.out.println(result);
13. }
14. }
15. Show two ways to concatenate the following two strings together to get the string "Hi, mom.":
16. String hi = "Hi, ";
17. String mom = "mom.";
18. Write a program that computes your initials from your full name and displays them.
19. An anagram is a word or a phrase made by transposing the letters of another word or phrase; for example, "parliament" is an anagram of "partial men," and "software" is an anagram of "swear oft." Write a program that figures out whether one string is an anagram of another string. The program should ignore white space and punctuation.
20. Write a Java program to fill in a letter template which looks like below:

// letter = “Dear <|name|>, Thanks a lot”

// Replace <|name|> with a string (some name)

1. Write a program to format the following letter using escape sequence characters.

Letter = “Dear Harry, This Java Course is nice. Thanks”