

# 1 Strings

1. What is the value of **result** when the following code is executed?

```
1 String str = "Aloha";  
2 int result = str.length();
```

**Solution:** 5

2. What is the value of **result** when the following code is executed?

```
1 String str = "Hola, _amigo!";  
2 char result = str.charAt(4);
```

**Solution:** , (comma)

3. What is the value of **result** when the following code is executed?

```
1 String str = "Hola, _amigo!";  
2 int result = str.indexOf('a');
```

**Solution:** 3

4. What is the value of **result** when the following code is executed?

```
1 String str = "Hola, _amigo!";  
2 int result = str.indexOf('A');
```

**Solution:** -1

5. What is the value of **result** when the following code is executed?

```
1 String str = "Hola, _amigo!";  
2 String result = str.substring(7, 10);
```

**Solution:** "mig"

6. What is the value of **result** when the following code is executed?

```

1      String str = "Yes_minister";
2      String result = 'S' + str.substring(5);

```

**Solution:** "Sinister"

7. What is the value of **result** when the following code is executed?

```

1      String str = "She_sells_sea_shells_on_the_sea_shore";
2      int result = 0;
3      for(int i = 0; i < str.length(); i++) {
4          char ch = str.charAt(i);
5          if(ch == 's') {
6              result++;
7          }
8      }

```

**Solution:** 7

8. Assuming String **str** contains at least one character, write a piece of code that assigns to an integer variable **result**, the number of digits in the String **str**. The expression to check whether a character **ch** is a digit or not is as follows,

```

1      boolean isDigit = false;
2      if(ch >= '0' && ch <= '9') {
3          isDigit = true;
4      }

```

**Solution:**

```

1      int result = 0;
2      for(int i=0; i < str.length(); i++) {
3          char ch = str.charAt(i);
4          if(ch >= '0' && ch <= '9') {
5              result++;
6          }
7      }

```

9. Assuming String **str** contains at least one character, write a piece of code that assigns to an integer variable **result**,

- **true**, if **str** contains any spaces.

- false, otherwise

**Solution:**

```

1  boolean result = false; //assume no space
2  for(int i=0; i < str.length(); i++) {
3      char ch = str.charAt(i);
4      if(ch == ' ') {
5          result = true;
6      }
7  }

```

More efficient solution - as always in the case of *validation* algorithms, no need to check once a space has been found, so,

```

1  boolean result = false; //assume no space
2  for(int i=0; result == false && i < str.length(); i++) {
3      char ch = str.charAt(i);
4      if(ch == ' ') {
5          result = true;
6      }
7  }

```

10. Assuming String `str` contains at least one character, write a piece of code that assigns to an integer variable `result`,

- true, if `str` contains **only** spaces.
- false, otherwise

**Solution:**

```

1  boolean result = true; //assume only spaces
2  for(int i=0; i < str.length(); i++) {
3      char ch = str.charAt(i);
4      if(ch != ' ') {
5          result = false;
6      }
7  }

```

More efficient solution - as always in the case of *violation* algorithms, no need to check once a space has been found, so,

```

1  boolean result = true; //assume only spaces
2  for(int i=0; result == true && i < str.length(); i++) {
3      char ch = str.charAt(i);
4      if(ch != ' ') {
5          result = false;
6      }
7  }

```