



## ACTIVITY 5

# Open-Ended Activity

This open-ended activity requires you to develop a program on a topic that interests you. As a class, spend a few minutes reviewing the requirements of the open-ended activity.

### Requirements:

- Write a program with a `main` method
- Create at least one new method which is called from `main` that takes at least one parameter
- Call at least two distinct methods in the `String` class
- Utilize conditional statements or compound Boolean expressions
- Utilize iteration

In addition, review the provided scoring guidelines so that you understand what you'll be expected to explain once you're done completing your program.

It's strongly recommended that the implementation of the program involve collaboration with another student. Your selected program can be anything that you choose that meets the requirements and allows you to demonstrate your understanding.

Before beginning, make sure that you understand the expectations for the activity.

- Who will you be working with? Are you allowed to work with a partner? In a group of three or four?
- Among the members of your group (or with your partner), how will the implementation be completed?
- If you'll be using pair programming, will your teacher be instructing you when to switch driver and navigator, or is this something that you need to keep track of?
- What should you do if your group/pair is stuck? Does your teacher want you to come straight to them? Are you allowed to ask another group?

## Check Your Understanding

Once your program has been implemented and tested, answer the following questions on your own:

1. Why did you choose to implement this program?
2. Describe the development process used in the completion of the project.
3. Provide the method header for a method that you implemented that takes at least one parameter. Explain why you chose the given parameter(s), including type, and why you made the method static or non-static.

4. Provide the code segment(s) where two distinct methods in the `String` class are called. Describe what each method call is doing, and what is being returned (if anything) by the method calls.
5. Copy and paste one code segment that uses nested conditional statements or compound Boolean expressions. What is one other way that this code could be written to achieve the same result? Provide an equivalent code segment to the one included above.
6. Copy and paste one code segment that uses iteration. Describe how the loop you used works and provide an equivalent code segment to the one included above that uses a different type of loop.