

Name(s) \_\_\_\_\_ Period \_\_\_\_\_ Date \_\_\_\_\_

# Activity Guide - App Exploration



In this activity, you'll decide how a computer (in this case, a smartphone) can use different types of information to solve a problem. You'll need to figure out which inputs the computer should use to get the necessary information, and whether or not the information should be stored for later.

Next, you'll decide how the information should be processed, using sorting, matching, or counting, and use that method to find what the computer should output. Once you've figured out how the app should work, you'll have a chance to think of some improvements.



## Ring Silencer App

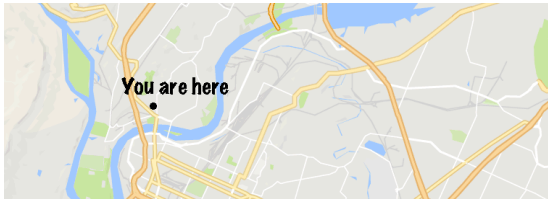
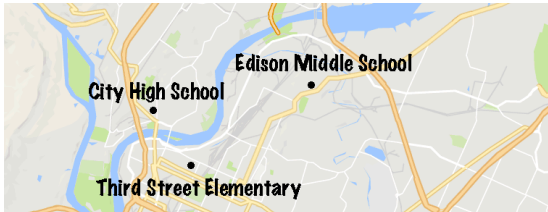
### Define

This app solves the problem of the user's phone ringing in class. It figures out when the phone is at a school and turns off the ringer. It turns the ringer back on when the user leaves school.

What type of output should the app produce? Turns the phone ringer on / off

### Prepare

Fill out the following table with information that the app needs and whether you will find the information from a **phone sensor** or **the Internet**. Decide whether you want to store the information for later.

Information	Where will you find the information?	Store for later?
	Phone Sensor (GPS)	No
	Internet	Yes

Choose the type of processing you will use, and explain how it will help you get your output.

### Sorting / Matching / Counting

Match the user location with the locations of the schools, and if it matches, turn the ringer off.

If there's not a match, turn the ringer on.

#### Try

Use the method you created above to process the information.

What is the output? Turn the ringer off

#### Reflect

This app turns off the ringer even when the user is not in class. An advanced version would only turn off the ringer at school when the user is quiet and not moving. If the user is moving around or making a lot of noise, it would assume that it is not class time and keep the ringer on.

How would you change your app to solve this new problem?

I could also use the microphone and only turn it off when it is quiet, and use the accelerometer to keep the ringer on if I am moving around.

Where would it find the new information that it needed?

It would use the phone sensors, like the accelerometer and the microphone

# Activity Guide - App I/O



## Movie Recommendation Challenge




### Define

This app addresses the problem of not knowing what movies to watch. Look through the information available to you, and decide what will help to choose a movie for the user.

What type of output should the app produce? a movie name

### Prepare

Fill out the following table with information that the app needs and whether you will find the information from a **phone sensor**, **the Internet**, or **user input**. Decide whether you want to store the information for later.

Information	Where will you find the information?	Store for later?
Movie Reviews: Since Then: 4/5 "Hilarious!" Mills: 5/5 "Even better than the book!" The Wait: 2/5 "Boring and predictable." Cargo: 3/5 "Exciting, but not much more." The Watch 2: 3/5 "If you loved the first one, you'll want to see this."	Internet	Yes
User's Favorite Movies: <i>The Watch</i> (Action) <i>Further</i> (Mystery) <i>The Last Night</i> (Drama)	User input	Yes
User's Favorite Books: <i>Whistler</i> (Mystery) <i>Mills</i> (Drama)	User input	Yes
Movie Showings: Central Cinemas: <ul style="list-style-type: none"> <li>• <i>Since Then</i> (PG - Comedy)</li> <li>• <i>Mills</i> (R - Drama)</li> <li>• <i>The Wait</i> (PG - Mystery)</li> <li>• <i>Cargo</i> (Action)</li> </ul> Midtown 15: <ul style="list-style-type: none"> <li>• <i>The Watch 2</i> (PG - Action)</li> <li>• <i>Since Then</i> (PG - Comedy)</li> <li>• <i>Mills</i> (R - Drama)</li> </ul>	Internet	No
	Internet	Yes

Choose the type(s) of processing you will use, and explain how it will help you get your output.

### Sorting / Matching / Counting

I will give movie points. If a movie has a good review, then it gets more points. Then I will match the types of books and movies I already like with the movies available and give points if there is a match. Also, I will match the movies that are on the map close to me and give points for being closer. Then I will sort my movie list by number of points and suggest the top movies.

#### Try

Use the method you created above to process the information.

What is the output? Mills

#### Reflect

Compare your method, and the inputs it needed, to another group's method.

What is one advantage of the other group's method?

They looked at if I liked the book the movie was based on and also if it's a sequel to one I like

How might you combine your ideas to make a better app?

I think we should keep my points idea, but also give the movie extra points if it's a sequel to something

I like or if it's based on a book that I like.