

APPS FOR MOBILE DEVICES

THEME	Bluetooth
FORMAT	Individual, pairs or small groups
PREPARATION TIME	1 hours
ACTIVITY LENGTH	2h – 3h
DIFFICULTY LEVEL	Average - Hard

PEDAGOGICAL GOALS

- Exploring Bluetooth as a communication feature available for cell phones
- Develop an app that allows instant messaging between two Android devices
- Better understand and reflect on the communication process between devices

NECESSARY MATERIALS

Computer room with computers connected to the Internet

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Preparation:

- Ensure that the computers used already have aiStarter installed, and that there is already an App Inventor account available for use.
- For more information on how to do this, check the Lesson Plan at the end of Section 1 of the Mobile Apps course.
- Study the application's interface and programming implementation through the Code IoT platform.

Conducting the activity:

- Divide the class into pairs or trios depending on the number of computers available at your school.
- Ask the class what Bluetooth is and where it is present. In what everyday situations do they use Bluetooth and how do they think it works. If possible, send a photo or file via Bluetooth to a student's cell phone before asking.
- Ask the class how they think apps like Messenger and Whatsapp work.
- Ask students what a messaging application needs to have and what operations it needs to do, and write the answers on the board.
- Ask students to access the App Inventor website at the link <http://appinventor.mit.edu/explore/>
- Ask them to click on “**Create apps**”, then on “**Start New Project**”, naming the project “Bluetooth – Student Name”.
- Guide students on which interface components they will need to implement the app. This information can be found within the Code IoT platform.
- Guide students on how to arrange components on the screen, and don't forget to coach them on invisible components:



- Now, ask students to enter the programming tab by clicking on “Blocks”.
- Teach students the functions of the different blocks needed to implement the app and how they should be organized.

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- Now ask the students to test the app with the emulator, the aiStarter program. Keep its window open.
- As students have already done this process in the previous class, encourage them to do it without guidance.
- Ask students who are able to perform the activity to help those who can't.

Discussion and reflection:

After completing the activity, discuss with your students the concepts covered in this class. See examples of some questions that can be used to start the discussion.

- What other information can we transmit through an app?
- How important is it to be able to transmit information?
- What was the hardest part of the activity?
- And the easiest one?

Tip and extra activity:

- If you like, ask students to share the apps with you. In this way, it is possible to verify which students and/or groups had more difficulties and in which part of the development these difficulties occurred.
- If time permits, ask students to try to develop an application that conveys other information. Students can choose what to convey, and this activity can be submitted as homework. The goal is not for them to create a perfect application, but for them to explore the possibilities that have been learned so far, to use creativity, and for you to be able, through these activities, to diagnose the reception and understanding of the class regarding the contents.

Credits:

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