⬡ APPS FOR MOBILE DEVICES

THEME	Implementing the first app
FORMAT	Group (students work in small groups)
PREPARATION TIME	2 hourss
ACTIVITY LENGHT	30-45 minutes
DIFFICULTY LEVEL	Low

⬡ PEDAGOGIC GOALS

- To learn about the App Inventor programming environment and its screens
- To implement the first application
- To understand how to debug an application

⬡ NECESSARY MATERIALS

Computer lab and internet connected computers.

Preparation:

- You will need an administrator password to install the emulator on your school's computers. If you don't have the password, ask your school's computer administrator for help.
- App Inventor is a programming environment that works on the web. To use it, a Google account is enough. If you don't have an account yet, register at the link: https://accounts.google.com/SignUp?hl=pt-BR
- Install the **aiStarter** on the computer acessing http://appinventor.mit.edu/explore/ai2/setup-emulator.html
- If you have a Smartphone or tablet with Android operating system, go to Google Play and install the **AI2Companion** emulator.

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Leading the activity:

- Divide the class into pairs or small groups depending on the number of computers available at your school.
- Explain to students the characteristics of applications implemented in App Inventor:
    - They are created with components that can be visible or invisible
    - Components have properties (such as color, height, width)
    - Components have behaviors that define how they should respond to events or start their activities
- Ask students to access the App Inventor website at the link http://appinventor.mit.edu/explore/
- Ask them to click on "**Create apps**", then "**Start New Project**", and for them to name the first project.
- Explain that there are two working modes, **Designer**, used to assemble the graphical interface, and the **Blocks** mode, where we implement the operation and logic of the application. Ask students to look for the Designer and Blocks buttons on the screen and see what happens when we click on them.
- Then explain to the students that they will initially implement a very simple application. The application has a label (text), a text box for entering text and two buttons: the first one writes the message "Hello World" in the text box. And the second button deletes it.
- Ask students to drag three components to Screen 1: a Textbox and two buttons.
- Initially the components have generic names, ask students to change the names by clicking on the component, and then on **Rename**. Ask to rename the buttons to "Button_write" and "Button_delete".
- Then, ask students to switch to programming mode by clicking Blocks and ask them to implement the code below:
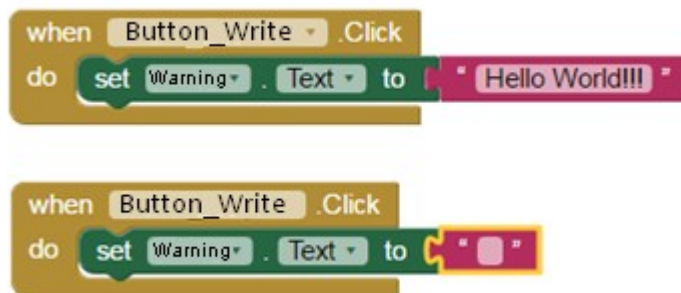
- Now ask students to test the application with the emulator. On the start menu of your computer, select the "MIT APP Inventor Tools" folder and open the aiStarter program. Keep his window open.
- Tell students to go back to the App Inventor's screen, select the Connect option and then the Emulator option. Test!

Discussion and reflection:
- This is the first activity with App Inventor. It is a directed activity because students need to get used to the environment and with how to test the applications.
- If there is time in class, ask students to make changes to this first app and share it with classmates.

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