INTRODUCTION TO REPRESENTATION AND REASONING IN AI

Template description

DEVELOPING AN ARTIFICIAL INTELLIGENCE CURRICULUM ADAPTED TO EUROPEAN HIGH SCHOOLS

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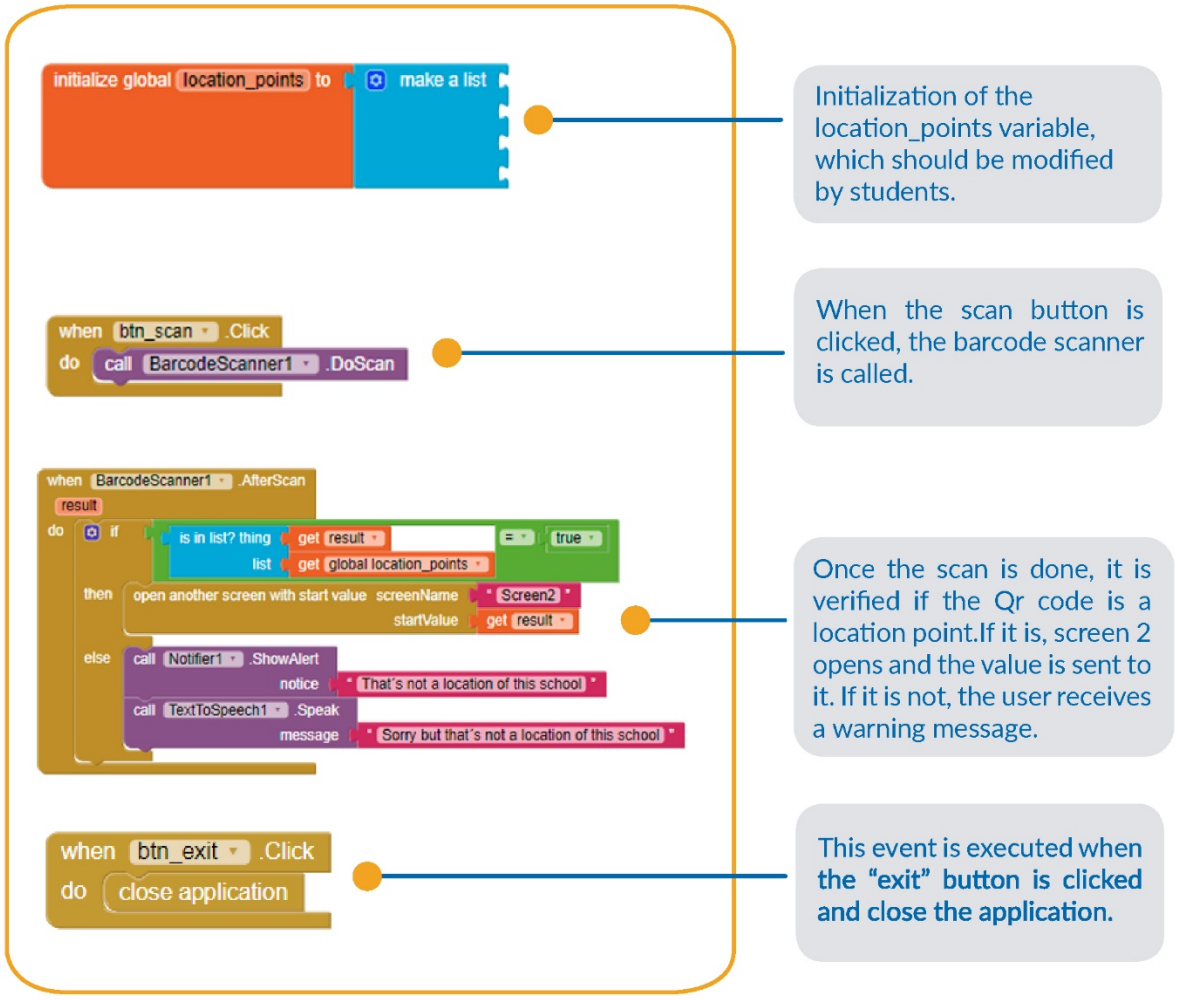
Template description

To focus the attention in representation and reasoning, a template is provided to focus the attention in AI aspects. This template includes not only the graphic part of the app but also some pre-programmed blocks in order to make the programming easier for the students. This document aims to describe all the pre-programmed blocks of the template, organized in screen1 and screen2.

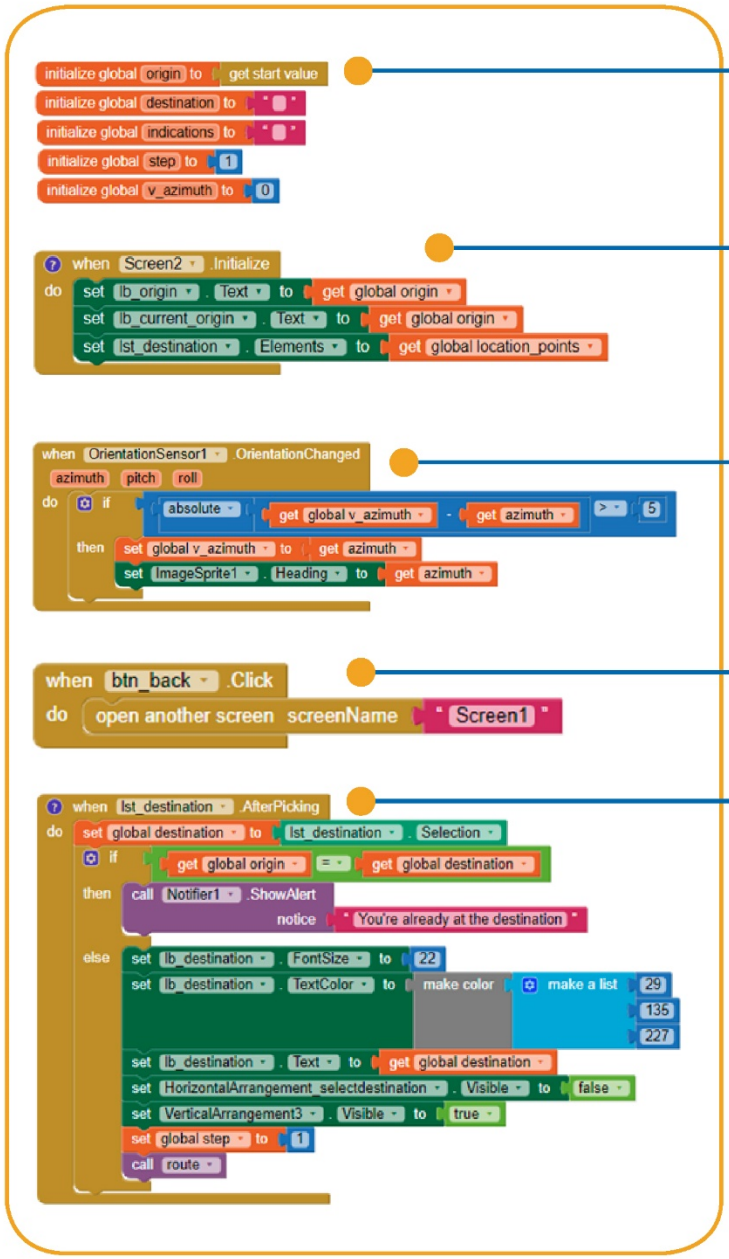
- **Screen1**

In this first window, all the blocks are completely programmed except for the first one, which the students must complete with the names of the location points of their school.



- **Screen2**

In this window, the blocks that should not be modified will be:



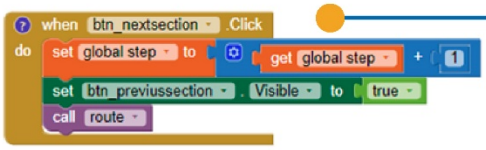
Initialization of variables.

When Screen2 is initialized, the name of the origin location is displayed on the corresponding text labels and the possible destinations are loaded into the list.

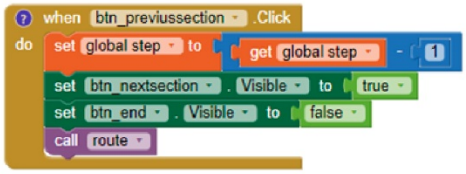
Comprass programming.

Back button programming.

When the user selects the destination, this block checks if it is different from the current location. If it is the same, it warns the user. If it is not, it is saved in a variable called destination and represented in the corresponding text labels (adjusting also its color and size). In addition, the components in which the sections of the route are displayed (images and text labels for names and indications) are made visible, and the button for selecting the destination is made invisible. Finally, the step variable is set to 1 (because all journeys must begin with section 1) and the route function is called up to start the guide.

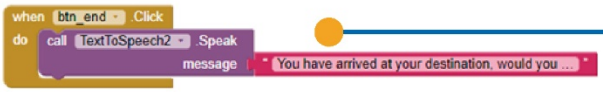


When the user clicks on the next section button:
- The event adds 1 to the step variable.
- A button is activated to go to the previous step.
- The route function is called to show the following section.

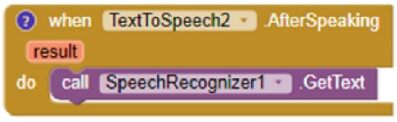


When the user clicks on the previous step button:
- The event subtracts 1 from the step variable.
- A button to go to the next step turns on, the end of route button turns off, and the route function is called.
- The route function is called to show the previous section.

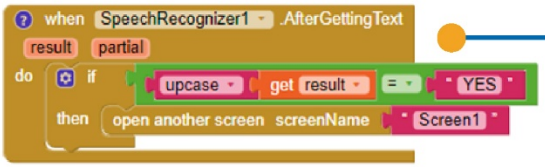
When the speak button is clicked, the directions are provided by voice through the speaker.



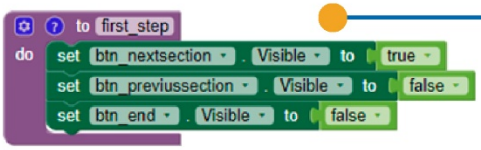
When this button is clicked, the user is asked if he/she wants to scan a new location.



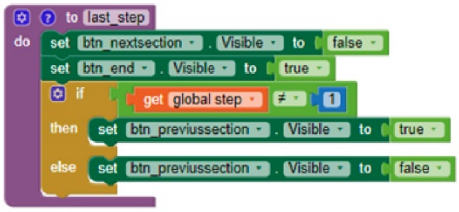
When the user clicks on the arrival button, he is asked if he wants to scan his new location. This event handler runs when the sentence has been completed and calls the voice recogniser.



Check the captured word and execute the appropriate action. If the result is YES, screen 1 opens.

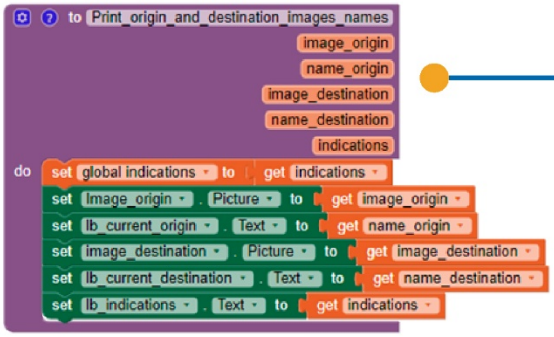


At the first step of each route it is necessary:
- To make visible the button to go to the next step
- Hide the button to go to the previous step
- Turn off the end button



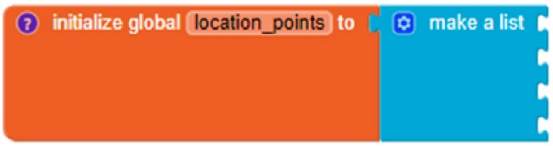
At the last step of each route it is necessary:
- Make visible the button through which the user passes to the previous step (if there is more than one step).
- Hide the button that takes the user to the next step.
- Activate the end of route button.

In addition, if the total number of steps is one, the previous section button must be turned off.

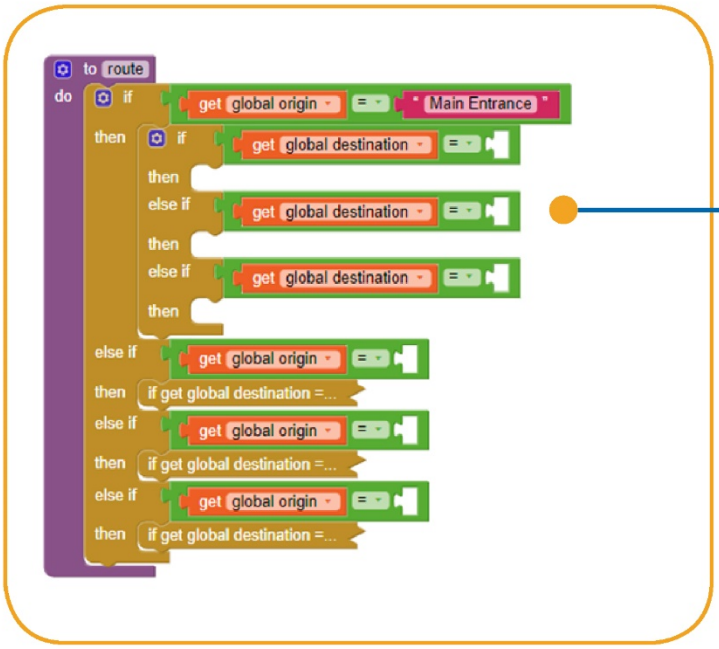


This function represents the instructions to be followed in each section, as well as the source and destination names and images. This function serves to simplify the code.

The blocks that should be modified will be:



Initialization of the location_points variable, which should be modified by students.



Function in which the student must program each of the routes.