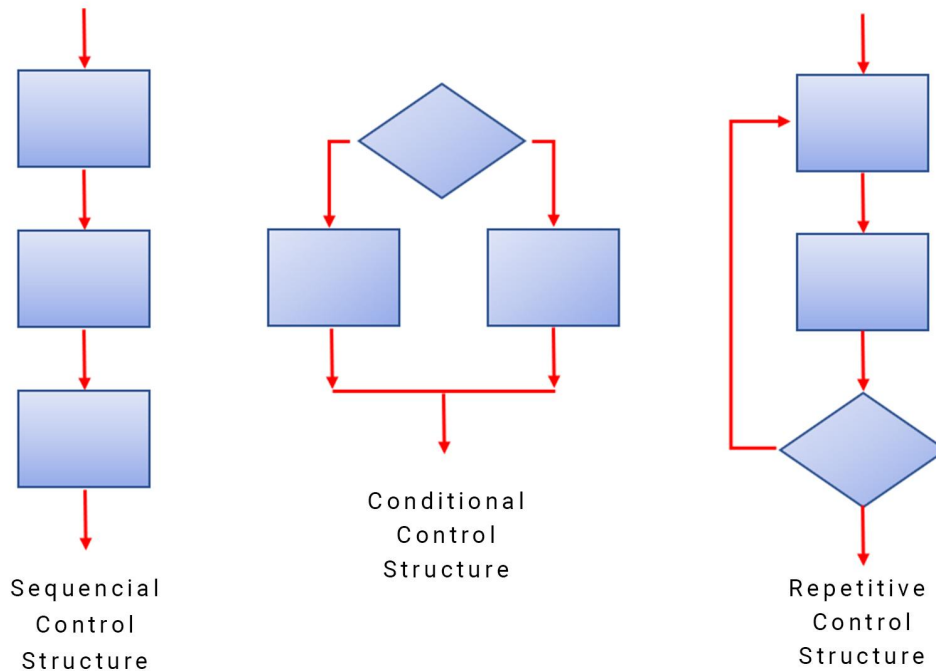


Flowcharts

A flowchart is a graphical representation tool in which the steps are organized in a simple and sequential manner. These steps can show us many things like workflow, projects and processes. To make a flowchart, we must understand its symbology.



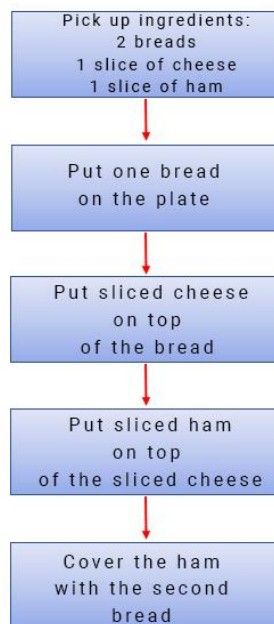
- **Rectangles:** one step of algorithm (Process).
- **Diamond:** condition that interferes in the algorithm flow or program (Conditional).
- **Arrows:** indicate the flow of the program, indicate the next command to be executed.
- **Sequential Control Structure:** Sequence of continuous events
- **Conditional Control Structure:** Sequence of events with a condition in the middle that interferes with the order of events
- **Repetitive Control Structure:** Sequence of events that are repeated.

The use of the flowchart is extremely wide and can be used in elaborate sets of actions, and even representations of daily activities, since it is always necessary to follow a logical sequence for any task. As will be shown in the following examples

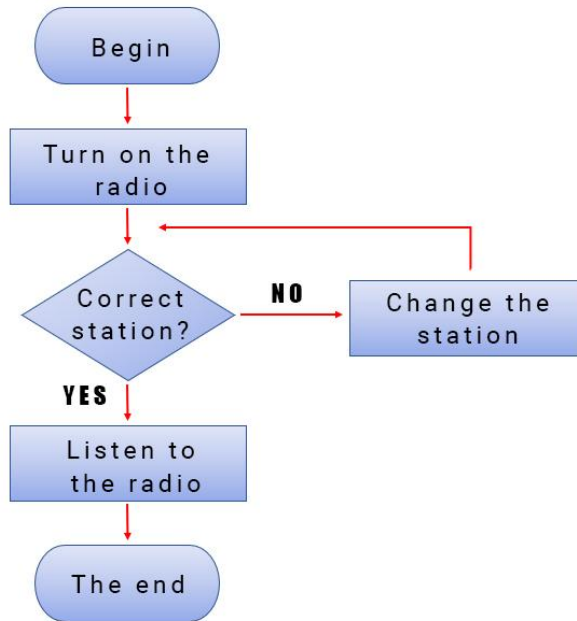
Examples

Taking the same example of Lesson 1, make a sandwich of ham and cream cheese:

We should follow the same steps of the algorithm, but now the difference is that we have to put these steps in the flowchart mode following the recipe and the preparation method.

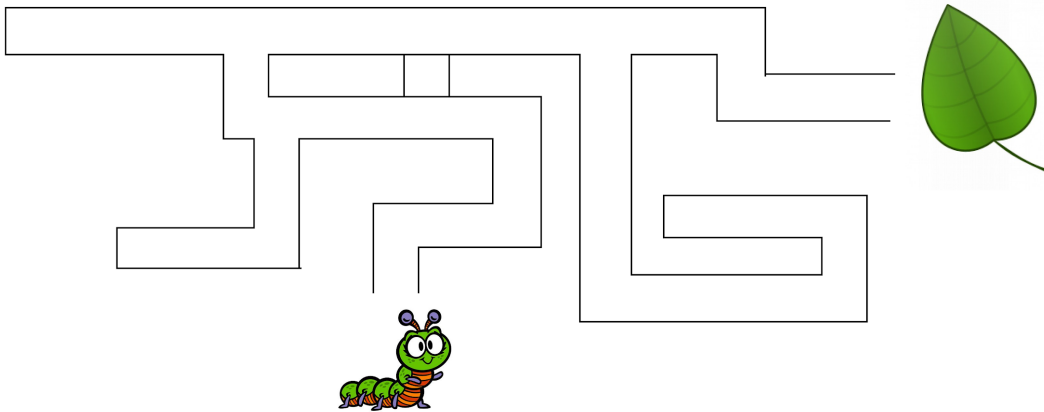


We can use the flowchart for any type of sequence of actions, such as turning on a radio and choosing a correct station. Note that while the answer to “Correct station?” if “no” the action of “Change the station” will be repeated. Therefore, we use a **repetitive control structure**.

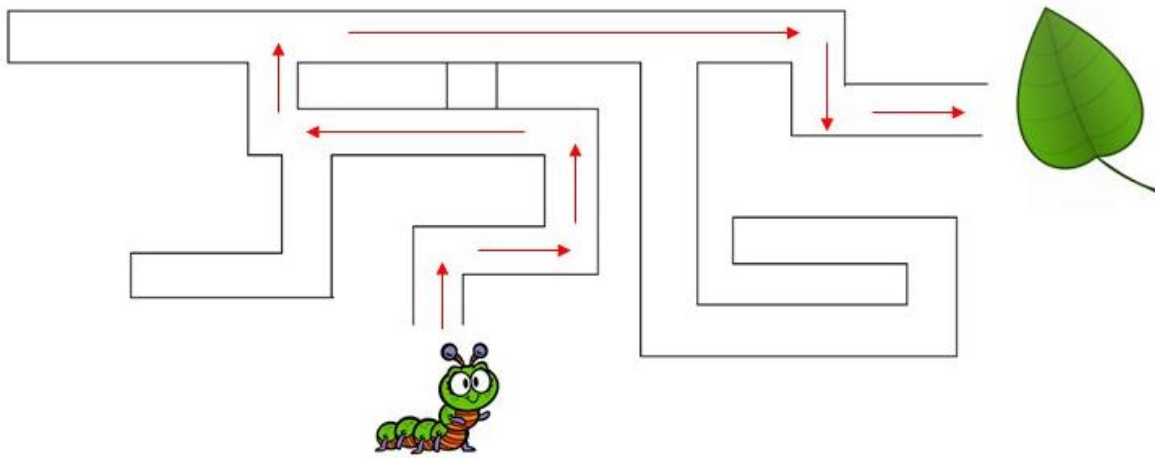


Exercises

1) The Lais caterpillar is hungry and needs to reach the leaf to fill its tummy. Shall we help her? For this, you must give the instructions using the commands: ("Up"; "Down"; "To the Right"; "To the Left") And then put them in the form of a flow chart



Answer:



Up



To the right



Up



To the left



Up



To the right



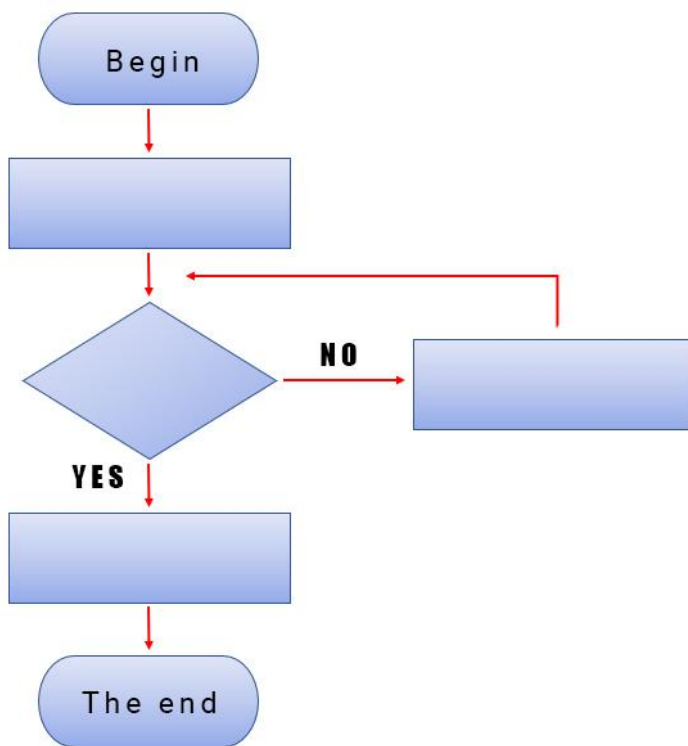
Down



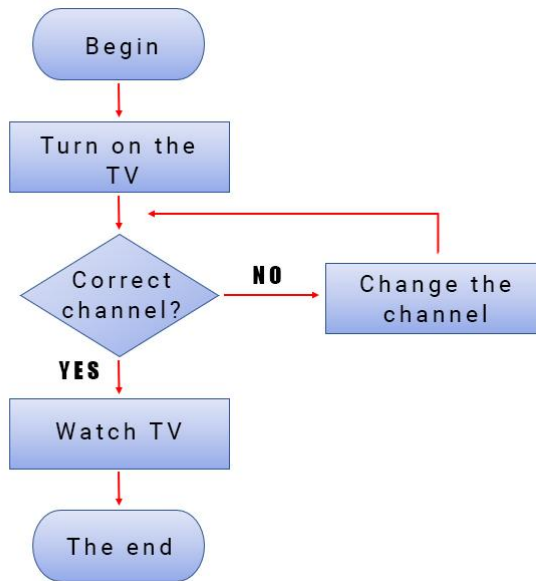
To the right

2) Jimmy and Johnny are looking to watch television. However, the control numbers are broken, so they can only press the key to change channels. What steps should the two take until they find the right channel for their favorite cartoon?

Complete the flowchart below.



Answer:



Homework

Now, let's think about the routine you have to get ready to go to school. What activities do you do? Some examples would be: Having breakfast; wearing the uniform; brushing teeth; tidying up the material. Then, organize the activities in a flowchart format (don't forget that the steps must be written according to the order in which they are carried out). The more steps you take, the nicer your flowchart will look

