

Week_29

Trinity Intro to Technology

04/22/2024

Today we will start with a review,
Have a typing test segment,
Then learn about flow charts...

What is our Number # 1 Rule...

.....

Answer: don't look at the keyboard.

Learn where A specific key is located and which finger pressed that key, also which Home Row key the finger is coming from. Memorize the position of the key, and which finger presses it. Then during typing do not look at the keyboard.

Lets begin our class with a brief review:

Touch Typing - is a style of typing without looking at the keys as you type. Although the phrase refers - typing without using the sense of sight to find the keys. **A *touch typist will know the location of the keys on the keyboard through muscle memory.***

Learn the finger for each key and memorize the location, the practice typing each key while NOT looking at the keyboard.





From this image:

Touch Typing Question:

With your fingers on the home row:

What key does the right hand (4th) finger hit?

What key does the left hand (2nd) finger hit?

What key does the right hand (2nd) finger hit?

What key does the right hand (3rd) finger hit?

What key does the left hand thumb hit?

What key does the left hand little(5th) finger hit?

What key does the left hand (4th) finger hit?

What key does the right hand little(5th) finger hit?

Which finger do you use for the [Space Bar] ?

Which finger do you use for the [A] Key?

Which finger do you use for the [J] Key?

Which finger do you use for the [D] Key?

Which finger do you use for the [L] Key?

Which finger do you use for the ["enter"] Key?



More about Coding:

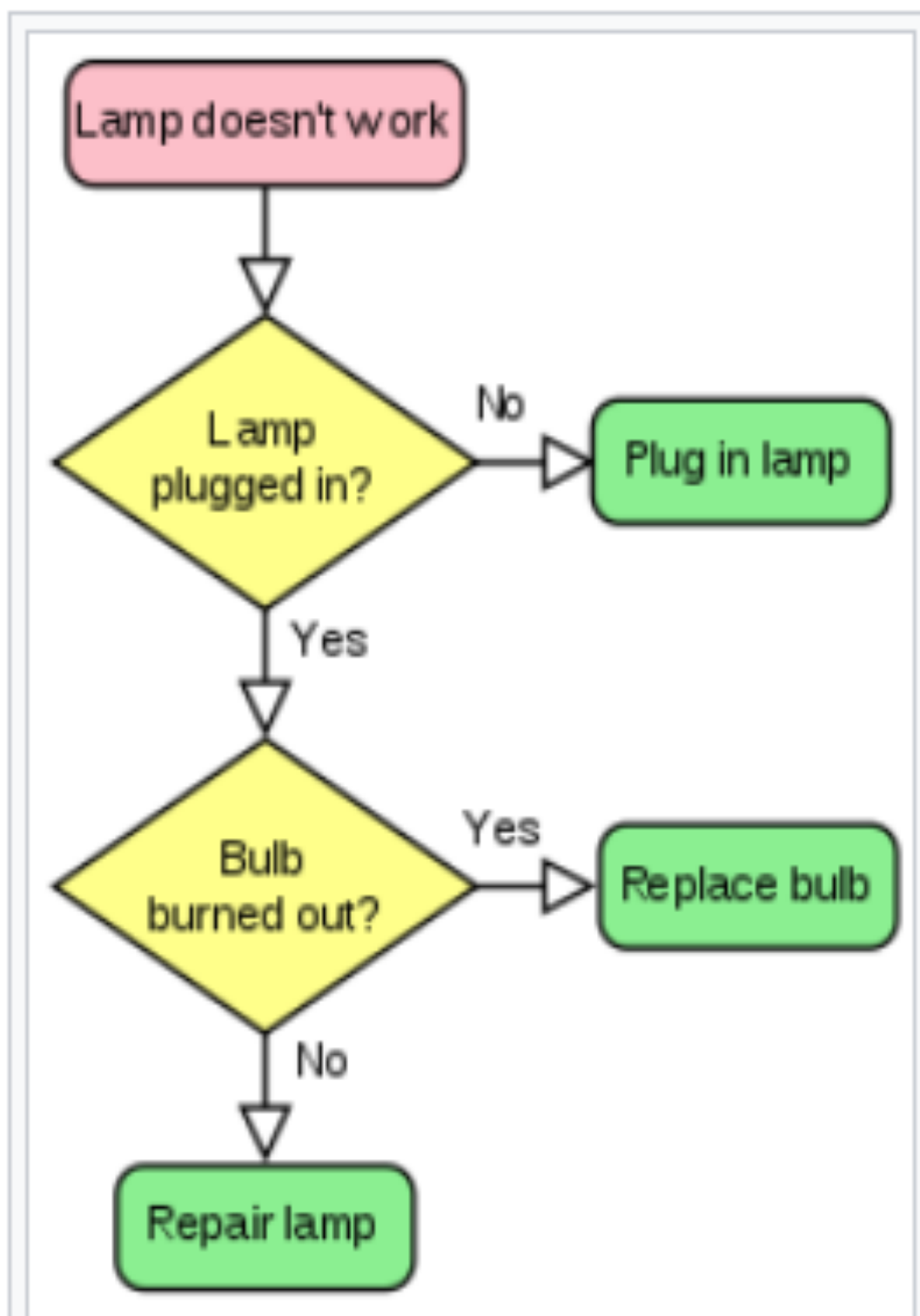
How does a Computer Programmer
Decide how to write a computer program?

One Answer is to display the
Objective in a visual format:

A **flowchart** is a type of [diagram](#) that represents a [workflow](#) or [process](#). A flowchart can also be defined as a diagrammatic representation of an [algorithm](#), a step-by-step approach to solving a task.

The flowchart shows the steps as boxes of various kinds, and their order by connecting the boxes with arrows. This diagrammatic representation illustrates a solution model to a given [problem](#). Flowcharts are used in analyzing, designing, documenting or managing a process or program in various fields.

Example Flowchart



A simple flowchart representing a process for dealing with a non-



functioning lamp.

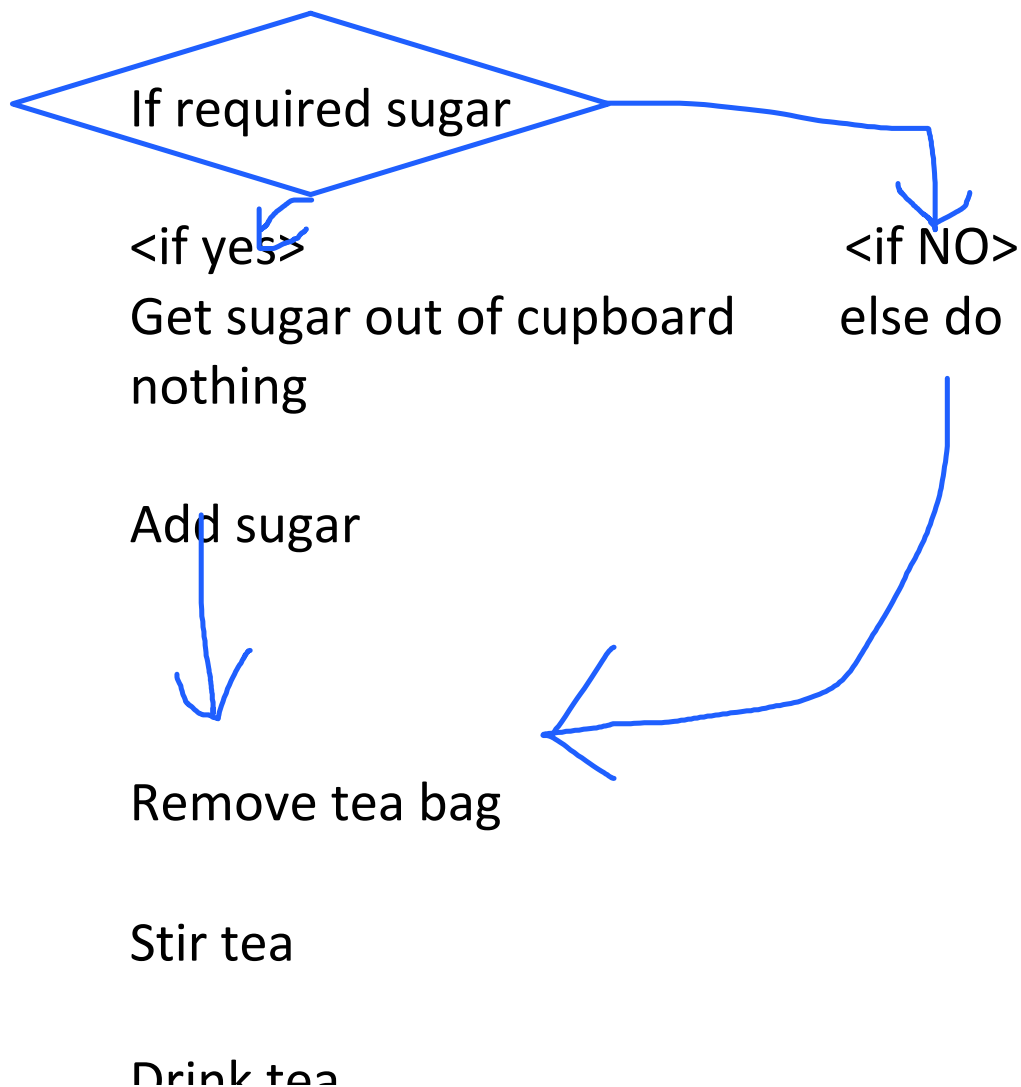
Boil water in pot

Take cup out of cupboard

Get tea bag from cupboard

Pour boiled water into the cup



Add tea bag to cup






Building blocks





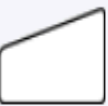
Common symbols


The [American National Standards Institute](#) (ANSI) set standards for flowcharts and their symbols in the 1960s.

ANSI/ISO Shape	Name	Description
	Flowline (Arrowhead) ^[15]	Shows the process's order of operation. A line coming from one symbol and pointing at another. ^[14] Arrowheads are added if the flow is not the standard top-to-bottom, left-to right. ^[15]
	Terminal ^[14]	Indicates the beginning and ending of a program or sub-process. Represented as a stadium, ^[14] oval or rounded (fillet) rectangle. They usually contain the word "Start" or "End", or another phrase signaling the start or end of a process, such as "submit inquiry" or "receive product".

	Process ^[15]	Represents a set of operations that changes value, form, or location of data. Represented as a rectangle . ^[15]
	Decision ^[15]	Shows a conditional operation that determines which one of the two paths the program will take. ^[14] The operation is commonly a yes/no question or true/false test. Represented as a diamond (rhombus). ^[15]
	Input/Output ^[15]	Indicates the process of inputting and outputting data, ^[15] as in entering data or displaying results. Represented as a parallelogram . ^[14]

Other Symbols

Shape	Name	Description
	Data File or Database	Data represented by a cylinder (disk drive).
	Document	Single documents represented a rectangle with a wavy base.
		Multiple documents represented stacked rectangle with a wavy base.
	Manual operation	Represented by a trapezoid with the longest parallel side at the top, to represent an operation or adjustment to process that can only be made manually.
	Manual input	Represented by quadrilateral , with the top irregularly sloping up from left to right, like the side view of a keyboard .
	Preparation	

	or Initialization	Represented by an elongated hexagon , originally used for steps like setting a switch or initializing a routine.
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Advantage of using Flow Charts:

The Programmer can visually see the "Flow" of the computer logic,
And design a pattern that will accomplish
The goals...

Also it is easy to change the design,
By a simple change to the logic...

After the project is complete,
A new programmer can view the flow chart and
see and understand the steps the original
programmer took to accomplish the goals

Students: it takes 3 things to get something done:

- 1) Know what to do
- 2) Decide how to do it
- 3) Do it, perform the tasks to accomplish the tasks

I want to encourage you to:

-> Do hard Things

Here is what that means.

In life there are challenges, and some are easy while other challenges are hard.

If you can do a hard thing, that requires time and your energy and your thoughts, knowing you may get frustrated along the way. When you accomplish a hard thing there is a real sense of "Ya! I did it" a satisfaction that is a good feeling. Once you finish a hard thing, the next hard thing is easier to finish.

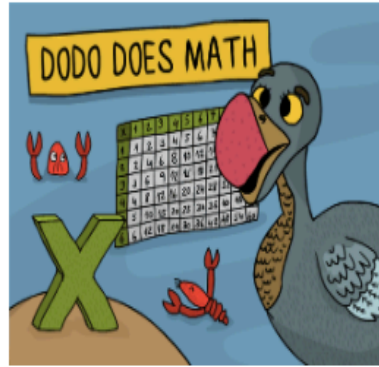
The Bible says: in the book of Joshua "Be Brave and Courageous, for the Lord your God is with you"... How can that help us to do hard things?

I would like you to tell me one thing that was "Hard" that you accomplished and it made you feel good when you were done. Can anyone share the benefit of finishing the "Hard Thing" that you accomplished...

Go to a browser like...

Universal Resource Locator
www.codemonkey.com/hour-of-code

unlock treasure.



**DODO DOES MATH | GRADES 2+ |
COFFEESCRIPT**

Students will write real code as they solve math to help a dodo find her missing eggs.



**CODING ADVENTURE | GRADES 2+
| COFFEESCRIPT**

Students will help a cute monkey catch bananas in fun-filled coding challenges.

CODING ADVENTURE

LEARN A REAL PROGRAMMING LANGUAGE BY PLAYING A FUN & INTUITIVE GAME

SIGN UP FOR FREE


Save and view students progress, get access to solutions and lesson plans

START PLAYING

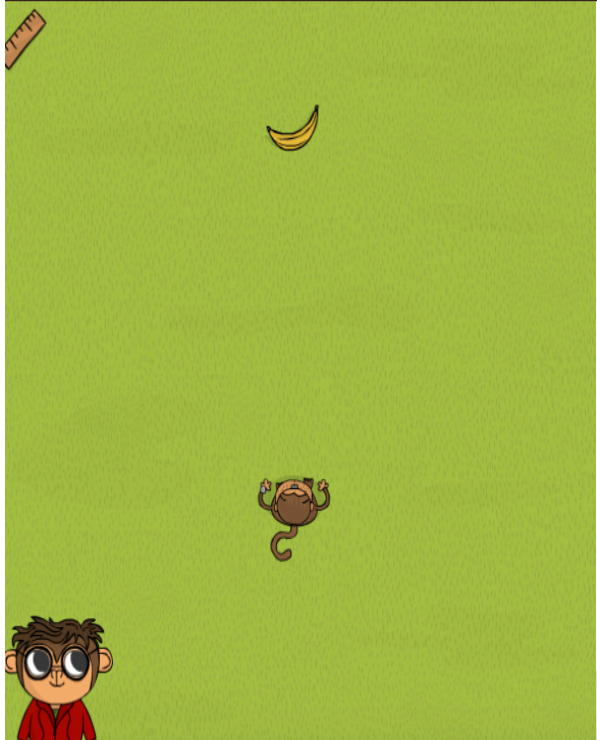
Log-in not required





app.codemonkey.com/challenges/1

codemonkey CODING ADVENTURE: CHALLENGE #1  LOG IN


1 step 15






 step

app.codemonkey.com/challenges/3

codemonkey CODING ADVENTURE: CHALLENGE #3  LOG IN

1 turn right
2 step 12





CodeMonkey CODING ADVENTURE: CHALLENGE #5 LOG IN

1 turn left
2 step 15
3 turn right
4 step 15



CodeMonkey CODING ADVENTURE: CHALLENGE #6

```
1 turn left
2 step 4
3 turn right
4 step 17
5 turn right
6 step 4
7
8
9
10
11
12
13
14
15
16
```

step turn left right

step turn left right

LOG IN

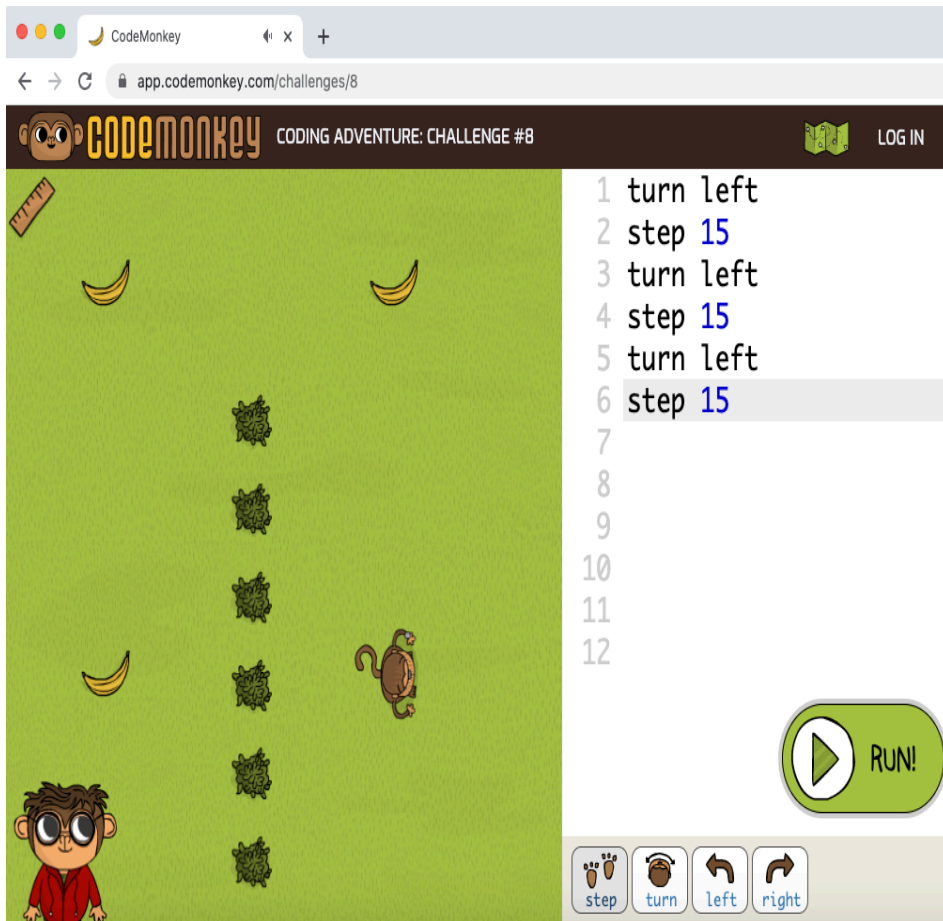
RUN!

CodeMonkey CODING ADVENTURE: CHALLENGE #7

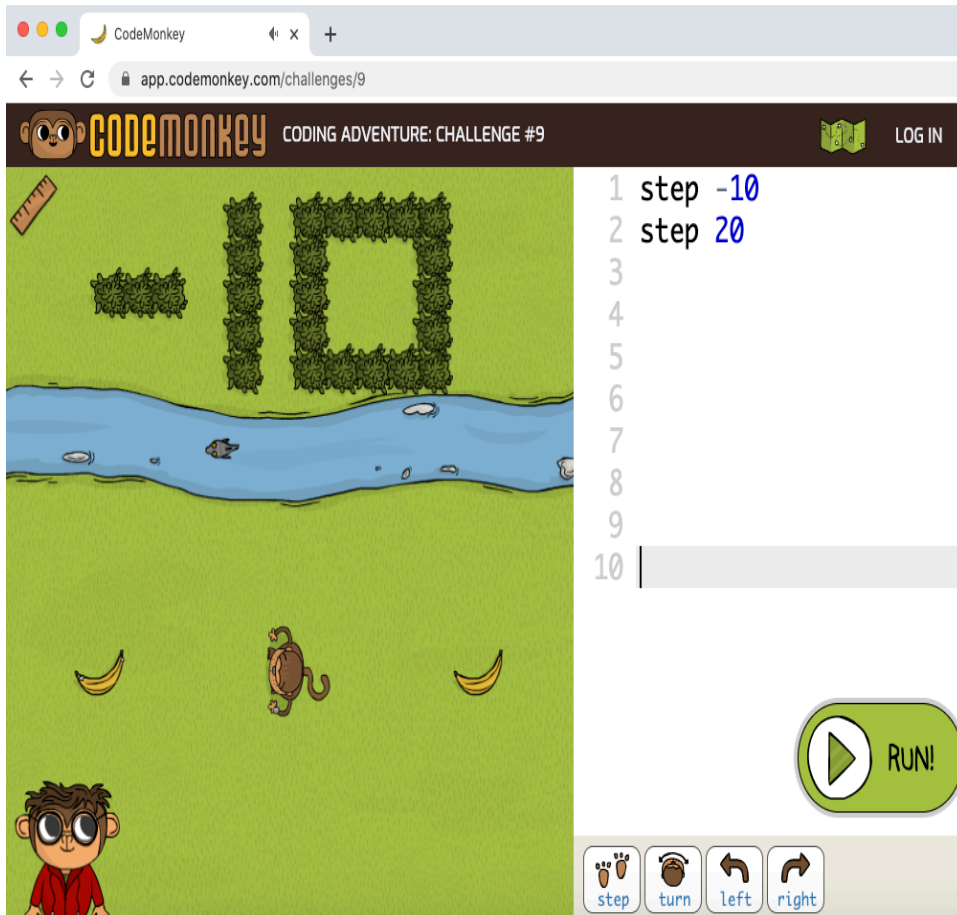
```
1 turn 45
2 step 14
```

step turn left right

LOG IN



CodeMonkey CODING ADVENTURE: CHALLENGE #9



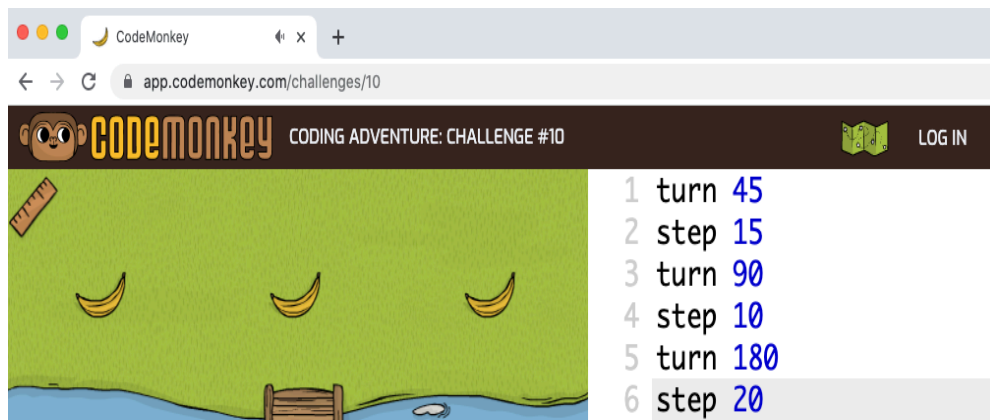
```

1 step -10
2 step 20
3
4
5
6
7
8
9
10

```

step turn left right RUN!

CodeMonkey CODING ADVENTURE: CHALLENGE #10

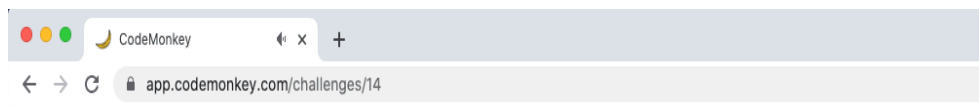


```

1 turn 45
2 step 15
3 turn 90
4 step 10
5 turn 180
6 step 20

```

step turn left right



CODEMONKEY CODING ADVENTURE: CHALLENGE #14 LOG IN



The scene shows a green field with a blue river in the middle. A monkey is at the top left, a turtle is on the left side of the river, and two bananas are floating in the water. A ruler is in the top left corner. A character with glasses is at the bottom left.

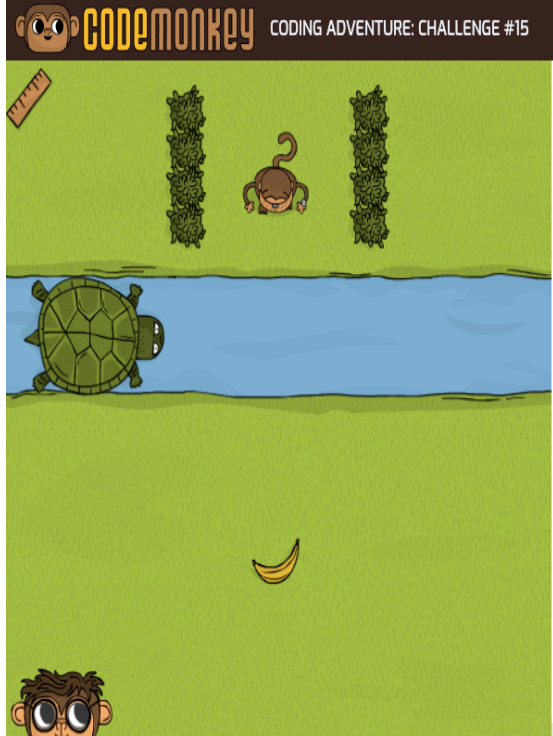
```
1 step 6
2 turtle.step 10
3 step 5
```

RUN!

step turn left right turnTo

CodeMonkey app.codemonkey.com/challenges/15 LOG IN

CODEMONKEY CODING ADVENTURE: CHALLENGE #15



The scene shows a green field with a blue river. A monkey is in the top middle, flanked by two vertical green bushes. A turtle is on the left side of the river. A banana is on the grass below. A ruler is in the top left corner. A character with glasses is at the bottom left.


```
1 turtle.step 10
2 step 6
3 step 8
```

Run your code
Tip: You can also use

RUN!




CodeMonkey CODING ADVENTURE: CHALLENGE #16




The game scene shows a green landscape with a blue river. A monkey character is on the left, a turtle is on the right, and a banana is in the river. A vertical line of bushes separates the monkey from the turtle. A ruler is in the top left corner.

```
1 turnTo turtle
2 step 9
3 turtle.step 8
4 turtle.step 8
5 turn left
6 turn left
7 step 9
```

RUN!

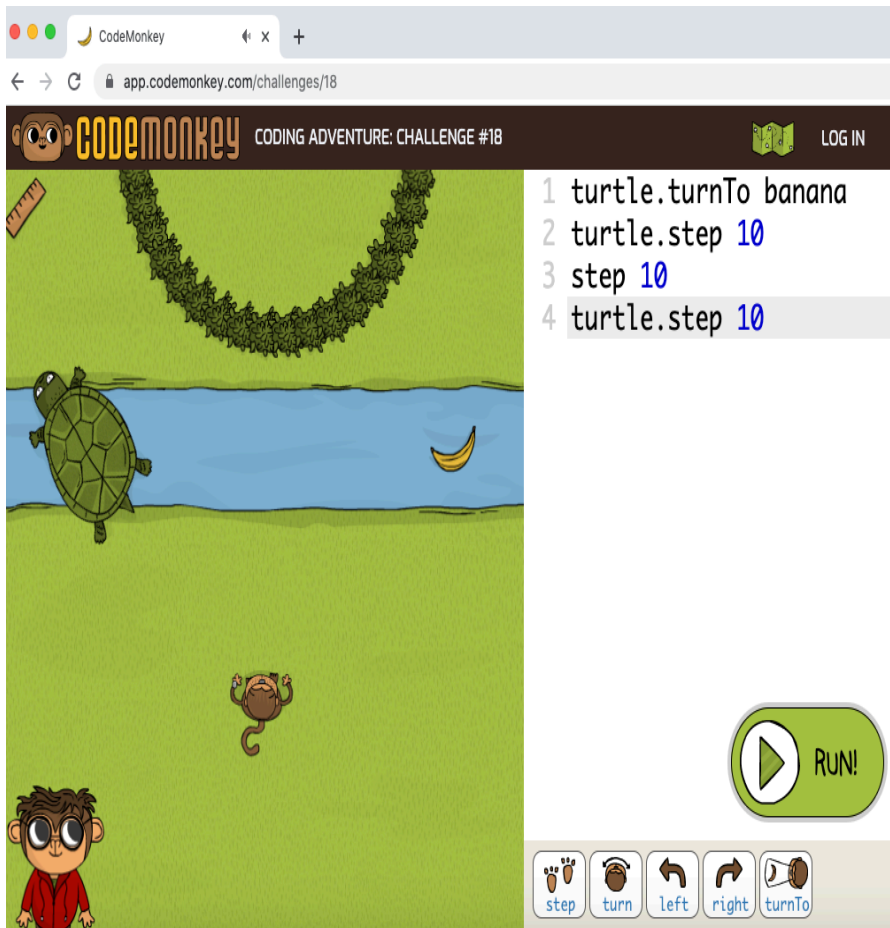
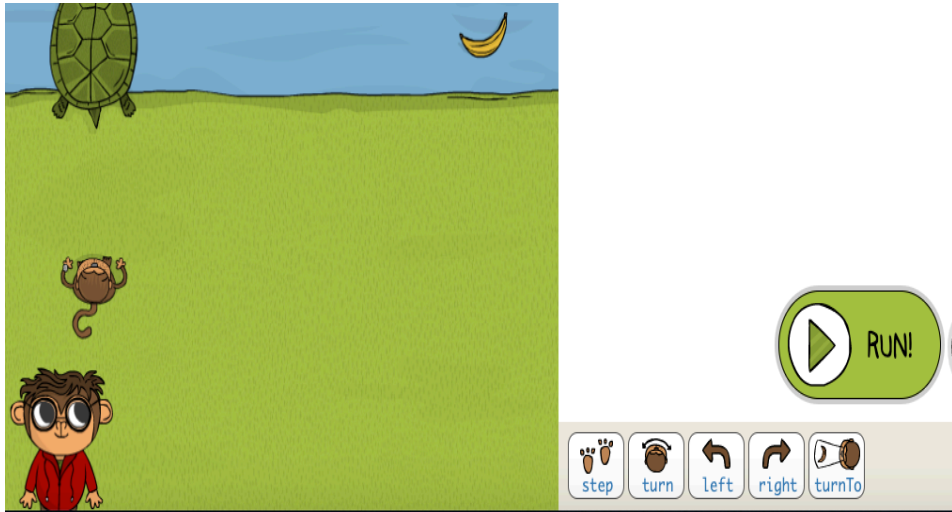


CodeMonkey CODING ADVENTURE: CHALLENGE #17

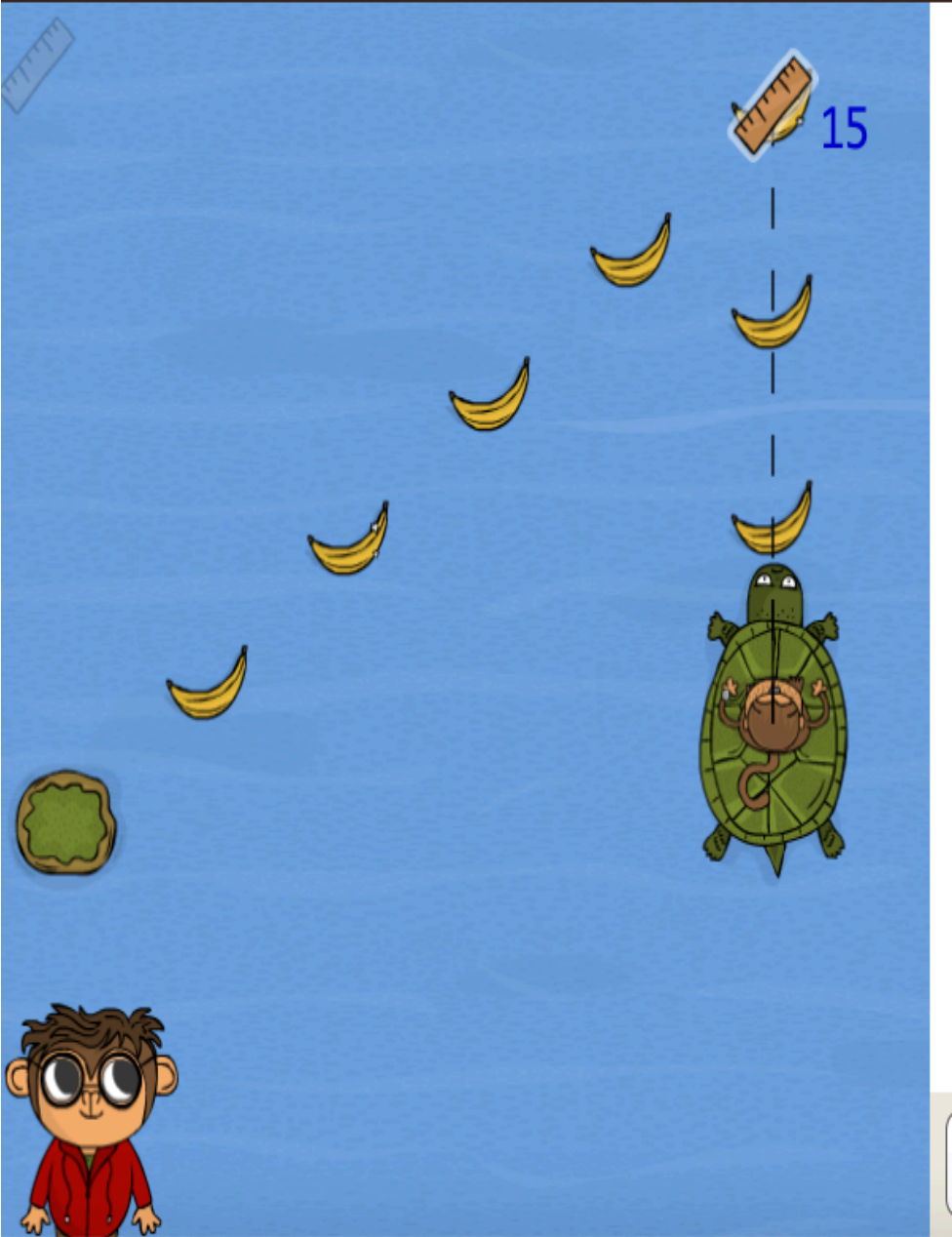


The game scene shows a green landscape with a blue river. A turtle is on the left, and a monkey is on the right. A ruler is in the top left corner.

```
1 turtle.turn right
2 step 10
3 turtle.step 20
```



 **CODEMONKEY** CODING ADVENTURE: CHALLENGE #19



The challenge interface features a blue background with a grid. A character with glasses and a red shirt is at the bottom left. A green turtle with a monkey on its back is at the bottom right. A path of yellow bananas starts from the turtle and goes up and left. A ruler icon is at the top right with the number 15. A green circular object is on the left side. A ruler icon is also in the top left corner.