

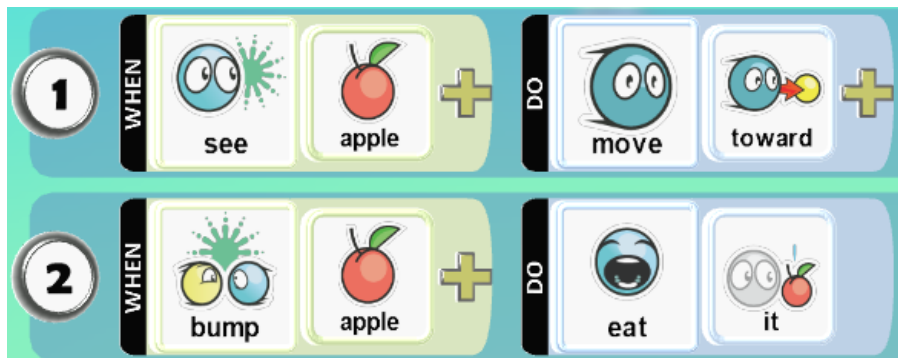
## Student Questionnaire: Module 4

Version of 7 July 2015

1. When two rules can both run but they have conflicting actions (same verb, different parameters), what happens? Put an “X” next to the correct answer.

- Both actions are performed.
- Neither action is performed: they cancel each other out.
- The earlier rule has priority; the later rule’s action is not performed.

2. Examine the Kodu program below. Write a number from 1 to 4 next to each apple to show the order in which the apples will be eaten.



3. Here is another Kodu program for eating apples. Remember what you learned about rule order and priority. Write a number from 1 to 4 next to each apple to show the order in which the apples will be eaten.

The image shows three Kodu program rules stacked vertically. Each rule has a 'WHEN' section and a 'DO' section.

- Rule 1:** WHEN see red apple + DO move toward
- Rule 2:** WHEN see blue apple + DO move toward
- Rule 3:** WHEN bump apple + DO eat it



4. Here is a third Kodu program for eating apples. Remember what you learned about rule order and priority. Write a number from 1 to 4 next to each apple to show the order in which the apples will be eaten.

The image shows three Kodu program rules, each with a 'WHEN' condition and a 'DO' action.

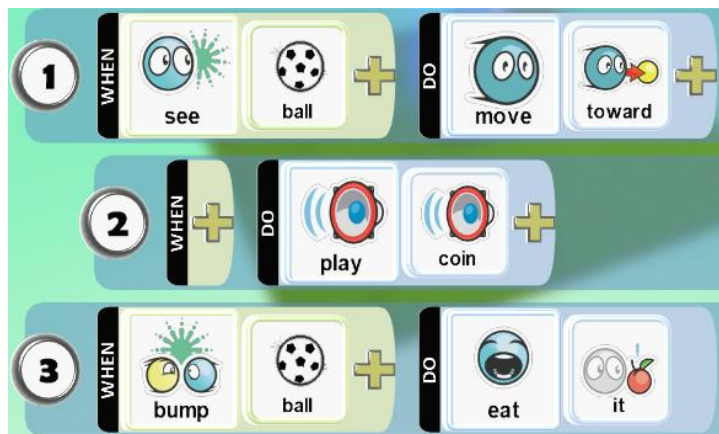
- Rule 1:** WHEN bump apple + DO eat it. This rule triggers when the Kodu character bumps into a red apple and then eats it.
- Rule 2:** WHEN see blue apple + DO move toward. This rule triggers when the Kodu character sees a blue apple and then moves toward it.
- Rule 3:** WHEN see red apple + DO move toward. This rule triggers when the Kodu character sees a red apple and then moves toward it.



5. In this world, the cycle is throwing out balls that the Kodu can eat:



Suppose the Kodu has these rules:



When will the Kodu play the coin sound? \_\_\_\_\_

After the Kodu eats a ball, it has to wait for the cycle to throw out a new ball. While it's waiting, will the Kodu play the coin sound?

(yes or no) \_\_\_\_\_ Explain your answer: \_\_\_\_\_

6. Compare the Pursue and Consume idiom with the Default Value idiom (look at the flash cards).

a. Which idiom relies on rule indentation? (Write an “X” next to the answer.)

- neither one does
- only Pursue and Consume does
- only Default Value does
- both do

b. Each idiom uses two rules. For which of these two idioms does rule order matter?

- for neither one
- only for Pursue and Consume
- only for Default Value
- for both

c. Why does rule order matter for some idioms but not for others?

---

7. What must be true for code to be an example of Default Value?

a. The rules must have:

- the same verb but conflicting parameters
- different verbs
- conflicting conditions (in the WHEN part)


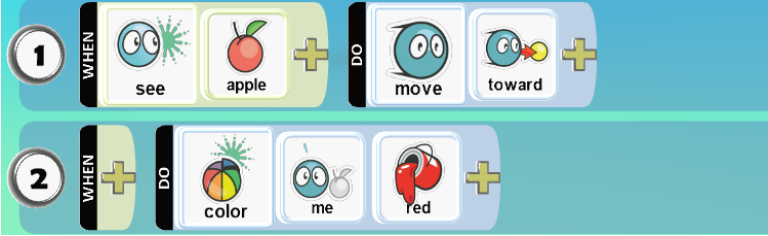



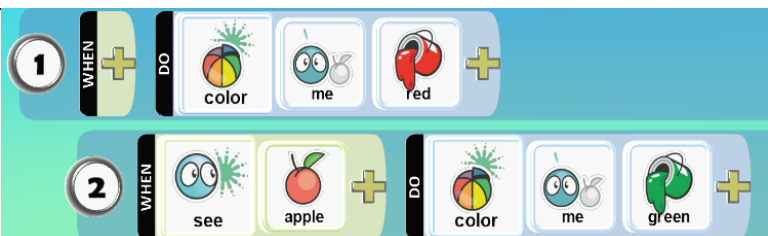
b. The default rule should:

- be indented
- have an empty DO part
- have an empty WHEN part

c. The default rule must come:

- before the other rules
- after the other rules
- either before or after the other rules

8. Decide whether each of the program fragments below is a proper example of the Default Value idiom.

<p>a.</p>  <p>Rule 1: WHEN see apple DO color me green</p> <p>Rule 2: WHEN DO color me red</p>	<ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Proper example of Default Value.</li> <li>2. <input type="checkbox"/> The verbs don't match.</li> <li>3. <input type="checkbox"/> The default rule won't run when it needs to.</li> <li>4. <input type="checkbox"/> The second rule will run but its action will always be overridden by the first rule.</li> </ol>
<p>b.</p>  <p>Rule 1: WHEN see apple DO move toward</p> <p>Rule 2: WHEN DO color me red</p>	<ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Proper example of Default Value.</li> <li>2. <input type="checkbox"/> The verbs don't match.</li> <li>3. <input type="checkbox"/> The default rule won't run when it needs to.</li> <li>4. <input type="checkbox"/> The second rule will run but its action will always be overridden by the first rule.</li> </ol>
<p>c.</p>  <p>Rule 1: WHEN see apple DO move toward</p> <p>Rule 2: WHEN DO move wander</p>	<ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Proper example of Default Value.</li> <li>2. <input type="checkbox"/> The verbs don't match.</li> <li>3. <input type="checkbox"/> The default rule won't run when it needs to.</li> <li>4. <input type="checkbox"/> The second rule will run but its action will always be overridden by the first rule.</li> </ol>
<p>d.</p>  <p>Rule 1: WHEN DO color me red</p> <p>Rule 2: WHEN see apple DO color me green</p>	<ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Proper example of Default Value.</li> <li>2. <input type="checkbox"/> The verbs don't match.</li> <li>3. <input type="checkbox"/> The default rule won't run when it needs to.</li> <li>4. <input type="checkbox"/> The second rule will run but its action will always be overridden by the first rule.</li> </ol>
<p>e.</p>  <p>Rule 1: WHEN see apple DO color me green</p> <p>Rule 2: WHEN DO color me red</p>	<ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Proper example of Default Value.</li> <li>2. <input type="checkbox"/> The verbs don't match.</li> <li>3. <input type="checkbox"/> The default rule won't run when it needs to.</li> <li>4. <input type="checkbox"/> The second rule will run but its action will always be overridden by the first rule.</li> </ol>
<p>f.</p>  <p>Rule 1: WHEN DO color me red</p> <p>Rule 2: WHEN see apple DO color me green</p>	<ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Proper example of Default Value.</li> <li>2. <input type="checkbox"/> The verbs don't match.</li> <li>3. <input type="checkbox"/> The default rule won't run when it needs to.</li> <li>4. <input type="checkbox"/> The second rule will run but its action will always be overridden by the first rule.</li> </ol>