

Student Questionnaire: Session 5

Version of June 14, 2015

1. In this world, the cycle and the octopus race to bump the kodu:



When one character bumps another, both feel the bump. The kodu is running the program shown below. Notice that it won't do anything until it gets bumped by whoever wins the race.

PAGE 1:

- [1] WHEN bump octopus DO switch to page 2
- [2] WHEN bump cycle DO switch to page 3

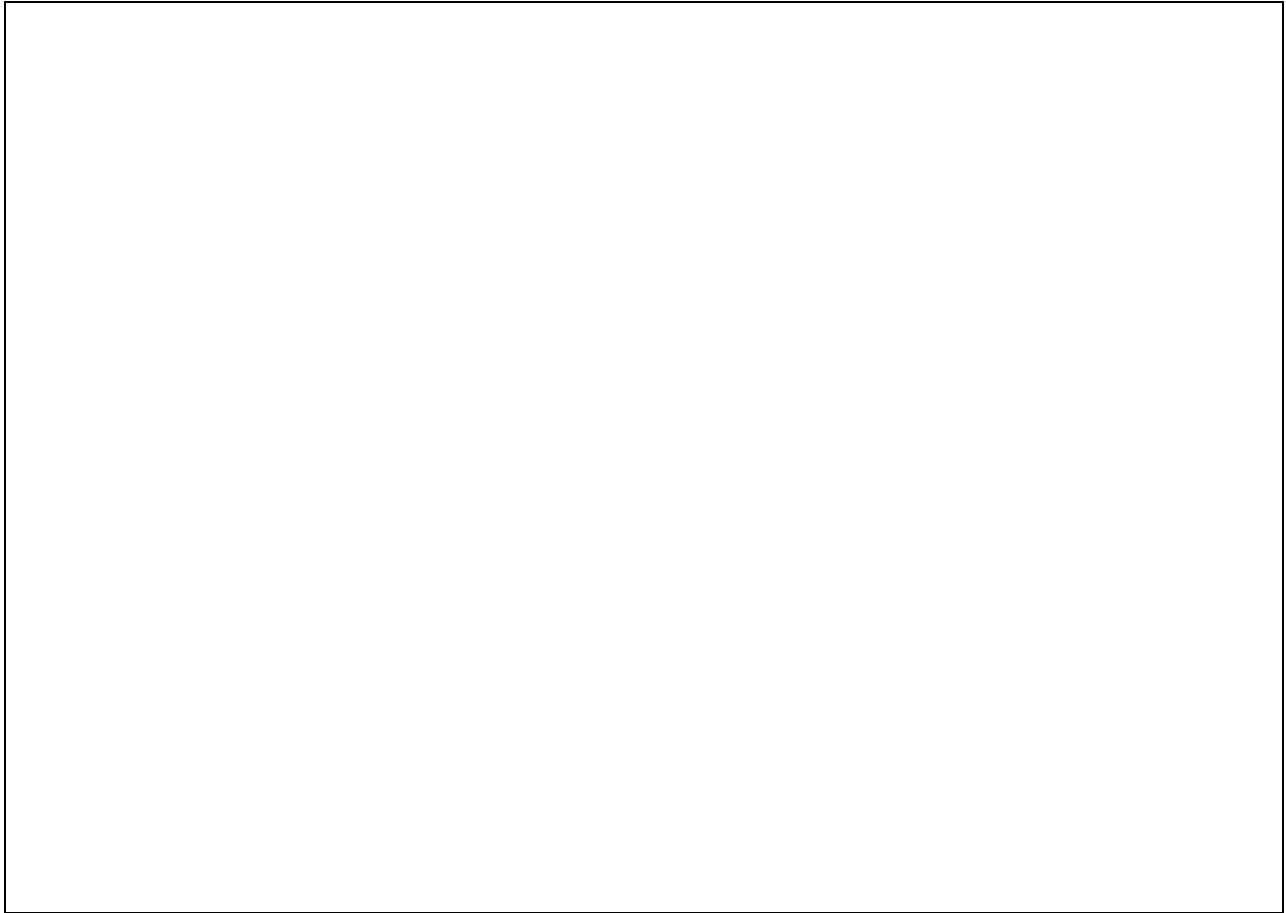
PAGE 2:

- [1] WHEN see hut DO move toward
- [2] WHEN bump hut DO switch to page 3

PAGE 3:

- [1] WHEN see castle DO move toward
- [2] WHEN bump castle DO win

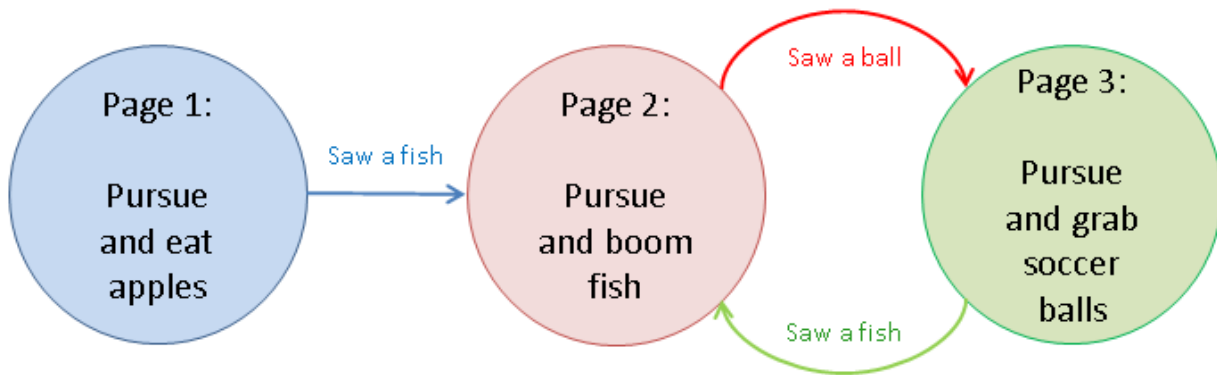
In the space below, draw the state machine diagram for the program. Label every node and transition.



2. Answer the following questions about the program in part 1:

- a. After being bumped by the octopus, what will the kodu bump next? _____
- b. After being bumped by the cycle, can the kodu bump the hut? _____
- c. After bumping the hut, will the kodu bump the octopus again? _____
- d. What will happen when the kodu bumps the castle? _____

3. Here is a Kodu program expressed as a state machine:



In the space below, translate the state machine program into Kodu rules. The first rule has already been written for you.

PAGE 1:	PAGE 2:	PAGE 3:
<p>[1] WHEN see apple DO move toward</p>		

4. Look at the state machine in part 3 and answer the following questions:

- a) If the kodu is booming fish, what page is it on? _____
- b) If the kodu is grabbing soccer balls, what page is it on? _____
- c) If the kodu is grabbing soccer balls and a fish appears, what page will it go to? _____
- d) If the kodu is eating apples and a soccer ball appears, what will it do? Circle the answer:

- I. Eat the soccer ball.
- II. Grab the soccer ball.
- III. Ignore the soccer ball and continue eating apples.
- IV. Boom a fish.

e) If the kodu has boomed a fish and grabbed a soccer ball, will it ever eat apples again (yes/no)?

Explain your answer:
