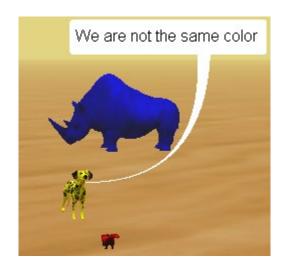# CompSci 94
Classwork: Logic with If
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Overview of story

- The dalmatian will visit each of his friends and do the following. They will face each other, then the dalmatian will move to within 1 unit of his friend. They both are randomly colored one of four colors. If one is red and the other blue, the dalmatian will say they make purple. Then the dalmatian will say whether they are the same color or different colors. If one of them is red, the dalmatian will jump over its friend. Otherwise the dalmatian will go around its friend. After visiting everyone the dalmatian will turn to the front and say "the end".

- **FOLLOW the steps that follow** to build the story where there is also more detail.

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1) Setting up the scene

- Add in any ground cover, maybe sand? (a light color with good contrast)

- Drag in these objects so they look like this:
    - Quadruped: desertTortoise, camel, cow, rhino, dalmatian, skunk

2) Write the **Quadruped** procedure named **colorRandom**

- This procedure should paint the quadruped randomly one of four colors: red, blue, green or yellow.

- This procedure has NO parameters.

- Hint: Generate a random integer one of four values. Then based on the number paint the quadruped. That is, if the number is 1, paint the quadruped red, if the number is 2, etc.

- **Test the procedure** in myFirstMethod with at least two animals to see if it works correctly.

3) Write the **dalmatian** procedure named **jump**

- This procedure has **two parameters**, one for how high to jump and one for how far to jump.

- The jump is simple, the dalmatian moves up, moves forward the specified distance and then moves back down the same amount.

- Test this procedure in myFirstMethod.

4) Write the **dalmatian** Procedure named **visit**

- Add one **quadruped** parameter, for the friend to visit.

- Put in a do In Order

- At the same time, have the dalmatian and friend turn and face each other.

- Have the dalmatian move over to the friend, stopping one unit in front of them (use move forward, a built-in function and math)

- At the same time have both of them randomly change color.

5) Start the story in myFirstMethod

- Remove any testing code you have in myFirstMethod

- Put in a do In Order

- Have the dalmation visit the camel.

- Run it, does it work? If not, debug the **visit** procedure

5) Continue the story in myFirstMethod

- Add the following code:
  - Have the dalmatian visits the camel, have it visit its other friends one by one in this order: rhino, desertTortoise, cow and skunk.

- Then have the dalmatian turn to the front and say "The End"

- Test the program out so far.

7) Add more code to end of visit proc.

- Note **This code is in the visit procedure**, not in myFirst Method!!!!!!

- After randoming coloring the animals, if one of them is red and one of them is blue, have the dalmatian say "Together we make purple."

- Do the same for these combinations
  - Blue and yellow, say "Together we make green."
  - Red and yellow, say "Together we make orange"

- More on the next page ….

7) (cont) more code to visit proc.

- Have the dalmatian say one of these two based on their colors.
  - We are the same color
  - We are not the same color
- If one of the two of them is red then have the dalmatian jump over the friend (may need to calculate how long the friend is and also add some math to the amount.) Otherwise, go halfway around the friend (in a half circle).

That's it! Be sure to run your program several times