Problems for February 1st, more if/else

Problem 1: Fortune Teller

For this problem, you are going to simulate a ‘fortune teller’. A fortune teller is something you make out of paper and you can use with your friends to give them different fortunes! For reference, I've included a picture below. The goal of your program is to take input for a color (green or red) and a number (1, 2 or 3), and display a different fortune for each possible combination. Your program should also check to make sure that the user has entered a number that is between 1 and 3. If they do not enter a number between 1 and 3, you should print out an error message and exit.

Some example runs could look like this:

What is your favorite color (green or red only, sorry): Red

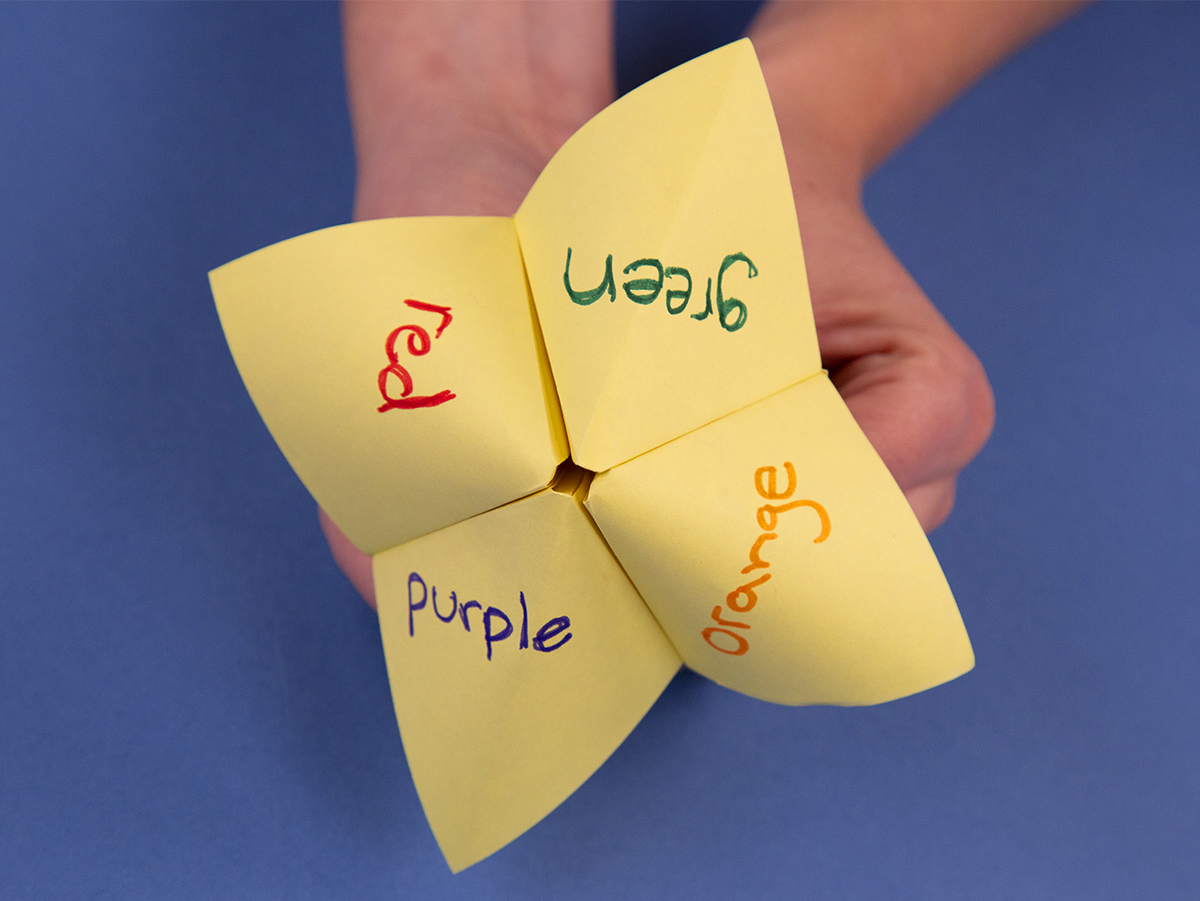
Pick a number between 1 and 3: 2

You are going to get an A for effort on this assignment!

What is your favorite color (green or red only, sorry): Green

Pick a number between 1 and 3: 1

I see an exciting adventure in your future!



Problem 2: Word Checker

For this problem, you are going to be writing a program that will get three separate inputs from the user. The first thing you need to do is check whether any of the inputs are numbers, such as ‘11’, or ‘1342’. You may assume a number will be an integer. If any of the inputs is a number, you should print out an error message and exit the program.

After this check, you should then print out whether or not any of the strings contain a period at the end. You should also check and see whether all of the inputs start with the same letter and if they do, print out a message as well as say what letter that is.

Here are two examples run of your program:

What is the first string? hello

What is the second string? how

What is the third string? happy.

It appears that all of your strings start with the letter ‘h’.

It looks like some of your strings contain punctuation at the end.

What is the first string? 123

What is the second string? computer.

What is the third string? science.

Uh oh, it looks like you have a number for one or more of your inputs, goodbye!

Problem 3: Converting from ands/ors to nested if statements

For these problems, you will be given a conditional statement and you should convert that into its equivalent form using nested if statements. Which do you think is better style and why?

a)

if x > 5 and y > 0 and z > 0:

print(‘hello’)

b)

if (x < 0 or x > 5) and (y == 1 and z == 2):

print(‘hello’)

**One possible solution for Problem 1:**

color = input('What is your favorite color (green or red only, sorry): ')

number = int(input('Pick a number between 1 and 3'))

if number < 1 or number > 3:

print('sorry that is not a valid number, goodbye.')

os.\_exit(0)

if color == 'red':

if number == 1:

# let the students get creative with the fortunes, maybe it will

# get people talking

print('fortune number 1')

elif number == 2:

print('fortune number 2')

else:

print('another fortune goes here')

else:

if number == 1:

print('another new fortune goes here')

elif number == 2:

print('here goes another fortune')

else:

print('and one more fortune')

**One possible solution for Problem 2:**

first = input('What is the first string? ')

second = input('What is the second string? ')

third = input('What is the third string? ')

if first.isnumeric() or second.isnumeric() or third.isnumeric():

print('Uh oh, it looks like you have a number for one or more of you inputs, goodbye! ')

os.\_exit(0)

if first[-1] == '.' or second[-1] == '.' or third[-1] == '.':

print('It looks like some of your strings contain punctuation at the end.')

if first[0] == second[0] and first[0] == third[0]:

print('It appears that all of your strings start with the letter \'' +

first[0] + '\'.')

**Solution for #3:**

a)

if x > 5:

if x > 0:

if z > 0:

print('hello')

b)

if x < 0:

if y == 1:

if z == 2:

print('hello')

elif x > 5:

if y == 1:

if z == 2:

print('hello')