CS 112 Introduction to Programming **Fall 2022**

Lab 3: Branching with Functions

Assignment is due by the end of the lab and must be submitted through Blackboard.

Submission instructions: you must submit **one Python file**.

Please name the file in the usual NetID_2XX_Lab3.py format.

Problem Description

A fisherman catches fish at his local lake. He notices that he catches different amounts of fish every month. Due to overfishing, the months of October to January have the lowest yield yet. To combat the low yield, the fisherman marks up the monthly price of the fish and the tax rate is calculated as shown in the table below:

Month	Mark-up for Fish	Tax Rate for the month
October	8%	4%
November	10%	5%
December	12%	6.5%
January	18%	6.7%

You are tasked with defining the body of the function `calculate_price()`. This function calculates the price of the fish for the month and returns a string with the calculated value.

```
def calculate_price(a_type, month, base_price):
```

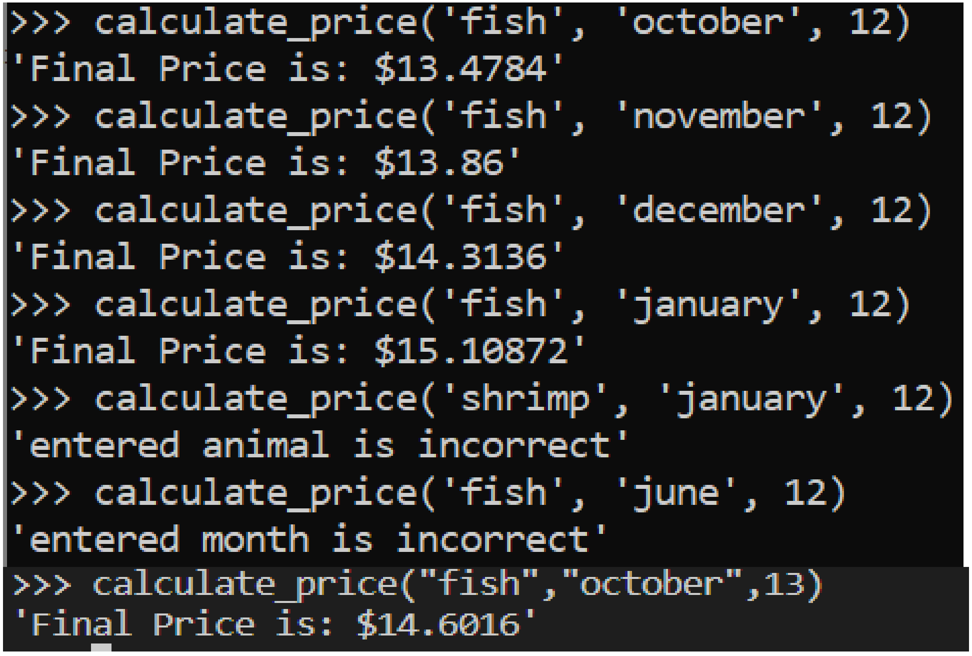
Parameters:

- `a_type` = holds the data for type of animal
- `month` = string name of the month (October – January)
- `base_price` = base price of the animal

Function behavior:

- Tax is added after the mark-up.
- If `a_type` is not *fish*, return the string "entered animal is incorrect"
- If `month` is invalid return the string "entered month is incorrect"
- Once the final price is calculated return the concatenated string "Final Price is: $" followed by the calculated price.
- To maintain consistency all entered arguments should be lowercase

Example Runs:



```
>>> calculate_price('fish', 'october', 12)
'Final Price is: $13.4784'
>>> calculate_price('fish', 'november', 12)
'Final Price is: $13.86'
>>> calculate_price('fish', 'december', 12)
'Final Price is: $14.3136'
>>> calculate_price('fish', 'january', 12)
'Final Price is: $15.10872'
>>> calculate_price('shrimp', 'january', 12)
'entered animal is incorrect'
>>> calculate_price('fish', 'june', 12)
'entered month is incorrect'
>>> calculate_price("fish","october",13)
'Final Price is: $14.6016'
```

Important Guidelines:

- Use math/relational/logic operators such as +,−,*, /,**, >, <=, and, or, not etc., as needed.
- Use if, if else, if elif else as needed.
- Do not use input() or print() in the function definition
- Do not use loops at this time.
- The following data types and their casting functions may be used: int, float, str Boolean.
- You may not import other modules (like math).
- Do not use string formatting, only use basic string concatenation
- Do not use any other programming element that has not been covered in the class or the ZyBook readings at this time.