Question 1)

In this lab, you are expected to calculate a customer's electricity bill based on usage and the city where the customer lives.

1. Firstly, you will read two piece of information which are the electricity usage of the customer as kWh and the city name.
    - Electricity usage will be an int, which shows the total monthly usage of a customer.
    - City name will be a str, such as istanbul, ankara, izmir, mugla, corum, kirsehir (Be careful, English alphabet letters are used and all of the letters are lower case.).
2. Secondly, calculate the base price of each kWh with respect to the total usage of the customer for the month.
    - The base prices are:
        - 0 kWh <= total monthly usage < 300 kWh, then the price of each kWh is 3 TL.
        - 300 kWh <= total monthly usage < 600 kWh, then the price of each kWh is 7 TL.
        - 600 kWh <= total monthly usage, then the price of each kWh is 15 TL.
3. After finding the base price, you should show the effect of the city the customer lives in. If the customer lives in istanbul or ankara, the price of each kWh will be more than the base price, otherwise, the price will be less than the base price:
    - If the customer lives in istanbul, then the price of each kWh will be 3 TL more than the base price.
        - For example, if the customer lives in istanbul and the total monthly usage is between 300 and 600 kWh, then the price of each kWh is 10 TL.
    - If the customer lives in ankara, then the price of each kWh will be 2 TL more than the base price.
        - For example, if the customer lives in ankara and the total monthly usage is between 300 and 600 kWh, then the price of each kWh is 9 TL.
    - For the other cities, then the price of each kWh will be 1 TL less than the base price.
        - For example, if the customer lives in antalya and the total monthly usage is between 300 and 600 kWh, then the price of each kWh is 6 TL.
4. After finding the price of each kWh for the customer, multiply it with the total usage of the customer to find the customer's electricity bill. Then print the found value on the screen.

Regulations & Hints:

- Print the result as a float with 2 digits after the decimal point. You can use the following line to print your result in a proper format. `print('%.2f' % your_result)`

Sample I/O:

Input:

340

ankara

Output:

3060.00

Input:

299

konya

Output:

598.00

Input:

650

istanbul

Output:

11700.00

Input:

600

corum

Output:

8400.00

Solution

```
usage = int(input())
city = input()

base_price = 0

if 0 <= usage < 300:
  base_price = 3
elif 300 <= usage < 600:
  base_price = 7
elif 600 <= usage:
  base_price = 15

if city == "istanbul":
  base_price += 3
elif city == "ankara":
  base_price += 2
else:
  base_price -= 1

total = base_price*usage
print("%.2f" % total)
```

Question 2) (Already given to students, no need to solve in the lab)

You are working for a flower shop and your company decided to open an online shop due to the Covid-19 pandemic. Your job is to implement a part of the online shopping software. Specifically;

- You will read 3 numbers one by one. First one will encode the flower name, second one will encode the color of the flower(s), third one will encode the amount of flowers.

- Encoding for the flower name is as such:

  • If the most significant digit (the leftmost digit) of the first number is 7, the requested flower is Rose,

  • if the most significant digit (the leftmost digit) of the first number is 8, the requested flower is Tulip,

  • otherwise the requested flower is Orchid.

- Encoding for the color is as such:

  • If the least significant digit (the rightmost digit) of the second number is 0, 1, 2 or 3 the color is White,

  • if the least significant digit (the rightmost digit) of the second number is 4, 5 or 6 the color is Pink,

  • if the least significant digit (the rightmost digit) of the second number is 7, 8 or 9 the color is Red.

- There is no actual encoding for the number of flowers. The third number will directly be the number of flowers ordered by the customer. However, there are such restrictions about flower amounts:

  • At most 100 Roses can be ordered at once. If more than 100 Roses are requested, the order is Invalid.

  • At most 50 Tulips can be ordered at once. If more than 50 Tulips are requested, the order is Invalid.

  • At most 30 Orchids can be ordered at once. If more than 30 Orchids are requested, the order is Invalid.

- At the end, you will print the order information as such:

  • If the order is invalid, you will print "Invalid!"

  • If the order is valid, you will print flower name, flower color and the amount without spaces. For example for 10 pink roses you will print "RosePink10". (Yes, flower name and the color will start with uppercase letters.)

Hint 1: You may need to convert the type of the input strings to integers for some operations. (And some of them may needed to be converted back to string type at the end.)
Hint 2: The most significant digit of 1234 is 1, the least significant digit of 1234 is 4. Similarly, for 781, 7 is the most significant and 1 is the least significant digit.

Example I/O:

Input1:
7

4
90

Output1:
RosePink90

Input2:
85012012
23
40

Output2:
TulipWhite40

Input3:
13
301
40

Output3:

Invalid!

* Input3 is invalid since it requests 40 white orchids but maximum permitted amount for orchids is 30.

Solution

```
namenumber = input()
colornumber = input()
amountnumber = input()
# detemining color
if int(colornumber[-1]) in [0, 1, 2 ,3]:
    color = 'White'
elif int(colornumber[-1]) in [4, 5, 6]:
    color = 'Pink'
else:
    color = 'Red'
# determining name
if int(namenumber[0]) == 7:
    name = 'Rose'
elif int(namenumber[0]) == 8:
    name = 'Tulip'
else:
    name = 'Orchid'
# Now it's time to print things.
if name == 'Rose' and int(amountnumber) > 100:
```

```
    print('Invalid!')
elif name == 'Tulip' and int(amountnumber) > 50:
    print('Invalid!')
elif name == 'Orchid' and int(amountnumber) > 30:
    print('Invalid!')
else:
    print(name+color+amountnumber)
```