Lab 3: Functions & Conditional Statements

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GitHub Classroom

Lab 3 - Functions &
Conditional Statements

Real Estate Market in Korea

In your programmer's life, you will have to address many problems with *real-world implications.*

Today, we will develop a small application to find the price of an apartment in Seoul!

Variables related to real-estate price

Surface Area   **Location**   **Access**   **View**

Two properties

We will study two properties in Seoul

Apartment 1

```
# Property 1 specifications
surface_pyeong_1 = 25
location_1 = "Gangnam"
access_1 = "Good"
view_1 = True # view on Han river?
```


Apartment 2

```
# Property 2 specifications
surface_pyeong_2 = 45
location_2 = "Other"
access_2 = "Poor"
view_2 = False # view on Han river
```

Task 1: Make your application foreign friendly

In Korea, apartment sizes are expressed in Pyeong. Such metric is not widely used internationally, create two functions to convert:

Pyeong to m²

1 pyeong → 3.3058 m²

m² to Pyeong

1m² → 0.3025 pyeong

You can name your functions as you like!
Convert the sizes of both apartments into m² in your main fct

Task 2: Calculating Property Value

The property value can be computed via the following equation:

$$value = 13000 \times size_{m^2} \times access_{premium} \times location_{premium} \times view_{premium}$$

Initial price

The average price for an apartment in Seoul is 13,000\$/m²

$13000 \times size_{m^2}$

Access premium

Access quality	coefficient
Poor	0.75
Fair	1.0
Good	1.25
Very Good	1.5

Location premium

$$\begin{cases} 1.5 & \text{if in Gangnam} \\ 1 & \text{Otherwise} \end{cases}$$

View premium

$$\begin{cases} 1.5 & \text{if view on Han river} \\ 1 & \text{Otherwise} \end{cases}$$

Create a function called `calculate_value`, which takes as inputs:
Size (m²), Location (string), Access Rate (string), View (Boolean)
And return the estimated value

Task 3: Find the cheapest one

Finally in the main function you will compare these two estimated prices and print what apartment is the cheapest