

# Lab 1 - I Choose You!

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Updated: 2/2/2024

Due Date: iLearn



## Starting Variables

You will be creating a few starter variables to describe two pokemon. We will refer to these as pokemon 1 and pokemon 2.

You will create a variable to store each pokemon's name, hit points, and attack power.

Pokemon 1:

- name - Pikachu
- hp - 100
- ap - 20

Pokemon 2:

- name - Charmander
- hp - 90
- ap - 25

You will also be creating a variable named *crit\_multiplier* and set this to 1.5. This will be used later.

## Calculating Damage

Now that we have worked with variables, you can start doing some calculations using the variables and other integers. To do so, we will do the following:

1. Create variable named damage
2. Assign this variable a value of pokemon 1 attack - 5
3. Assign the variable pokemon 2 hp the value of pokemon 2 hp - damage

## Printing Damage Output

Next we need to print the damage output.

You will be printing these two sentences:

1. {pokemon 1 name} attacks {pokemon 2 name} for {damage} damage.

2. {pokemon 2 name}'s HP is now {pokemon 2 hp}.

We can do this using the `print()` function. Below are two examples of using the `print()` function with variables and strings:

This is how to print multiple arguments with the function `print()`

```
my_name = "Travis"
my_age = 29

print("My name is ", my_name, " and I am ", my_age, " years old.")
```

This is how to print a formatted string, when the variables are in placeholders in a string. Notice how there is an *f* in from of the first quote. This is to tell print that we have a formatted string. Then, each variable is in curly braces `{my_var}`.

```
my_name = "Travis"
my_age = 29

print(f"My name is {my_name} and I am {my_age} years old.")
```

## Calculate Critical Damage

To calculate critical damage, we will do the following:

1. Create a variable named `crit_damage`
2. Assign it the value of `damage * crit_multiplier`
3. Set the variable `pokemon 2 hp` to `pokemon 2 hp - crit_damage`

## Printing Critical Damage Output

Next we need to print the damage output.

You will be printing these two sentences:

1. {pokemon 1 name} attacks {pokemon 2 name} for {crit\_damage} critical damage.
2. {pokemon 2 name}'s HP is now {pokemon 2 hp}.

## Expected Output

```
Pikachu attacks Charmander for 15 damage.
Charmander's HP is now 75.
Pikachu attacks Charmander for 22.5 critical damage.
Charmander's HP is now 52.5.
```

## Turning in Assignment

Please zip your file before turning it in through iLearn. This is to prevent iLearn from deleting your file (it can happen).

How to zip file on Windows: <https://support.microsoft.com/en-us/windows/zip-and-unzip-files-8d28fa72-f2f9-712f-67df-f80cf89fd4e5>

How to zip file on MacOS: <https://support.apple.com/guide/mac-help/zip-and-unzip-files-and-folders-on-mac-mchlp2528/mac>