

DSO 545: Statistical Computing and Data Visualization

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Lab 6: Python Toolbox (Conditional Statements and Functions)

This lab is based on w3schools.com tutorials.

If-Else Statements

1. Write script that checks if a given number is positive or negative.

```
num = 3

if num >=0:
    print("positive or zero")
else:
    print("negative")
```

positive or zero

2. Update the previous script to check if a given number is zero, positive or negative.

```
num = -1

if num >0:
    print("positive")
elif num ==0:
    print("zero")
else:
    print("negative")
```

negative

Python Functions

3. Define a function called my_function() to print "Hello World!".

```
def my_function():
    print("Hello World!")

my_function()
```

Hello World!

4. Update the previous function to print information passed to it as a parameter/argument.

```
def my_function(user_input):
    print(user_input)

my_function("Hello Python!")
```

Hello Python!

5. Update the previous function to print “Hello World” in case the user did not pass a parameter/argument to it.

```
def my_function(user_input = "Hello World!"):  
    print(user_input)  
  
my_function()
```

```
## Hello World!
```

6. Create a function `check_sign()` to check if a given number is zero, positive or negative.

```
def check_sign(num):  
    if num > 0:  
        print("positive")  
    elif num == 0:  
        print("zero")  
    else:  
        print("negative")  
  
check_sign(-4)
```

```
## negative
```

7. Create a function `five_fold()` that takes a number as its input and returns it 5-fold.

```
def five_fold(num):  
    return 5*num  
  
x = five_fold(3)
```

8. Create a function that takes three text values, and concatenates them using a given separator.

```
def combine(text1, text2, sep):  
    print(str(text1) + str(sep) + str(text2))  
  
combine("DS0", "545", sep = '-')  
  
## DS0-545
```