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6. Vectorize function

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Project0 due Feb 15, 2023 08:59 -03 Completed

In this exercise, you will learn how to vectorize a function that can only deal with scalar for loop.

Scalar function

1.0/1 point (graded)

Let's start with writing a scalar function `scalar_function`, which will apply the following `x` and `y`.

$$f(x, y) = \begin{cases} x \cdot y, & \text{if } x \leq y \\ x/y, & \text{else.} \end{cases}$$

Note that `x` and `y` are scalars.

Available Functions: You have access to the NumPy python library as `np`

Grader note:: If the grader appears unresponsive and displays "Processing", it means (crashed. Please resubmit your answers, and leave a message in the forum and we will v as possible.

```
1 def scalar_function(x, y):
2     """
3     Returns the f(x,y) defined in the problem statement.
4     """
5     def f(x, y):
6         if (x <= y):
7             return x*y
8         else:
9             return x/y
10
11     return f(x,y)
12     raise NotImplementedError
13
```

Press ESC then TAB or click outside of the code editor to exit

Correct

Test results

Available Functions: You have access to the NumPy python library as `np`, and the functions defined in the previous exercise.

Grader note:: If the grader appears unresponsive and displays "Processing", it means the grader has crashed. Please resubmit your answers, and leave a message in the forum and we will respond as possible.

```
1 def vector_function(x, y):
2     """
3     Make sure vector_function can deal with vector input x,y
4     """
5     def f(x, y):
6         if (x <= y):
7             return x*y
8         else:
9             return x/y
10
11     vec_f = np.vectorize(f)
12     return vec_f(x,y)
```

Press ESC then TAB or click outside of the code editor to exit

Correct

Test results

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CORRECT



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-
-  [I create the vector_function only to return the vectorized scalar_function but it gives me that error.](#)
-
-  [will correct answers be available after the due date?](#)
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-
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