

Homework 1

Due date: Wednesday January 25 2017, 11:59pm

Write the whole homework in one file, the examples below could look like the file snippet below

1. Example 1: Write a command that produces this list [7,8,9,10]

Answer: `range(7,11)`

2. Example 2: Write a command that generates a list of squares:

Answer: `[xi*xi for xi in range(10)]` or `[xi**2 for xi in [1,4,3,2]]` etc.

```
#!/usr/bin/env python
# (c) yourname
# 1. Write a command that produces this list [7,8,9,10]
print range(7,11)
# 2. Write a command that generates a list of squares
print [xi*xi for xi in range(10)]
print [xi**2 for xi in [1,4,3,2]]
```

1. Write a command that produces this list [2,4,6,8,10,12,16]
2. Write a command that slices this list [113, 117, 121, 125, 129, 133, 137, 141, 145, 149] into the two numbers in the center.
3. Create a 2dimensional list: for example the result should look like this [[1,2],[3,4],[5,6]]
4. Add a number to a list, give an example
5. Prepend a number to a list
6. Combine two strings
7. How to do element-wise division? Give an example with this list [456,45,23,89,56] and the divisor 23 .
8. Look at the result of the last question, describe why the numbers are all integers, how could change this?
9. Sum this list [113, 117, 121, 125, 129, 133, 137, 141, 145, 149]
10. Produce a list that contains pairs (i,i-4), i starting at 10 and stopping at 15
11. Give an example of a dictionary with 5 entries, use firstname as keys and last names as values.
12. Show only the unique numbers of this list `[xi/100 for xi in range(1000)]`

Send the file `yourname_home1.py` to `beerli@fsu.edu`, use "ISC4304 home1 yourname" as subject line.