



**13th Summer
School on
SCIENTIFIC
VISUALIZATION**

Python Programming - exercise

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Exercise

Exercise 1 (list):

- Write a program that compute all numbers odd and even $< N$ where N is taken from standard input. Create two list odd and even to hold the number. Use for cycle to generate the number and the operator $\%$ to check if the number is odd or even
- Use the function range to generate the list of odd and even number, using slicing operation
- Write a these operations inside a function

Exercise 2 (dictionary -string):

- Write a program that given a string compute a dictionary with the frequency of each character inside the string.



Exercise 3 (set):

Given the following structure:

```
>>> all = set(range(1, 20))
```

```
>>> primes = set([2, 3, 5, 7, 11, 13, 17, 19])
```

```
>>> even = set([2, 4, 6, 8, 10, 12, 14, 16, 18])
```

Print the set of odd number

Print the set of odd primes number

Print the set of odd number that are not primes



Exercise 4 (file):

- Open file polydat.vtk and print the number of row
- Go to the beginning of the file, read line by line and print all lines that don't start with #
- Write a function that look for POINTS field inside the file and write a file point.txt with points value
 - Write a function that look for PolyGONS field inside the file and write a file polygons.txt with polygons value