

TMTplus Introduction to Scientific Programming

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March 2021

4.3 Iterating over elements

Ex 4.10 Please run the following two scripts and try to understand them. It is helpful if you think up what they will do before you run them.

```
i= 1
while i <= 10:
    print(i)
    i = i + 1
print("Finished")
```

```
i = 0
while i < 9:
    i = i + 1
    if i==5 or i==7:
        continue                # Back to the while statement
    else:
        print(i)
print(i+1)
```

Ex 4.11 Print each element of the following movies list using a while loop. Note: use Python online documentation to check for this loop type or check back at the lecture slides.

```
movies = [ "The_Addams_Family", "Ghostbusters", "Jurassic_Park",
           "Pulp_Fiction", "Home_Alone", "The_Matrix"]
```

Ex 4.12 Using the movies list from the previous exercise, print each element using a for loop.

Ex 4.13 Nested loops are frequently used to handle lists of lists. Using the following tv_shows list of lists use a nested loop to print all information of each television show.

```
tv_shows = [
    ["Sherlock_Holmes", "Drama" ,2009],
    ["Planet_Earth", "Documentary", 2006],
    ["Cosmos", "Documentary", 2014],
    ["Dr._Who","Science_fiction", 2005],
    ["Stranger_Things","Science_fiction", 2016],
    ["Game_of_Thrones","Fantasy", 2011]
]
```