25 January 2025 10:07

Using * operator with strings

Str * 4 = it will repeat the string 4 times

Map - Filter ---------

```
l1 = [x for x in range(1,30)]


# map will generate a new value fro each value of l1 and then put all new values in a new list
newlist = list(map(lambda x : x**4 , l1))
print(newlist)

def genNewValue(x):
    return str(x)*3

print(list(map(genNewValue, l1)))

# filter will generate a new list for only those values for which the condition is true
print(list(filter(lambda x: x % 2 == 0, l1)))
print(list(filter(lambda x: x <= 1000,newlist)))
```

HW ---

1. TO calculate days between two dates , following code is useful

   ```
   from datetime import date
   date1 = date(2021, 7, 18)
   date2 = date(2021, 10, 15)
   delta = date2 - date1
   print(delta.days)
   ```

   Try above code .
   Write a python program to accept a work_start_date and work_end_date from user
   Accept daily wages from user
   Calculate the number of Sunday between the two dates
   Find the total working days EXCLUDING sundays , calculate total amount to be paid to the worker

2. Create a list of all days in the month given by user .
   for each day as the key create a dictionary as follows
   {1 : {sleephours:8 , calorieIntake:2000 , walktime:"2 hours" },
   2 : {sleephours:8 , calorieIntake:2000 , walktime:"2 hours" },
   ….
   …
   31 :}

   Ask the user - for which date she wants to enter data , accept the data for that date as above

Show Menu

1. Total walk done in this month
2. Total sleep
3. Total calories
4. Quit

3. Write a map function to create a new list of students from and existing list such that the firstname and last name is in title case in the new list
4. Write a filter function to create a new list from an existing list of dictionaries such that new list contains only those products that have not crossed the expiry date

```
existing list = [
  { "pname" : "cheese" , "expirydate":datetime(2020,11,1) },
  { "pname" : "butter" , "expirydate":datetime(2025,5,1) }
  { "pname" : "pickle" , "expirydate":datetime(2026,11,1) }
 …. Add more
                    ]
```

show the original list and new list .

5. Accept a character , width and height from user and draw a rectangle using that character

```
for ex  char = t
width = 5
height = 6
output
    ttttt
    t   t
    t   t
    t   t
    t   t
    ttttt
```

6. Using list comprehension create a list of tuples having date and day of week

Original list = [list of any 5 dates]