1. **Python program to find difference between current time and given time**

```
# Python program to find the
# difference between two times


# function to obtain the time
# in minutes form
def difference(h1, m1, h2, m2):

        # convert h1 : m1 into
        # minutes
        t1 = h1 * 60 + m1

        # convert h2 : m2 into
        # minutes
        t2 = h2 * 60 + m2

        if (t1 == t2):
                print("Both are same times")
                return
        else:

                # calculating the difference
                diff = t2-t1

        # calculating hours from
        # difference
        h = (int(diff / 60)) % 24

        # calculating minutes from
        # difference
        m = diff % 60

        print(h, ":", m)

# Driver's code
```

```
if __name__ == "__main__":

        difference(7, 20, 9, 45)
        difference(15, 23, 18, 54)
        difference(16, 20, 16, 20)
```

2. **Python Program to Create a Lap Timer**

```
import time

start_time=time.time()
end_time=start_time
lap_num=1

print("Click on ENTER to count laps.\nPress CTRL+C to stop")

try:
  while True:

    input()
    time_laps=round((time.time() - end_time), 2)

    tot_time=round((time.time() - start_time), 2)

    print("Lap No. "+str(lap_num))
    print("Total Time: "+str(tot_time))
    print("Lap Time: "+str(time_laps))

    print("*"*20)

    end_time=time.time()
    lap_num+=1

except KeyboardInterrupt:
  print("Exit!")
```

3. **Convert date string to timestamp in Python**

```
# Python program to convert
# date to timestamp



import time
import datetime


string = "20/01/2020"

element = datetime.datetime.strptime(string,"%d/%m/%Y")

tuple = element.timetuple()
timestamp = time.mktime(tuple)

print(timestamp)
```

4. **How to convert timestamp string to datetime object in Python?**

```
import datetime

date_time_str = '2018-06-29 08:15:27.243860'
date_time_obj = datetime.datetime.strptime(date_time_str, '%Y-%m-%d
%H:%M:%S.%f')

print('Date:', date_time_obj.date())
print('Time:', date_time_obj.time())
print('Date-time:', date_time_obj)
```

5. **Find number of times every day occurs in a Year**

```
# python program Find number of
# times every day occurs in a Year
```

```
import datetime
import calendar

def day_occur_time(year):

	# stores days in a week
	days = [ "Monday", "Tuesday", "Wednesday",
		"Thursday", "Friday", "Saturday",
		"Sunday" ]

	# Initialize all counts as 52
	L = [52 for i in range(7)]

	# Find the index of the first day
	# of the year
	pos = -1
	day = datetime.datetime(year, month = 1, day = 1).strftime("%A")
	for i in range(7):
		if day == days[i]:
			pos = i

	# mark the occurrence to be 53 of 1st day
	# and 2nd day if the year is leap year
	if calendar.isleap(year):
		L[pos] += 1
		L[(pos+1)%7] += 1

	else:
		L[pos] += 1


	# Print the days
	for i in range(7):
		print(days[i], L[i])


# Driver Code
```

```
year = 2019
day_occur_time(year)
```

6. **Python Program to Check if String Contain Only Defined Characters using Regex**

```
# _importing module
import re


def check(str, pattern):

        # _matching the strings
        if re.search(pattern, str):
                print("Valid String")
        else:
                print("Invalid String")

# _driver code
pattern = re.compile('^[1234]+$')
check('2134', pattern)
check('349', pattern)
```

7. **Python program to Count Uppercase, Lowercase, special character and numeric values using Regex**

```
import re


string = "ThisIsGeeksforGeeks !, 123"

# Creating separate lists using
# the re.findall() method.
uppercase_characters = re.findall(r"[A-Z]", string)
lowercase_characters = re.findall(r"[a-z]", string)
numerical_characters = re.findall(r"[0-9]", string)
special_characters = re.findall(r"[, .!?]", string)
```

```
print("The no. of uppercase characters is", len(uppercase_characters))
print("The no. of lowercase characters is", len(lowercase_characters))
print("The no. of numerical characters is", len(numerical_characters))
print("The no. of special characters is", len(special_characters))
```

8. **Python Program to find the most occurring number in a string using Regex**

```
# your code goes here# Python program to
# find the most occurring element
import re
from collections import Counter

def most_occr_element(word):

    # re.findall will extract all the elements
    # from the string and make a list
    arr = re.findall(r'[0-9]+', word)

    # to store maxm frequency
    maxm = 0

    # to store maxm element of most frequency
    max_elem = 0

    # counter will store all the number with
    # their frequencies
    # c = counter((55, 2), (2, 1), (3, 1), (4, 1))
    c = Counter(arr)

    # Store all the keys of counter in a list in
    # which first would we our required element
    for x in list(c.keys()):

        if c[x]>= maxm:
            maxm = c[x]
            max_elem = int(x)
```

```
        return max_elem

# Driver program
if __name__ == "__main__":
        word = 'geek55of55gee4ksabc3dr2x'
        print(most_occr_element(word))
```

9. **Python Regex to extract maximum numeric value from a string**

```
# Function to extract maximum numeric value from
# a given string
import re

def extractMax(input):

        # get a list of all numbers separated by
        # lower case characters
        # \d+ is a regular expression which means
        # one or more digit
        # output will be like ['100','564','365']
        numbers = re.findall('\d+',input)

        # now we need to convert each number into integer
        # int(string) converts string into integer
        # we will map int() function onto all elements
        # of numbers list
        numbers = map(int,numbers)

        print max(numbers)

# Driver program
if __name__ == "__main__":
        input = '100klh564abc365bg'
        extractMax(input)
```

10. Python Program to put spaces between words starting with capital letters using Regex

```
import re

def putSpace(input):

    # regex [A-Z][a-z]* means any string starting
    # with capital character followed by many
    # lowercase letters
    words = re.findall('[A-Z][a-z]*', input)

    # Change first letter of each word into lower
    # case
    for i in range(0,len(words)):
    words[i]=words[i][0].lower()+words[i][1:]
    print(' '.join(words))


# Driver program
if __name__ == "__main__":
    input = 'BruceWayneIsBatman'
    putSpace(input)
```