ASSIGNMENT 2

In [ ]:
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In [2]:
```
# Q1. Write a lambda expression to extract first word of a string.

in_str=input("Enter a String:")
out_str=lambda str1:str1.split(" ")[0]
out_str(in_str)
```

```
Enter a String:Soumya
```

Out[2]:
```
'Soumya'
```

In [4]:
```
#Q2. Write a function to extract first word of s string
#(with many words separated by space).

def extract_first_word(s):
  return s.split(" ")[0]

in_str=input("Enter a string:")
extract_first_word(in_str)
```

```
Enter a string:Hello, I am Soumya Gite
```

Out[4]:
```
'Hello,'
```

In [8]:
```
#Q3. Extract the first word from every string from a list of strings
# by using map function.

n=int(input("Enter number of strings to be checked:"))
ls=[]
for i in range(0,n):
  new_str=input()
  ls.append(new_str)

map_first=list(map(lambda in_str:in_str.split(" ")[0], ls))
map_first
```

```
Enter number of strings to be checked:4
Hey
Soumya here
From Datta Meghe College of Engineering, Airoli
```

Out[8]:
```
['Hey', 'Soumya', 'From', '']
```

In [9]:
```
# Q4. Write a function to return a list of prime factors of a given number.

#Function to check if a number n is prime
def is_prime(n):
  for i in range(2,n):
    if n%i==0:
      return False
  else:
    return True

#Function to find the list of prime numbers till num
def prime_list(num):
  list_prime=[]
  for i in range(2,num):
    if (is_prime(i)):
      list_prime.append(i)
  return list_prime

in1=int(input("Enter a number:"))
list1=prime_list(in1)
out1=[]
for k in list1:
  if in1%k==0:
    out1.append(k)

print(f"Prime factors of {in1} are {out1}")
```

```
Enter a number:28
Prime factors of 28 are [2, 7]
```

In [10]:
```
#Q5. Write a function that finds 2nd largest among 4 numbers
# (Repetitions are allowed, without sorting).

#Method1: Using two lists and max()
list1=[]
for i in range(0,4):
  inp1=int(input(f"Enter {i}th element:"))
  list1.append(inp1)

list2=list1
list1.remove(max(list1))
sec_l=max(list1)
list1.remove(sec_l)
print(f"Second largest element is {sec_l}")
```

```
Enter 0th element:29
Enter 1th element:78
Enter 2th element:46
Enter 3th element:18
Second largest element is 46
```

In [11]:
```
#Method2: By comparing the elements with first maximum and second maximum

list1=[]
for i in range(0,4):
  inp1=int(input("Enter element:"))
  list1.append(inp1)

f_max=max(list1[0],list1[1])
s_max=min(list1[0],list1[1])
for i in range(2,len(list1)):
  if list1[i]>f_max:
    s_max=f_max
    f_max=list1[i]
  elif list1[i]>s_max and list1[i]!=f_max:
    s_max=list1[i]

print(f"Second largest element is {s_max}")
```

```
Enter element:56
Enter element:46
Enter element:14
Enter element:19
Second largest element is 46
```