In [1]:
```
# Question 1
lista=[]
for x in range(2000, 3200):
    if (x%7==0) and (x%5!=0):
        lista.append(str(x))
print (lista)
```

```
['2002', '2009', '2016', '2023', '2037', '2044', '2051', '2058', '2072', '2079', '20
86', '2093', '2107', '2114', '2121', '2128', '2142', '2149', '2156', '2163', '2177',
'2184', '2191', '2198', '2212', '2219', '2226', '2233', '2247', '2254', '2261', '226
8', '2282', '2289', '2296', '2303', '2317', '2324', '2331', '2338', '2352', '2359',
'2366', '2373', '2387', '2394', '2401', '2408', '2422', '2429', '2436', '2443', '245
7', '2464', '2471', '2478', '2492', '2499', '2506', '2513', '2527', '2534', '2541',
'2548', '2562', '2569', '2576', '2583', '2597', '2604', '2611', '2618', '2632', '263
9', '2646', '2653', '2667', '2674', '2681', '2688', '2702', '2709', '2716', '2723',
'2737', '2744', '2751', '2758', '2772', '2779', '2786', '2793', '2807', '2814', '282
1', '2828', '2842', '2849', '2856', '2863', '2877', '2884', '2891', '2898', '2912',
'2919', '2926', '2933', '2947', '2954', '2961', '2968', '2982', '2989', '2996', '300
3', '3017', '3024', '3031', '3038', '3052', '3059', '3066', '3073', '3087', '3094',
'3101', '3108', '3122', '3129', '3136', '3143', '3157', '3164', '3171', '3178', '319
2', '3199']
```

In [39]:
```
# Question 2
def factorial(n):

    if n == 0:
        return 1

    return n * factorial(n-1)

num = int(input("Enter a number:"))
print("Factorial of", num, "is",
factorial(num))
```

```
Enter a number:5
Factorial of 5 is 120
```

In [58]:
```
# Question 3

n = int(input("Enter the value of n: "))
dec = {i : i*i for i in range(1, n+1)}
print(dec)
```

```
Enter the value of n: 6
{1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36}
```

In [69]:
```
# Question 4
def remove_char(str, n):
      first_part = str[:n]
      last_part = str[n+1:]
      return first_part + last_part
print(remove_char('kitten', 0))
print(remove_char('kitten', 3))
print(remove_char('kitten', 5))
```

```
itten
kiten
kitte
```

In [1]:
```
# Question 5
import numpy as np
x= np.arange(6).reshape(3, 2)
print("Original array elements:")
print(x)
print("Array to list:")
print(x.tolist())
```

```
Original array elements:
[[0 1]
 [2 3]
 [4 5]]
Array to list:
[[0, 1], [2, 3], [4, 5]]
```

In [ ]:
```
# Question 6
import numpy as np
x= np.arange(6).reshape(3, 2)
print("Original array elements:")
print(x)
print("Array to list:")
print(x.tolist())
```

In [6]:
```
import numpy as np
Originalarray1=[0, 1, 2]

Originalarray2=[2, 1, 0]

np.cov(Originalarray1,Originalarray2)
```

Out[6]:
```
array([[ 1., -1.],
       [-1.,  1.]])
```

In [14]:
```
import math

numb = input(" D: ")
numb = numb.split(',')

result_list = []
for D in numb:
    Q = round(math.sqrt(2 * 50 * float(D) / 30))
    result_list.append(Q)

print(result_list)
```

```
 D: 14,52,6.8
[7, 13, 5]
```

In [1]:
```
print ('Habachi Haithem GoMycode HackerSpace Beja AI')
```

```
Habachi Haithem GoMycode HackerSpace Beja AI
```

In [ ]:
```

```