Divyansh Sengar

Task 5

In [71]:
```python
def primeNumber(num):
    if num==1 or num==0:
        return False
    flag=0
    for i in range(2,num):
        if num%i==0:
            flag=1
    if flag==1:
        return False
    else:
        return True
arr=[1,2,3,5,7,10,12,13]
result=0
for num in arr:
    x=primeNumber(num)
    if x is True:
        result=result+num
print(result)
```

30

In [39]:
```python
def strictIncreasing(arr):
    flag=0
    for i in range(1,len(arr)):
        if arr[i-1]>arr[i]:
            flag=1
            break
    if flag==1:
        return ('Not Strictly increasing')
    else:
        return ('Strictly Increasing')
arr=[1,2,3,4,5,6,7]
print(strictIncreasing(arr))
```

Strictly Increasing

In [57]:
```python
def isExpanding(arr):
    diff=0
    flag=0
    prev_diff=0
    for i in range(1,len(arr)-1):
        diff=abs(arr[i+1]-arr[i])
        if diff<=prev_diff:
            flag=1
            break
        prev_diff=diff
    if flag==1:
        return('Not Expanding')
    else:
        return('Expanding')
arr=[1,2,4,7,11,20,30,41,72,1]
print(isExpanding(arr))
```

```
Expanding
```

In [71]:
```python
def permutation(string,start=0,end=len(string)-1):
    if start==end:
        print(string)
    for i in range(start,end+1):
        string[start],string[i]=string[i],string[start]
        permutation(string,start+1,end)
        string[start],string[i]=string[i],string[start]
string='abc'
string=list(string)
permutation(string)
```

```
['a', 'b', 'c']
['a', 'c', 'b']
['b', 'a', 'c']
['b', 'c', 'a']
['c', 'b', 'a']
['c', 'a', 'b']
```

In [ ]:

In [ ]: