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Algorithms HW_2.2

1) Scheduling problem:

In [11]:
```
def scheduling():
    T = input('Time Avaliable: ')
    T = int(T)
    tasks = input('Times for tasks: ')
    tasks = list(map(int, tasks.strip().split(' ')))
    tasks.sort()

    counter = 0
    total = 0
    for task in tasks:
        total += task
        counter += 1
        if total > T:
            counter -= 1
            break
        if total == T:
            break
    return f'Number of tasks can be {counter}'
```

In [12]:
```
c = scheduling()
```

```
Time Avaliable: 6
Times for tasks: 3 5 4 2 1
```

In [13]:
```
print(c)
```

```
Number of tasks can be 3
```

2) Selected Tasks Problem:

In [14]:
```
def selected_tasks():
    start = input('Start Times for tasks: ')
    end = input('End Time for tasks: ')
    start = list(map(int, start.strip().split(' ')))
    end = list(map(int, end.strip().split(' ')))

    indeces = []
    i = 0
    indeces.append(i)

    for j in range(len(end)):
        if start[j] >= end[i]:
            indeces.append(j)
            i = j
    return f'The indeces of tasks are {indeces}'
```

In [15]:
```
tasks = selected_tasks()
```

```
Start Times for tasks: 10 12 20
End Time for tasks: 20 25 30
```

In [16]:
```
print(tasks)
```

```
The indeces of tasks are [0, 2]
```

In [ ]: