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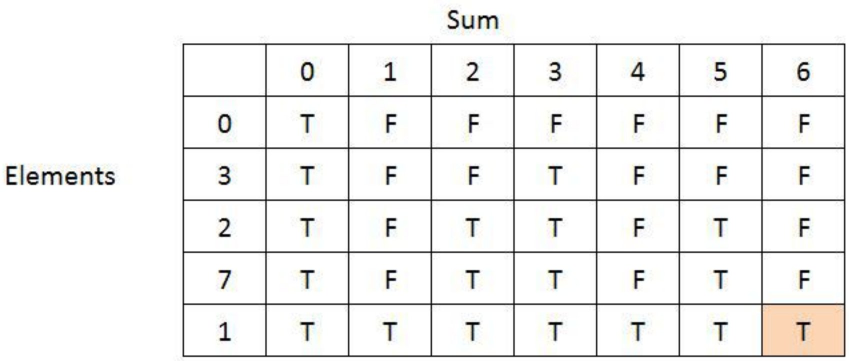
Q4,

Pseudo-code:

```
def isSubsetSum(st, n, sm):
    # The value of subset[i][j] will be
    # true if there is a subset of
    # set[0..j-1] with sum equal to i

    boolean[][] solution = new boolean[A.length + 1][sum + 1]


    # If sum is 0, then answer is true
    for i in range(0, n + 1):
        subset[i][0] = True

    # If sum is not 0 and set is empty,
    # then answer is false
    for i in range(1, sm + 1):
        subset[0][i] = False

    # Fill the subset table in botton
    # up manner
    for i in range(1, n + 1):
        for j in range(1, sm + 1):
            if (j < st[i - 1]):
                subset[i][j] = subset[i - 1][j]
            if (j >= st[i - 1] and subset[i][j] == False):
                subset[i][j] = subset[i - 1][j] or subset[i - 1][j - st[i - 1]]

    return subset[n][sm];
```



Sum

Elements

	0	1	2	3	4	5	6
0	T	F	F	F	F	F	F
3	T	F	F	T	F	F	F
2	T	F	T	T	F	T	F
7	T	F	T	T	F	T	F
1	T	T	T	T	T	T	T

worst case: T(n) = Θ(sum*n) since we need to fill the table with size sum*n.
where n is the length of the sequence. Sum is the number we want to find. x