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COURSE: MSc CS

SUBJECT: ALGORITHM

TOPIC: SUBSET SUM PROBLEM

PRACTICAL 8

```
# A recursive solution for subset sum
# problem

# Returns true if there is a subset
# of set[] with sun equal to given sum


def isSubsetSum(set, n, sum):

        # Base Cases
        if (sum == 0):
                return True
        if (n == 0):
                return False

        # If last element is greater than
        # sum, then ignore it
        if (set[n - 1] > sum):
                return isSubsetSum(set, n - 1, sum)

        # else, check if sum can be obtained
        # by any of the following
        # (a) including the last element
        # (b) excluding the last element
        return isSubsetSum(
                set, n-1, sum) or isSubsetSum(
                set, n-1, sum-set[n-1])


# Driver code
```

```
set = [3, 34, 4, 12, 5, 2]

sum = 9

n = len(set)

if (isSubsetSum(set, n, sum) == True):

        print("Found a subset with given sum")

else:

        print("No subset with given sum")
```

OUTPUT: