LAB № 6

Instructions

1. Please write the code for the problems in python language in Jupyter notebook

2. The code should readable with variables named meaningfully

3. Plagiarism is unacceptable and we have ways to find it. So do not do it.

4. Follow the instructions and define the methods/functions as given in the problem statement.

5. Write test cases wherever required so that they cover all scenarios.

6. Please do not use in-built python functions for solving the problem.

Problem 1

Samantha started her Phd this semester. Her advisor given her freedom to take any number of courses she like but placed a condition that sum of credits of the courses must be exactly equal to n. Given list c, where $c[i]$ represents number of credits for ith course and number of credits Samantha has to take , can you return true if there are courses such that sum of credits is equal to n or else false using **recursion**.

```
Example 1:
Input: n = 5, c = [1, 2, 3, 4]
Output: True (as can take courses with  credit 2 and 3)
Example 2:
Input: n = 7, c = [2, 4, 6, 8]
Output: False
```

Write the code following below function signature.

```python
1
2 def can_take_courses(c, n):
3     '''Your code
4         comes here'''
5
6     return {True or False}
```