

Question 1:

Write a program using Dynamic Programming Technique for:

Given a string `s`, return *the longest palindromic substring* in `s`.

Example 1:

Input: `s = "babad"`

Output: `"bab"`

Note: `"aba"` is also a valid answer.

Example 2:

Input: `s = "cbabd"`

Output: `"bb"`

Example 3:

Input: `s = "a"`

Output: `"a"`

Example 4:

Input: `s = "ac"`

Output: `"a"`

Constraints:

- `1 <= s.length <= 1000`
- `s` consist of only digits and English letters (lower-case and/or upper-case),

Question 2:

Write a program to implement Knapsack problem using Dynamic programming approach with the following data:

Consider the following knapsack and collection of items:

Knapsack: $W = 15$

Items:

Item	Weight	Value
1	2	1
2	10	20
3	3	3
4	6	14
5	18	100