HSC CRACKERS

Assignment on Pointers

Problem 1: Swapping Magical Items with Pointers

Awesh, a young magician, has two magical items in his possession. He wants to swap their positions using magic, but he needs your help to do it with pointers.

Problem Statement

Write a function to swap the values of two variables using pointers.

Input	Output
5, 10	10, 5
-3, 7	7, 3
100, 200	200, 100
0, 1	1, 0

Problem 2: Navigating through a List of Magical Books

Awesh has a collection of magical books, each containing unique spells. He wants to go through his list of books and print the titles using pointers.

Problem Statement

Write a function to print all elements of an array using pointers.

Input

Number of strings and the strings.

Output

Comma separated strings.

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Input	Output
3 SpellBook A SpellBook B SpellBook C	Spellbook A, Spellbook B, Spellbook C
4 Book 1 Book 2 Book 3 Book 4	Book 1, Book 2, Book 3, Book 4
3 Alpha Beta Gamma	Alpha, Beta, Gamma
2 Introduction to Magic Advanced Potions	Introduction to Magic, Advanced Potions

Problem 3: Dynamic Memory Allocation for Magical Creatures

Awesh needs to keep track of the magical creatures he encounters on his journey. He wants to dynamically allocate memory to store the number of creatures he sees each day.

Problem Statement

Write a function that allocates memory for an array of integers using malloc and initializes it with values.

Input	Output
5 1 2 3 4 5	{1,2,3,4,5}
3 10 20 30	{10,20,30}
4 5 10 15 20	{5,10,15,20}
2 100 200	{100,200}

Problem 4: Finding the Address of Maximum Value in an Array

Awesh has discovered a chest full of different magical artifacts, each with a unique power level. He needs to identify the most powerful artifact, but instead of knowing its power, he needs to know where it's located in his collection. Help Awesh by finding the address of the maximum value in the array using pointers.

Problem Statement

Write a function to find the address of the maximum value in an array using pointers.

Input	Output
5 10 20 30 40 50	Find Yourself
5 1 3 7 2 5	Find Yourself
5 -10 -2- -3- -5 -15	Find Yourself
5 100 200 150 300 250	Find Yourself