Structured Programming Quiz 3V3

Student Name /ID:

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**Q1: What is the output of the following code:**

#include <stdio.h>

void foo(int arr[], int size, int score) {

for (int i = 2; i < size; i++) {

arr[i] -= score;

}

}

int main() {

int numbers[5] = {1, 2, 3,4,5};

int Value = 2;

foo(numbers, 5, Value);

for (int i = 0; i < 5; i++) {

printf("%d ", numbers[i]);

}

return 0;

}

**Q2:** Write a complete C program that includes a function named MinAbove, which takes an array of integers, its size, and a threshold value as input parameters. The function should return the smallest value among the elements that are greater than or equal to the given threshold. If no such values exist, it should return -1. In the main function, declare an integer array named temp with a size of 70. Prompt the user to input temperature readings, then call MinAbove to find and display the lowest temperature that is **at least 30**.

#include <stdio.h>

// Function to find the smallest value greater than or equal to threshold

int MinAbove(int arr[], int size, int threshold) {

int minValue = -1;

for (int i = 0; i < size; i++) {

if (arr[i] >= threshold) {

if (minValue == -1 || arr[i] < minValue) {

minValue = arr[i];

}

}

}

return minValue;

}

int main() {

int temp[70];

int size;

// Prompt user for the number of temperature readings

printf("Enter the number of temperature readings (max 70): ");

scanf("%d", &size);

if (size > 70 || size <= 0) {

printf("Invalid size!\n");

return 1;

}

// Read temperature values

printf("Enter %d temperature readings: \n", size);

for (int i = 0; i < size; i++) {

scanf("%d", &temp[i]);

}

// Find and display the lowest temperature that is at least 30

int result = MinAbove(temp, size, 30);

printf("The lowest temperature that is at least 30: %d\n", result);

return 0;

}