**Program 1.: Find the Largest Element in an Array:**

#include <iostream>

int findMax(int nums[], int n) {

int maxElement = nums[0];

for (int i = 1; i < n; i++) {

if (nums[i] > maxElement) {

maxElement = nums[i];

}

}

return maxElement;

}

int main() {

int n;

std::cout << "Enter the number of elements in the array: ";

std::cin >> n;

int nums[n];

std::cout << "Enter the elements of the array: ";

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

std::cin >> nums[i];

}

int maxElement = findMax(nums, n);

std::cout << "The largest element in the array is: " << maxElement << std::endl;

return 0;

}

**Output Snip:**

**Program 2: Find the Smallest Element in an Array:**

#include <iostream>

int findMin(int nums[], int n) {

int minElement = nums[0];

for (int i = 1; i < n; i++) {

if (nums[i] < minElement) {

minElement = nums[i];

}

}

return minElement;

}

int main() {

int n;

std::cout << "Enter the number of elements in the array: ";

std::cin >> n;

int nums[n];

std::cout << "Enter the elements of the array: ";

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

std::cin >> nums[i];

}

int minElement = findMin(nums, n);

std::cout << "The smallest element in the array is: " << minElement << std::endl;

return 0;

}

**Output Snip:**

**Program 3: Find the Second Largest Element in an Array:**

#include <iostream>

int findSecondLargest(int nums[], int n) {

int maxElement = nums[0];

int secondMax = INT\_MIN;

for (int i = 1; i < n; i++) {

if (nums[i] > maxElement) {

secondMax = maxElement;

maxElement = nums[i];

} else if (nums[i] > secondMax && nums[i] != maxElement) {

secondMax = nums[i];

}

}

return secondMax;

}

int main() {

int n;

std::cout << "Enter the number of elements in the array: ";

std::cin >> n;

int nums[n];

std::cout << "Enter the elements of the array: ";

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

std::cin >> nums[i];

}

int secondLargest = findSecondLargest(nums, n);

std::cout << "The second largest element in the array is: " << secondLargest << std::endl;

return 0;

}

**Output Snip:**

**Program 4: Find the Second Smallest Element in an Array:**

#include <iostream>

int findSecondSmallest(int nums[], int n) {

int minElement = nums[0];

int secondMin = INT\_MAX;

for (int i = 1; i < n; i++) {

if (nums[i] < minElement) {

secondMin = minElement;

minElement = nums[i];

} else if (nums[i] < secondMin && nums[i] != minElement) {

secondMin = nums[i];

}

}

return secondMin;

}

int main() {

int n;

std::cout << "Enter the number of elements in the array: ";

std::cin >> n;

int nums[n];

std::cout << "Enter the elements of the array: ";

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

std::cin >> nums[i];

}

int secondSmallest = findSecondSmallest(nums, n);

std::cout << "The second smallest element in the array is: " << secondSmallest << std::endl;

return 0;

}

**Program 5: Search for an Element in an Array:**

#include <iostream>

bool search(int nums[], int n, int element) {

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

if (nums[i] == element) {

return true;

}

}

return false;

}

int main() {

int n;

std::cout << "Enter the number of elements in the array: ";

std::cin >> n;

int nums[n];

std::cout << "Enter the elements of the array: ";

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

std::cin >> nums[i];

}

int element;

std::cout << "Enter the element to search for: ";

std::cin >> element;

if (search(nums, n, element)) {

std::cout << "Element " << element << " is present in the array." << std::endl;

} else {

std::cout << "Element " << element << " is not present in the array." << std::endl;

}

return 0;

}

**Output Snip:**