9.Ascending Order

#include <stdio.h>

#include <stdbool.h>

int binarySearch(int nums[], int target, int left, int right)

{

while (left <= right)

{

int mid = left + (right - left) / 2;

if (nums[mid] == target)

{

return mid;

}

else if (nums[mid] < target)

{

left = mid + 1;

}

else

{

right = mid - 1;

}

}

return -1;

}

int main()

{

int n;

printf("Enter the number of elements: ");

while (scanf("%d", &n) != 1 || n <= 0)

{

printf("Invalid input. Please enter a positive integer: ");

while (getchar() != '\n');

}

int nums[n];

printf("Enter %d sorted array elements:\n", n);

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

{

while (scanf("%d", &nums[i]) != 1)

{

printf("Invalid input. Please enter an integer: ");

while (getchar() != '\n');

}

}

int target;

printf("Enter the target element to search for: ");

while (scanf("%d", &target) != 1)

{

printf("Invalid input. Please enter an integer: ");

while (getchar()!='\n');

}

int result = binarySearch(nums, target, 0, n - 1);

if (result != -1)

{

printf("Target %d found at index %d.\n", target, result);

}

else

{

printf("Target %d not found in the array.\n", target);

}

return 0;

}

OUTPUT

