A screenshot of a computer

AI-generated content may be incorrect.

to search a number using Binary Search method

Code9:

#include <stdio.h>

int main() {

int n, key, low, high, mid, found = 0;

printf("Enter number of elements: ");

scanf("%d", &n);

int arr[n];

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

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

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

printf("Enter number to search: ");

scanf("%d", &key);

low = 0;

high = n - 1;

while (low <= high) {

mid = (low + high) / 2;

if (arr[mid] == key) {

printf("Element %d found at position %d\n", key, mid + 1);

found = 1;

break;

} else if (arr[mid] < key) {

low = mid + 1; // search in right half

} else {

high = mid - 1; // search in left half

}

}

if (!found)

printf("Element %d not found in array.\n", key);

return 0;

}