**BINARY SEARCH**

#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 element 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);

found = 1;

break;

}

else if (arr[mid] < key) {

low = mid + 1;

}

else {

high = mid - 1;

}

}

if (!found)

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

return 0;

}