**9. Write a C program to search a number using Binary Search method**

**#include <stdio.h>**

**int main() {**

**int arr[100], n, num, i, low, high, mid;**

**printf("Enter number of elements (sorted): ");**

**scanf("%d", &n);**

**printf("Enter elements:\n");**

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

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

**printf("Enter number to search: ");**

**scanf("%d", &num);**

**low = 0;**

**high = n - 1;**

**while(low <= high) {**

**mid = (low + high) / 2;**

**if(arr[mid] == num) {**

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

**return 0;**

**}**

**if(arr[mid] < num)**

**low = mid + 1;**

**else**

**high = mid - 1;**

**}**

**printf("%d not found in the array\n", num);**

**return 0;**

**}**

**Output**

