**Experiment 9**

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

**Program**

#include <stdio.h>

int main()

{

int i, low, high, mid, n, key, array[100];

printf("Enter number of elements:");

scanf("%d",&n);

printf("Enter %d integers: \n", n);

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

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

printf("Enter the search element:");

scanf("%d", &key);

low = 0;

high = n - 1;

mid = (low+high)/2;

while (low <= high) {

if(array[mid] < key)

low = mid + 1;

else if (array[mid] == key) {

printf("The element %d found at location %d", key, mid+1);

break;

}

else

high = mid - 1;

mid = (low + high)/2;

}

if(low > high)

printf("The element %d is not present in the given array", key);

return 0;

}

Output:

