**PROGRAM-1**

**AIM-Write a program for binary search**

#include <iostream>

#include<conio.h>

#include<stdlib.h>

#define MAX\_SIZE 5

using namespace std;

int main() {

int arr\_search[MAX\_SIZE], i, element;

int f = 0, r = MAX\_SIZE, mid;

cout << "Simple C++ Binary Search Example - Array\n";

cout << "\nEnter " << MAX\_SIZE << " Elements for Searching : " << endl;

for (i = 0; i < MAX\_SIZE; i++)

cin >> arr\_search[i];

cout << "\nYour Data :";

for (i = 0; i < MAX\_SIZE; i++) {

cout << "\t" << arr\_search[i];

}

cout << "\nEnter Element to Search : ";

cin>>element;

while (f <= r) {

mid = (f + r) / 2;

if (arr\_search[mid] == element) {

cout << "\nSearch Element : " << element << " : Found : Position : " << mid + 1 << ".\n";

break;

} else if (arr\_search[mid] < element)

f = mid + 1;

else

r = mid - 1;

}

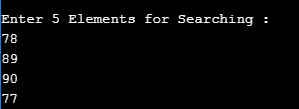
if (f > r)

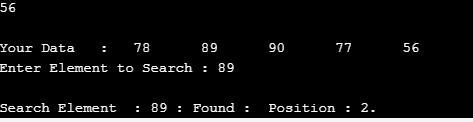
cout << "\nSearch Element : " << element << " : Not Found \n";

getch();

}

**OUTPUT-**

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