**DAA PRACTICAL**

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**BINARY SEARCH PROGRAM**

#include<iostream>

using namespace std;

int main() {

int i, n;

int a[9];

cout << "Enter the elements in array :" << endl;

for (i = 0; i < 9; i++) {

cin >> a[i]; // Input elements into the array

}

int low = 0;

int high = 9 - 1;

int mid = (low + high) / 2; // Calculate mid index of the array

cout << "Enter the element to be searched:";

cin >> n;

for (i = 0; i < 9; i++) { // Loop through the array to search for the element

if (n == a[mid]) {

cout << "Element found !";

break;

}

if (n > a[mid]) { // If element is greater than mid element, adjust the search range

low = mid + 1;

}

if (n < a[mid]) { // If element is smaller than mid element, adjust the search range

high = mid - 1;

}

mid = (low + high) / 2;

}

if (i == 9) // If loop completes without finding the element

cout << "\nElement not found!";

return 0;

}

// OUTPUT :

