Experiment No.4

To implement Binary Search for ‘n’ number and perform analysis using DAC technique.

```
#include <stdio.h>

int binarySearch(int arr[], int l, int r, int x)

{

	while (l <= r) {

		int m = l + (r - l) / 2;

		if (arr[m] == x)

			return m;

		if (arr[m] < x)

			l = m + 1;

		else

			r = m - 1;

	}

	return -1;

}

int main(void)

{

	int arr[] = { 2, 3, 4, 10, 40 };

	int n = sizeof(arr) / sizeof(arr[0]);

	int x = 10;

	int result = binarySearch(arr, 0, n - 1, x);

	(result == -1) ? printf("Element is not present"" in array"): printf("Element is present at ""index %d",result);
```

```
return 0;

}
```

Output:

```
Element is present at index 3
```