

Experiment no:4

Binary Search:

Code:

```
#include <stdlib.h>
#include <conio.h>
#include <stdio.h>

int main(){
int key, low, high, mid, n, i, A[100];
clrscr();
printf("Enter the size of array ;");
scanf("%d",&n);
printf("\nEnter the array elements :   \n");
for(i=0;i<n;i++){
    scanf("%d",&A[i]);
}
printf("\nEnter the key : ");
scanf("%d",&key);

low=1;
high=n;
while(low<=high){
    mid=(low+high)/2;
    if(A[mid]==key){
        printf("\nKey found at: %d ",mid);
        break;
    }
    else if(A[mid]<key){
        low=mid+1;
    }
    else{
        high=mid-1;
    }
}

return 0;
}
```

Output:

Output
<pre>/tmp/VlkNrgYZdw.o Enter the size of array ;10 Enter the array elements : 12 11 10 14 15 20 30 52 75 2 Enter the key : 5 === Code Execution Successful ===</pre>