|  |  |
| --- | --- |
|  | **DEPARTMENT OF COMPUTER ENGINEERING** |

|  |  |
| --- | --- |
| Semester | 4 |
| Subject | Analysis of Algorithm |
| Subject Professor In-charge | Prof. Sanjeev Dwivedi |

|  |  |  |
| --- | --- | --- |
| Student Name | Pravin Padalkar | |
| Roll Number | 20102B0028 | |
| Grade and Subject Teacher’s  Signature |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Experiment Number | | 03 | | |
| Experiment Title | | Program to implement Recursive Binary Search*..* | | |
| Resources / Apparatus  Required | | Dev-C |  | |
| Program | | #include<stdio.h>  int binarysearch(int a[],int low,int high,int x)  {  int mid;  if(low<=high)  {  mid=(low+high)/2; if(x==a[mid]) return 1; if(x<a[mid])  return binarysearch(a,low,mid-1,x); else  return binarysearch(a,mid+1,high,x);  }  return 0;  }  int main()  {  int a[20],n,i,x;  printf(" enter nos of elements in array\n"); scanf("%d",&n);  printf("enter elements in array\n"); for(i=0;i<n;i++) | | |

|  |  |
| --- | --- |
|  | scanf("%d",&a[i]);  printf(" enter element to search\n"); scanf("%d",&x);  printf("elements in array\n"); for(i=0;i<n;i++) printf("%d ",a[i]);  printf("\n");    if(binarysearch(a,0,n-1,x))  printf(" %d element is present in array\n",x); else  printf(" %d element is not present in array\n",x); return 0;  } |

|  |  |
| --- | --- |
| Output |  |
| Conclusion | We have successfully executed Recursive Binary Search |