#include <stdio.h>

#define MAX\_LEN 1

int b\_search\_recursive(int l[],int arrayStart,int arrayEnd,int a)

{

int m,pos;

if (arrayStart<=arrayEnd)

{

m=(arrayStart+arrayEnd)/2;

if (l[m]==a)

return m;

else if (a<l[m])

return b\_search\_recursive(l,arrayStart,m-1,a);

else

return b\_search\_recursive(l,m+1,arrayEnd,a);

}

return -1;

}

void read\_list(int l[],int n)

{

int i;

printf("\nEnter the elements:\n");

for(i=0;i<n;i++)

scanf("%d",&l[i]);

}

void print\_list(int l[],int n)

{

int i;

for(i=0;i<n;i++)

printf("%d\t",l[i]);

}

/\*main function\*/

main()

{

int l[MAX\_LEN], num, ele,f,l1,a;

int ch,pos;

//clrscr();

printf("======================================================");

printf("\n\t\t\tMENU");

printf("\n=====================================================");

printf("\n[1] Binary Search using Recursion method");

printf("\n[2] Binary Search using Non-Recursion method");

printf("\n\nEnter your Choice:");

scanf("%d",&ch);

if(ch<=2 & ch>0)

{

printf("\nEnter the number of elements : ");

scanf("%d",&num);

read\_list(l,num);

printf("\nElements present in the list are:\n\n");

print\_list(l,num);

printf("\n\nEnter the element you want to search:\n\n");

scanf("%d",&ele);

switch(ch)

{

case 1:printf("\nRecursive method:\n");

pos=b\_search\_recursive(l,0,num,ele);

if(pos==-1)

{

printf("Element is not found");

}

else

{

printf("Element is found at %d position",pos);

}

//getch();

break;

\* Confidential \*

case 2:printf("\nNon-Recursive method:\n");

b\_search\_nonrecursive(l,num,ele);

//getch();

break;

}

}

//getch()

}