/*linear & binary search by switch_case*/

```
#include<stdio.h>
int main()
{
	int ch;
int n,m,i,found,location,key,j,k,temp,first,last,mid;
	printf("enter the value of n\n");
	scanf("%d",&n);
	int a[n];
	printf("enter the values of array\n");
	for(i=0;i<n;i++)
	{
		scanf("%d",&a[i]);
	}
	printf("enter the value of m\n");
	scanf("%d",&m);
	int b[m];
	printf("enter the values of array\n");
	for(j=0;j<m;j++)
	{
		scanf("%d",&b[j]);
	}
	printf("enter your choice\n");
	printf("1.linear search\n2.binary search\n");
	scanf("%d",&ch);
	switch(ch)
	{
		case 1:
			printf("enter your key(search)element\n");
	scanf("%d",&key);
	for(i=0;i<n;i++)
```

```
        {

                if(a[i]==key)
                {
                        found=1;
                        location=i;
                        break;
                }
                else
                {
                        found=0;
                }

        }
        if(found==0)
        {
        printf("SEARCH UNSUCCESSFUL:element not found\n");
}
        else
        {
        printf("SEARCH SUCCESSFUL:%d is present at place %d",key,(location+1));
}


         case 2:

        for(j=0;j<m;j++)
        {
                for(k=j+1;k<m;k++)
                {
                        if(b[j]>b[k])
```

```
                {
                temp=b[j];
                b[j]=b[k];
                b[k]=temp;
            }
        }
}
printf("sorted array\n");
for(j=0;j<m;j++)
{
        printf("%d\n",b[j]);
}
first=0;
last=n-1;
printf("enter the value of key\n");
scanf("%d",&key);
mid=(first+last)/2;
while(first<=last)
{
        if(b[mid]<key)
        {
                first=mid+1;
        }
        else if(b[mid]==key)
        {
                printf("%d is found at %d",key,mid+1);
                break;
        }
        else
        {
                last=mid-1;
```

```
                mid=(first+last)/2;
            }
            mid=(first+last)/2;

        }
        if(first>last)
        {
            printf("value is not found");
        }
        break;
        default:
            {
            printf("invalid choice\n");
    }
}
return 0;
}
```