**Linear Search**

#include <stdio.h>

long linear\_search(long [], long, long);

int main()

{

long array[100], search, c, n, position;

printf("Input number of elements in array\n");

scanf("%ld", &n);

printf("Input %d numbers\n", n);

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

scanf("%ld", &array[c]);

printf("Input number to search\n");

scanf("%ld",&search);

position = linear\_search(array, n, search);

if (position == -1)

printf("%d is not present in array.\n", search);

else

printf("%d is present at location %d.\n", search, position+1);

return 0;

}

long linear\_search(long a[], long n, long find) {

long c;

for (c = 0 ;c < n ; c++ ) {

if (a[c] == find)

return c;

}

return -1;

}

**Binary Search**

#include <stdio.h>

int main()

{

int first, last, n, search , middle,array[100],c;

printf("Enter number of elements\n");

scanf("%d",&n);

printf("Enter %d integers\n", n);

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

scanf("%d",&array[c]);

printf("Enter value to find\n");

scanf("%d", &search);

first = 0;

last = n - 1;

middle = (first+last)/2;

while (first <= last) {

if (array[middle] < search)

first = middle + 1;

else if (array[middle] == search) {

printf("%d found at location %d.\n", search, middle+1);

break;

}

else

last = middle - 1;

middle = (first + last)/2;

}

if (first > last)

printf("Not found! %d is not present in the list.\n", search);

return 0;

}

**Bubble Sort**

#include <stdio.h>

int main()

{

int array[100], n, c, d, swap,i;

printf("Enter number of elements\n");

scanf("%d", &n);

printf("Enter %d integers\n", n);

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

scanf("%d", &array[c]);

for (c = 0 ; c < ( n - 1 ); c++)

{

for (d = 0 ; d < n - c - 1; d++)

{

if (array[d] > array[d+1]) /\* For ascending order use < \*/

{

swap = array[d];

array[d] = array[d+1];

array[d+1] = swap;

}

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

// printf("%d ,", array[i]);

//printf("\n");

}

}

printf("Sorted list in ascending order:\n");

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

printf("%d\n", array[c]);

return 0;

}

**Arranging characters of a string in ascending order**

#include<stdio.h>

#include<stdlib.h>

#include<string.h>

int main()

{

char ch,input[100],output[100];

int no[26]={0},n,c,t,x,i;

printf("\n Enter your name\n");

scanf("%s",input);

n=strlen(input);

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

{

ch=input[c]-'a';

no[ch]++;

}

for(i=0;i<=25;i++)

printf("%d ,",no[i]);

t=0;

/\* for (ch='a';ch<='z';ch++)

{

x=ch-'a';

for(c=0;c<no[x];c++)

{

output[t]=ch;

t++;

}

}

output[t]='\0';

\*/

printf("\n");

for(i=0;i<26;i++)

{

if(no[i]==1)

printf("%c",'a'+i);

}

printf("\n %s",output);

return 0;

}