**Experiment No. 3**

**Aim: Implement Minimum and Maximum Problem using Divide &**

**Conquer Approach**

**Program -:**

#include<stdio.h>

int max, min;

int a[100];

void maxmin(int i, int j)

{

int max1, min1, mid;

if(i==j)

{

max = min = a[i];

}

else

{

if(i == j-1)

{

if(a[i] <a[j])

{

max = a[j];

min = a[i];

}

else

{

max = a[i];

min = a[j];

}

}

else

{

mid = (i+j)/2;

maxmin(i, mid);

max1 = max; min1 = min;

maxmin(mid+1, j);

if(max <max1)

max = max1;

if(min > min1)

min = min1;

}

}

}

int main ()

{

int i, num;

printf ("\nEnter the total number of numbers : ");

scanf ("%d",&num);

printf ("Enter the numbers : \n");

for (i=1;i<=num;i++)

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

max = a[0];

min = a[0];

maxmin(1, num);

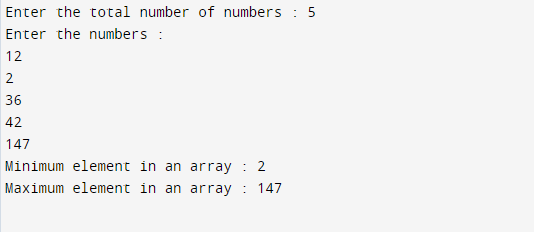
printf ("Minimum element in an array : %d\n", min);

printf ("Maximum element in an array : %d\n", max);

return 0;

}

**Output -:**

****