| Program No: | 20 |
| --- | --- |
| Roll No: | 1510 |
| Title of Program: | Unit 1: Sorting and Searching: Shell Sort |
| Objective: | Write a Program to implement Shell Sort |

**CODE:**

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Name: Advait Dhakad

Roll No: 1510

Unit: Searching and Sorting

Program: Shell Sort

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class shell\_sort{

static void SSort(int[] arr){

int n = arr.length;

int j;

for(int gap=n/2;gap>0;gap=gap/2){

for(int i=gap; i<n;i++){

int temp = arr[i];

for(j = i; j>=gap && arr[j-gap]>temp; j=j-gap){

arr[j]=arr[j-gap];

} // end of inner most loop (j)

arr[j]=temp;

} // end of inner loop(i)

}// end of outer for loop (gap)

} // end of SSort

static void Display(int[] arr){

for(int i: arr){

System.out.print(i+" ");

}

System.out.println();

}

public static void main(String[] args){

System.out.println("\t\t\*\*\*\*\*\*\*SHELL SORT\*\*\*\*\*\*\*");

int[] arr = {12,94,57,86,54,3,2};

System.out.println("Before Sorting: ");

Display(arr);

SSort(arr);

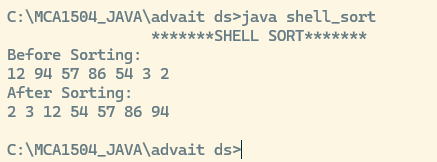
System.out.println("After Sorting: ");

Display(arr);

}

}

**OUTPUT:**

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