

Apex College

BCIS Program

Affiliated to Pokhara University



Data Structure & Algorithms Lab Report

Shell
~~Sort~~ ¹⁶ Sort Algorithm

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#Lab 16 objectives

- To understand the working process and understanding of concepts of shell sort algorithm

#Introduction

Shell sort is a highly efficient sorting algorithm that is based on insertion sort algorithm. It is also known as diminishing increment sort. This algorithm uses insertion sort on a widely spread elements, first to sort them and then sort the less widely spaced (interval) elements. The distance or space between comparisons decreases as the sorting algorithm runs until the last phase in which adjacent elements are compared.

This algorithm is only efficient for medium size list.
Time complexity: $O(n^2)$

Step 1: Initialize the value of count

Step 2: Divide the list into smaller sub-list of equal interval count

Step 3: sort those sub lists using insertion sort algo.

Step 4: Repeat step 2 & 3 until adjacent elements are compared.