Date:-25/08/25 Task - s implement vanious searching and sox time Oberations in 14thon. brodrowing. Aim: To implement vorious seasoning and sorting desations is taken toakouring. 5.1. A company stores Employee records is alist of dictionaries, where each dictionary cortains 12, rame , and depastment. white a function. freed find - employee - by-id that takes. this list and a target employee ID are asguments and seturns the dictionary of the. employee with the matching 10 10x noneitno. Such Employee is tound. Alogrithmi · Gret thelength of the Students list and store 1. initialization. itin n. · Iterate from 100 ton-1 (Prolocive). the loop. 2. outer loops. be presents the humber of passes through. the list. · Pritialize a boolean vosiable scoopped to fale. 3. Track Swars: this vontable will track it any swars one made in the custent pass. \$ Inner Algorithm:-2. Define the fonction find employee-by id. a. Alist of dictionaries (employers) where each that takes two pasameters. detarony represents an employee record with. keys of, name and depostment. b. An integer (target-id) representing the employee to be searched.

10-10-10 Eustrov /n-n-/9m3 2 . NSOI PERCHERE IF THOOK. TROUTURE OF ETOTAL autput fiel 12, name 1. Bob, l'de partment : 'Ingineer's i-t-1- apportunity - bight bygg 1 - 1 to 17 = 1/3/3/1-12 = 600 +21/2/11 - mont of but 20 and & bone of he The or or pridate many the Him sepolaring board to a colonia House matingola. North of the Think O the lower tem. There is no ly want the state how it is the 

3. Iterate through the list: use a for last oftente though Each dictionary in the suppoyees list. a check too matching 10; within the loop, check if the id. theid of the current dethonory matches the target is 2. Before watching Becord: Stamatch & found, express e. Hardle vowatch: It the loop completes without fording a match, seturn rone. det find- Employee - by id (tomployee , tonget id): for employees in employees. It Employee (Pd') == +anget-Pd; return toplayce. setorn none. I Test the forction. ['id: 1,' name'; LATIPCE', I deportment! I HR'). Employee =[. [7d': 2, nome ': Bobildepastment! (tingineesing)) & Td':3, 'name': chaptre', Ideportment! (saley') Took ( find - Employee - by - id (+mployeer2) It outbut; { ig '.51 Laws; BOP, 'getartwent; ungineasing? Perult: Thus the roogsam for vosions seasching and sorting operations is excuted and venified. successfully. PERFORMANCE (5) RESULT AND ANALYSIS

Aim: To implement vorious searching and souting oberations in Litha Exactorunità.

5.2. you are developinga grade management. System for a School. The system maintain a 131. of student records, where each record is reportsented as a dietionary containing a student's name and score. the school heads to generate a report that displays students scrose in ascending order. your task is to implement a feature that sorts the student becords by their scopes using the bubble sout algorithm.

1. in Phalization: Get the length of the cludents list

2. outer loop: Herate. from ?=0 ton-1 (inclusive). This 100P refresents the number of passes through the list.

3. Track swaps: initialize a boolean vosiable swappel to take this vosiable will track it only evals

one made in the current pass.

4. Inner loop: Pterate from J=0+0 n-1-2 (Probains this look composes adjacent elements in the list.

and performs supers of necessary.

5. compose and swap: For each pair of adjacent elements (i.e., students (i) and students (iti):

· compare their scare values.

· It students []['score'] > students []+1] ['score']

Swap the two elements. · Set swapped to true to indicate to true to indicate that a super arms made.

6. tooly termination: After each pass of the Throng 10012, check Pt swapped & false. It no swapped

output to be at cuttron country of at some Before sorting " month with in soit as one {'name' : 1 Alice; 15core : 88 2:00 not . 2:5 & 'name': 1306 1 1scare! : 953. 2'name: charlie', score: 753. 2 'name : Drang , scrove: 853. After sating E'name: Charlie, score: 753: 2'name!: Diang! 1score: 853 2 name1: 14/2 ce1, 20006; 883. & name |: 180p] / scose |: 95 }. 00, 10 Januar = N1-2+11-2 + 11-37 7 201 V rooks of solicities come door ? The state of most of m ide si otam mole importante commence estad of or the same and the state of the the to river to a second · OVEN Sca

where made down of the passithe 18+ is always sufed, and you can break out of the outon los GB/4 7. completion: The function modifies the students list in place, sorth of it by score. 1903gam def bubble - soot - scores (students): n = len (students) for in range (n): # Track if any swap is made in this pass. swapped = false. tor i'm range (0, n-9-1): Ft students [1] ('score') > students[iti] ('score'): -the success of the consent student is greater than the next & todents(j), students(j+1] = (todents(j+1], students(j) suggeted = Tave. It it no two elements were swapped , the 18 1 is almost softed it not swapped: preak. # example usage. 2' name: 1 Alice, Iscore 1:883, { name : 180P, 1800c, 32, ['name': (chailte', same': 75,4) ?'name': 'Diang', 'score': 853. I paint ("Betore souting:") for students instudents: Print (student) bubble-sort-scares (students) Print ("In After sorting: ") VELTECH for student in studente Print (Stoden+). Results: Thus the program Hor roxious. Leave hing and soxfing operations the program the roxious. Leave hing and workled and workled.

Soccerfuly.