Department of Statistics & Computer Science
University of Kelaniya
ACADEMIC YEAR-2020/2021
COSC 21063-Data Structures and Algorithms
Practical Tutorial 07

01.

Student Number	Name	Gender	Grade
PS/2017/016	Amal	M	A
PS/2017/198	Binura	M	A
PS/2017/301	Chanaka	M	A
PS/2017/045	Sarath	M	B
PS/2017/149	Nirmala	F	B
PS/2017/151	Sithara	F	B
PS/2017/280	Kamal	M	B
PS/2017/273	Kasuni	F	C
PS/2017/312	Akila	F	C
PS/2017/105	Dasuni	F	D

Using the above information write a Java program to accomplish the following.

i.   Input above Student 's details and display them.
ii.   Implement a method to find and display the details of all students who have a
        specific grade using:
                a **Binary Search**
                b **Sequential Search**

02.

Employee ID	Name	Department	Salary Grade
EMP001	Anjali	HR	B
EMP002	Roshan	Finance	A
EMP003	Meera	IT	C
EMP004	Hiran	HR	A
EMP005	Sanjay	Marketing	B
EMP006	Vimukthi	Finance	D
EMP007	Dilani	IT	C
EMP008	Tharindu	Marketing	A
EMP009	Ishara	HR	B
EMP010	Lahiru	IT	D

Using the above information, write a Java program to accomplish the following:

   i.   Input the above employees' details and display them.
   ii. Sort the details according to their **Salary Grade** and display them.
   iii. Search the details of employees by a given **Salary Grade** (If there is more than one, print all).

Use binary search and sort the table according to the **Salary Grade** using:

- Insertion sort with a **contiguous data structure (array)**, and
- Insertion sort with a **linked list structure**.