College of Computing at AlGunfudha *Computer Science Department* *Semester 1, 1441/1442*		*Course: Data Structure* *Course project*

Student's Name: ..... Student's ID: ..... note : ..... \20

Serial Number: ..... Group: .....Signature:.....

**this project will be implemented as groups, each leader for each group must make a schedule ,diving the tasks over the team members with the duration for each task.*

Data Structure Project

Write a Python program to create a Singly Linked List of N students. This singly linked list is to store the Name of student, Department and grades (array of 5 floats) of the students. Your program should display a menu of choices to operate the singly linked list data structure. See the sample menu below:

Operations Menu of linked list of students

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1. Add a Student
2. Delete a student
3. Calculate and display the GPA of students
4. Show student having the maximum GPA
5. Show student having the minimum GPA
6. Find a student
7. Print all students
8. Print the students of a given department
9. Sort the list using the GPA field

10. Store the students of CS department in a queue Q

11. Store all GPA in a binary search tree BST

12. Exit

Before the discussion :

-You have to make a presentation that summarizes your whole work in the project throughout the semester.
-The presentation must not exceed 5 slides.
-All of the groups must send the documentation and presentation to blackboard the week before the discussion.
Our discussion day would be on: week -14