Addis Ababa Science and Technology University



College of Electrical and Mechanical Engineering

Department of Software Engineering

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Fundamentals of Database System

Group Assignment (20 %)

***Submission date: 11/5/2010***

Plagiarism results in mark deductions to both groups. Use your own language to do the problems.

1. Explain the difference among the terms primary key, candidate key, and super key, you should use couples of examples to further explain your answer.
2. Assume that there is a system called Personnel Record Management System (PRMS), the system includes the following two basic data object categories with their own features or properties:

* Employee will have an Id, Name, Age, Tel and Department will have an Id, Name, Location
* Whenever an Employee is assigned in one Department, the duration of his stay in the respective department should be registered.

1. Build an E-R diagram for a Hospital Management System (HMS) with a set of patients and a set of medical doctors. Associate with each patient a log of the various tests and examinations conducted. You can identify extra entities and attributes which may result in Extra mark increment.
2. Write SQL statement to do the following tasks

* Create a database name it by your group name; assume that you have a group to do this assignment.
* Add a table named ‘student’ (stud\_id, firstname, lname, marks and dep). Stud\_id should be the primary key.
* Insert values where values are the members of your group
* Change the column name ‘lname’ by ‘lastname’.
* Add new values E006’,'tekie','bedru',25,’electrical
* Find the student id, first name and last name of all students.
* Find the student whose department is electrical
* Combine the two columns ‘firstname’ and ‘lastname’.
* Retrieve the value of column ‘dep’ and give the name to the field called ‘department’.
* Retrieve all information about student whose last name is ‘bedru’ and also the department is electrical
* Sort the records in a descending order of their firstname
* Update the firstname of the student with stud\_id E006 to be ‘fikadu’