

Computer Science Department
University of Computer & Emerging Sciences (FAST-NU)

HOME WORK ASSIGNMENT COVER SHEET

COURSE TITLE	DATABASE SYSTEMS	COURSE CODE	CS219
INSTRUCTOR	Teaching Team	TYPE	<input type="checkbox"/> <input checked="" type="checkbox"/> (Please tick)
		Indiv.	Group
ASSIGNMENT NO	HW-4 (Class)		
ASSIGNMENT	Creating ERD for a Use Case of Telecom Industry		
HAND OUT DATE	18-May-2021	DUE DATE	30-May-2021 (11:50PM)

ASSESSMENT CRITERIA (or attached)	% Mark
<p>This HW includes the following tasks</p> <p>Scenario</p> <p>Submission: Only soft copy in pdf is required.</p> <p>Group of max 3 students is allowed, individual work and group of 2 is acceptable in extreme situations and with <u>prior written (by email) permission of theory course teacher</u>. Such permission should be sought at least <u>5 days before the deadline of the assignment</u>.</p> <p>Any type of plagiarism will lead to 0% marks of both/all parties.</p> <p>Cross Section Groups are not allowed.</p>	

TO BE COMPLETED BY STUDENT (TEAM LEAD)	GROUP MEMBERS ID						
NAME _____	<table><tr><td>ID</td><td>Sec#</td></tr><tr><td>ID</td><td>Sec#</td></tr><tr><td>ID</td><td>Sec#</td></tr></table>	ID	Sec#	ID	Sec#	ID	Sec#
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ID NO _____ Section# _____							
Time Taken _____							
DECLARATION: I/We declare that this Coursework is my/our group's own work							
SIGNATURES (All members)							

GRADE/ MARK AWARDED	<input type="checkbox"/>	COMMENTS _____
INSTRUCTOR'S SIGNATURE _____ DATE _____		

Brief:

Develop an entity-relationship diagram (ERD) for the attached case. Clearly identify the entities, relationships, multiplicity (i.e., many-one, many-many, etc.), attributes, primary keys, foreign keys, and constraints in your model, using the notations and diagramming rules as described in the textbook and class.

You should typeset your assignment, and use a graphical tool to draw your diagrams.

Requirement Specifications:

A Call Management System (CMS) is meant to keep information of different calls being made over the Telenor network. The system keeps information of all Telenor users, their personal details (NIC No, Name, and Address), and connection details (Telenor No, Connection Date, Address). A single user can have multiple connections. The call record includes detail of each call (call start date-time, call end date time, duration of a call, calling no, and no. dialed) made over the network. The system keeps a record of the type of call being made (e.g. Local, Mobile, Trunk). Telenor maintains different per-minute rates for a different types of calls. In the case of Trunk call, call charges are different for different countries. Telenor provides different calling facilities like CLI, Call Recording, and Answering machines and charges a fixed amount on each type of facility. The system needs to keep track of services activated on each connection and the date they are activated on.

Deliverables:

Submit your work that should include:

- ERD: Your full ER diagram of the assignment.
- Documentation: Paragraphs explaining details about the design regarding following aspects
 - What diagramming software is used and any comments on the software.
 - Any clarifications about your ERD which are not evident in the model itself.
 - Any assumptions you had to make with respect to the requirements.
 - Any constraints (business rules) apparent from the requirements that you are unable to model via your ERD.