CNIT 182
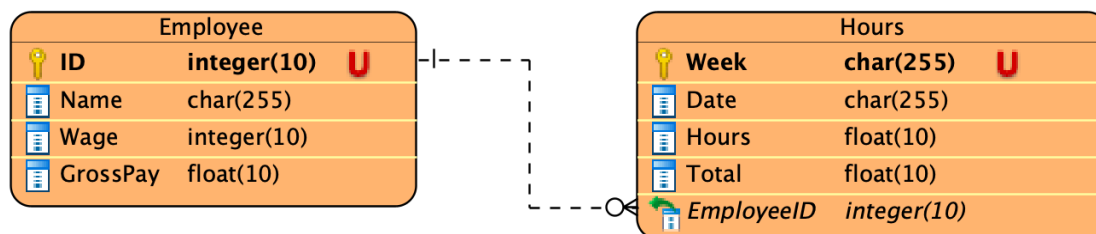# Lab 7: Database Normalization and Entity Relationship Diagrams

EXERCISES

Complete the exercises assigned by your instructor by typing the required information below in the space provided, drawing a model and pasting it into this document, and/or creating a table and copying and pasting it into this document. Attach this document to the Lab 7 Assignment in Brightspace and submit the assignment in Brightspace.

1. Draw a data design (ERD) that would track information recorded on the employee time card shown below. Determine needed entities, attributes, data types, primary and foreign keys, and relationships. Make assumptions where necessary.

EmployeeID:	100101
Emp Name:	Rosner, Joanne
Wage:	$16.30
Hours for Week Ending:	28-Feb

Day	Hours
24-Feb	8.5
25-Feb	8.1
26-Feb	3.7
27-Feb	5.8
28-Feb	6.6
Total	32.7
Gross Pay	$533.01

Answer: (copy and paste ERD)

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2. The table shown below is part of an office inventory database. Assume that Item ID is the primary key. Identify the design problems and draw a revised table structure that corrects those problems. Draw a well-designed ERD. Include entities, attributes, data types, primary and foreign keys, and relationships. Make assumptions where necessary.

Item ID	Description	Dept	Dept Name	Dept Head	Quan	Cost/Unit	Inventory Value
4011	5 ft desk	MK	Marketing	Jane Thompson	5	200	1000
4020	File cabinet	MK	Marketing	Jane Thompson	10	75	750
4005	Executive chair	MK	Marketing	Jane Thompson	5	100	500
4036	5 ft desk	ENG	Engineering	Ahmad Rashere	7	200	1400

Answer: (Design Problems)

Corrected Table Structure:

Item ID	Description	Department	Quantity	Cost/Unit
4005	Executive Chair	Marketing	5	200
4011	5 ft desk	Marketing	5	100
4020	File Cabinet	Marketing	10	75
4036	5 ft desk	Engineering	7	200

Department	Head
Marketing	Jane Thompson
Engineering	Ahmad Rashere

Copy and paste ERD:
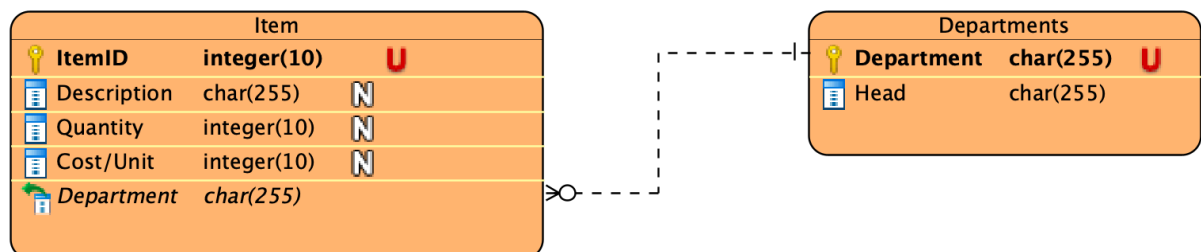
3. Design the data for an upholstery shop database based on the order entry form below. Draw a well-designed ERD. Include entities, attributes, data types, primary and foreign keys, and relationships. Make assumptions where necessary.

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Order #   149832

Name   Sue Smith   Telephone 765-644-1111
Address   814 W. 15th   Work   765-644-2222
            Anderson, IN 46012

Date	Sold by	Terms
9/13/2003	WG	COD

Quantity	Units	Item	Price/Unit	Amount
6	Hours	Recover loveseat - labor	$ 5.00	$300.00
10	Yds	Fabric: Barrow - Nova #26 mint	$ 25.50	$255.00
50	Inches	Replace cushions w/ 5" WN Foam	$ 0.65	$ 32.50
			Total	$587.50

Special Notes:
Squeak in left arm
Wants skirt tailored
Home on Mondays & Wednesdays until 10:00 am

Answer: copy and paste ERD: