

## COMP B21 - Assignment #4

This assignment requires you to design a video rental database system that will provide the functionality outlined below. Your grade will be based on how well your system can accommodate the requirements, your ability to reach third normal form for your design, your mastery of how to “break” fields in to sub-fields to access data individually, and your ability to reach the desired goals with the fewest number of fields (without being SO clever that easily understanding your system is an issue). Your score will also be based on an “X” factor related to how much a user must know, or do, to complete a simple transaction. For example – does the user add a single record to a single table to complete a process or must they know that there are “3 additional steps” that must be completed to accomplish the same. Additionally, do not “broaden” the functionality of the database to include items that have not been requested. Your completed project must be word-processed and follow this format for the table notation.

**Table name bolded.** In parentheses, include the names of the fields in each table with the primary key field(s) underlined AND listed first. All foreign keys must be listed with an arrow indicating the table name they link to. Additionally, write one (1) sentence for each table that CLEARLY indicates the purpose of the table. Do not provide any other details, such as, field length or type

Examples:

**customer** (customerid, fname, lname, salespersonid→salesperson)

A record in the customer table indicates a customer that does business with the company.

**orderline** (orderlineID, ordernum→ orders, productid→products, quantity, price,)

A record in the orderline table indicates details about each product included on an order for a customer.

Your system should be able to provide the following information

- Customer bio (name, address, phone, driver’s license)
- Videos in the library
- Videos that are rented out
- Info on each video (format (VHS, Beta, DVD, BluRay, Streaming), length, rental price, cost, rental time period, genre of video – comedy, action, quantity of categories unknown.)
- Who has what rented out
- How much money was taken in per day, week, month, year
- A customer’s rental history and if they paid late fees on a rental
- How many times a video is rented in a specific time period

\* **Make sure to list your REASONABLE business rules that dictate the assumptions you make during design.**