

ISYS 464, FALL 2022, PROJECT PART 1, DUE DATE: Wednesday, 11/2/2022

20 points

This is the Part 1 of the project, and it consists of two parts:

Part 1a: Introduction

Describe the business for which you design the application.

Describe the part of business operation your database supports.

Describe the advantages of automating this operation.

Part 1b: Database analysis

Describe the data requirements: Describe entities involved in the business, their attributes, and how entities are related to each other.

Draw an ERD with attributes based on the data requirements

Requirements: The ERD must have at least four entity types and at least one entity type consists of a supertype with subtypes. It should also have at least one multi-valued attribute and have at least one example of attribute of a relationship.

Below is a sample of writing for **part 1a** that describes the business, its operations and needs for a database:

A database application will be designed for an existing business, Promotional Marketing (PMkt). PMkt is a multifaceted marketing company providing services such as promotional products and programs; graphic, internet and industrial design; product branding; trade show booth design; and annual reports and corporate identities. In the past 4 years, PMkt has grown from a one-person operation to 6 employees, with a projected growth of 4-6 employees within the next two years.

PMkt recently was awarded a preferred vendor status from BigName Corporation to provide a consolidated merchandise program for their national and international offices. PMkt produces an annual catalog, which contains illustrations and data relating to a variety of products. These

products include apparel goods, such as shirts, jackets and fleece sweatshirts; and non-apparel goods such as plastics (e.g. cups, pens, Frisbees), metals (binders, awards), and glass and crystals (e.g. awards). There is an abbreviated online version of the catalog, as well as a full size paper catalog.

When one of the BigName offices decides to do a promotional event, they first need to review a catalog before they can make their selection for a product to be inscribed with their choice of a corporate logo. There usually is not a lot of lead time for fulfilling the order, so time is of the essence to obtain a catalog. In view of Jibe's rapid growth, there is no database keeping track of catalog request, shipments of catalogs, or whether the mailing of a catalog produced an order. There is also no method of automatically producing a mailing label to mail the catalog.

This inefficient process results in a significant cost to Jibe, in terms of downtime for personnel to manually respond, as well as in increasing costs for shipping catalogs overnight instead of in a more inexpensive mode. There is additional downtime of personnel to address mailing labels and to prepare UPS & Fed-Ex shipping forms by hand.

The database will allow for catalog requests to be filled faster, more efficiently and more economically. Mailing labels, as well as UPS and Fed-Ex forms, could be processed automatically. A web page can be constructed to allow current and new clients to view products online and automatically request a catalog via the internet. If possible, there could be an email confirmation to the client when the catalog is sent, which provides the UPS tracking number. Each year, PMkt will be able to automatically update their clients with a new catalog.

The advantages of automating this operation is significant, with savings of freight expenses and the cost of personnel hours relating to catalog shipments of up to \$24,000.00/year. Customers will know when the catalog was shipped, and can notify PMkt if there was a problem with delivery, which often occurs especially with international offices.

PMkt will also be able to chart and graph where catalog requests are coming from, in order to plan future marketing efforts. For example, PMkt can identify and target BigName offices that may not yet be ordering. Overall, it

will streamline operations for a process which does not require the degree of personnel involvement that it is presently receiving.