BCIS 338 Summer 2022, Test released 28 July 2022, Due 3 August 2022

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Per University policy, the exam is an individual effort. Any observation of cheating will be forwarded to the Associate Dean for Academics in the College of Business.

Please provide full answers with detail. Grammar/syntax mistakes will not result in point reductions, but you must be clear so I understand your answer.

Good Luck!

**Q1 (Processes and BPMN =20 Points) Develop a business process chart using standardized BPMN on the following scenario. A university registrar takes add/drop slips from students. They review the forms for correctness, where correct forms are inputted into a database and incorrect forms are returned to the students for correction. The database app does a daily pull from the database and updates the class rosters that is viewed by professors. Therefore, the value chain is: students, registrar, and professors. In MS Word, you can use Insert>Illustrations>Shapes and within shapes are the flowchart icons. Hint, this is almost exactly like the lecture.**

|  |  |  |
| --- | --- | --- |
| Student | Registrar | Professor |
| Return to Student  No | Yes  Database  Correct? |  |

**Q2 (IS Project Management = 20 Points)**

**Using any of the charts or visualizations we discussed in class (I highly recommend a GANTT chart), please provide a visualization that answers the following business case:**

**Helen’s Quality Hardware (HQH) is a national chain hardware store headquartered in Las Cruces.  Based on issues with inventory management, quality control, and predictive analytics, they want to transition from using Excel for each function separately into using a connected ERP database.  Their vendor (Xi Data Inc.) has recommended various steps and projected times to implement the project.  However, HQH doesn't want to shut any parts of their business down for the project to control implementation timelines. There are four main steps (one with multiple steps) required for the project (System Hardware Install, System Data Upload, Limited System Test, and Nationwide Systems Change-over).  System Hardware Install involves setting up the servers (2 weeks) and setting up in-store systems (3 weeks).  These two sub-steps can be done simultaneously.  After the servers are set up, the System Data Upload can happen and takes two weeks.  The Limited System Test can only happen if the first two steps are done and takes three weeks for the actual test and the diagnostics.  After this is completely done, the Nationwide Systems Change-over can occur.  This has two steps -- a two-week implementation followed by a two-week diagnostic period.**

**What is the minimum project time?** 12 weeks

**Your chart or visualization:**

**Q3 (System Security = 20 Points) Tony’s Terrific Tiaras is a new business opening in Las Cruces. Tony has positioned his company to be a leader in online tiara sales in the South and Southwest US with some marketing in Mexico. His business consists of 30 employees organized into: HR and Accounting, In and Outbound Logistics, Tiara Manufacturing, Warehousing, Marketing/Sales, and IS/IT. In roughly one page, describe 3-4 information security threats that should concern Tony. In each case, what are some specific ways that he could combat or minimize each threat.**

As an online retailer Tony should be concerned with Phishing from individuals posing to either be customers that may be trying to retrieve customer order information. This could be an issue if a fake customer receives order information about an existing customer and then requests changes. That could result in orders being shipped to wrong addresses or increased charges on customer’s accounts by requesting increase in order amounts. Tony can prevent this by requiring customers that request changes to either call or use an online portal with specific login information to ensure only real customers can request changes or inquire about their orders.

In an online sales platform, it may not be simple for an employee to grant a customer a correct invoice resulting in a loss due to faulty advertisement on the company’s retail website. For example, a product may be advertised on-line at $20 below actual intended sales price due to human error during input of information. An employee then processing the order notices the error and the product is supposed to be sold for $40 instead of $20. As good practice to retain customers you should grant the customer the advertised price and you would take the loss. This can be costly for a leading online retailer with high volume of sales and people looking for low prices. Tony could prevent this by implementing a checks and balances process for the process of adding prices to the website containing a final quality control check.

Finally, an online retailer such as Tony’s Terrific Tiaras should be aware of the real and unexpected reality of natural disasters. Natural disasters could disrupt local physical servers and result in loss of data. To prevent this Tony’s can invest in an online private cloud server that serves as a backup in case of unforeseen natural disasters.

Q4 (Excel Add-Ins:Power Pivot = 20 Points)

Create Data models with the following spreadsheets:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Cust\_ID | Cust\_Name | Cust\_City | Preferred Customer |  | Order\_ID | Cust\_ID | Item\_Name | Item\_Price | Final\_Price |
| 1 | Bob | Boston | Y |  | 10 | 6 | Pants | $ 92.00 |  |
| 2 | Francis | Albuquerque | Y |  | 11 | 5 | Hat | $ 66.00 |  |
| 3 | Jim | Toledo | N |  | 12 | 4 | Hat | $ 37.00 |  |
| 4 | Polly | Boston | N |  | 13 | 2 | Shirt | $ 21.00 |  |
| 5 | Gene | Toledo | Y |  | 14 | 2 | Hat | $ 55.00 |  |
| 6 | Juanita | Albuquerque | N |  | 15 | 5 | Pants | $ 47.00 |  |
|  |  |  |  |  | 16 | 4 | Pants | $ 21.00 |  |
|  |  |  |  |  | 17 | 1 | Pants | $ 95.00 |  |
|  |  |  |  |  | 18 | 6 | Hat | $ 45.00 |  |
|  |  |  |  |  | 19 | 5 | Shirt | $ 83.00 |  |
|  |  |  |  |  | 20 | 2 | Shirt | $ 38.00 |  |
|  |  |  |  |  | 21 | 6 | Hat | $ 44.00 |  |
|  |  |  |  |  | 22 | 3 | Gloves | $ 49.00 |  |
|  |  |  |  |  | 23 | 2 | Pants | $ 46.00 |  |
|  |  |  |  |  | 24 | 6 | Shirt | $ 62.00 |  |
|  |  |  |  |  | 25 | 5 | Pants | $ 81.00 |  |
|  |  |  |  |  | 26 | 2 | Pants | $ 32.00 |  |
|  |  |  |  |  | 27 | 4 | Shirt | $ 92.00 |  |
|  |  |  |  |  | 28 | 5 | Hat | $ 76.00 |  |
|  |  |  |  |  | 29 | 5 | Pants | $ 33.00 |  |
|  |  |  |  |  | 30 | 3 | Hat | $ 87.00 |  |
|  |  |  |  |  | 31 | 3 | Hat | $ 40.00 |  |
|  |  |  |  |  | 32 | 4 | Shirt | $ 74.00 |  |
|  |  |  |  |  | 33 | 4 | Hat | $ 95.00 |  |
|  |  |  |  |  | 34 | 1 | Hat | $ 39.00 |  |
|  |  |  |  |  | 35 | 3 | Gloves | $ 44.00 |  |
|  |  |  |  |  | 36 | 2 | Shirt | $ 20.00 |  |
|  |  |  |  |  | 37 | 1 | Gloves | $ 23.00 |  |
|  |  |  |  |  | 38 | 1 | Hat | $ 29.00 |  |

2. Using a Power Pivot, create a relationship between the spreadsheets using Cust\_ID as the key.

3. Create a Pivot Table from the PowerPivot and do **one** of the following and paste the visualization to your exam document:

a. Create a 3D map using the Total spent by customer by city

b. Create a clustered bar chart of Total spent by customer

c. Create a total spent by each customer (where they get a 10% discount if they are a preferred customer). There are at least three good ways of annotating the discount.

Graphical user interface

Description automatically generated

Q5 (Excel: Advanced Formatting = 20 points)

Using the commands learned in Ch11 (RIGHT, LEFT, PROPER, Text to Column, ETC.) format the following table:

|  |  |
| --- | --- |
| Name | Address |
| bob UnderWood | 123 Elm Street, Dallas TX |
| FRANK NfurTer | 1 Happy Valley, Portland OR |
| betty Schmetty | 50 Yellowstone Way, Helena MT |
| giNO haskins | 9 Spam Lane, Honolulu HI |

To This:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **First\_Name** | **Last\_Name** | **Street** | **Town** | **State** |
| Bob | Underwood | 123 Elm Street | Dallas | TX |
| Frank | Nfurter | 1 Happy Valley | Portland | OR |
| Betty | Schmetty | 50 Yellowstone Way | Helena | MT |
| Gino | Haskins | 9 Spam Lane | Honolulu | HI |
|  |  |  |  |  |

Paste your final table and describe the steps used to produce the table. Hint: To make spaces with a CONCAT function use something like =CONCAT(D2 & “ “ & E2 & “ “ & F2). You can also hide columns if you have created formula dependencies.

Graphical user interface, application, table

Description automatically generated

Step 1: Used Text to Column to separate the town and state from the street using the comma delimiter and then renamed the address column to “Street”.

Step 2: Used Text to Column again to separate town from state using the space delimiter and skip the import of the first column. Then renamed two columns “Town” and “State”.

Step 3: Inserted new column to left of “Street” and used =PROPER(A2) in cell B2 to capitalize the first letter of each name for Bob Underwood. I then filled the function down the rest of cells in that column. Next, I copied the column to the original and paste as values.

Step 4: Inserted two columns, “First Name” and “Last Name” to the right of the fixed names. I typed the first two names and then flash filled the rest of each column. Lastly, deleted the original name column.

Step 5: Formatted the table using “White, Table Style Light 1” and removed the filter buttons.