Faculty of Science and Technology

Submission Coursework Brief Postgraduate

Department of Computing & Informatics

Unit: DATA MANAGEMENT (COMP7060)		
Unit Contact: Paul de Vrieze	Credits: 20	Level: 7

Assessment Title: South Coast Pizza Database			
Assessment Number: 1 of 1			
Assessment Type: Individual	Weighting: 100%		
Deadline: 20/12/2024 at 12:00 PM	Submission Method: Turnitin (+ large file submission box)		

Quality Assessor (QA): Nicholas Mavengere Other Marker	r (s): N/A
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Can I use Generative AI tools?

Basic spelling and grammar correction tools are permitted.

The following originality requirements will apply to this assignment:

You are not allowed to use any Generative AI or other AI powered tools, such as ChatGPT, for this assessment. Any use of these tools for any part of this assessment would be considered an academic offence.

Task:

You are required to create a data management plan for a use case (South Coast Pizza) as attached to the brief.

Some of this work will be interrelated and the order in which you present your results is not fully the order in which you do the work.

Your document should contain the following elements:

- 1. An analysis of the data managements needs (requiremens) of the businesses for:
 - o Operational needs
 - Managerial needs
 - Analytical needs

Your discussion must be based upon the specifics of the use case, detailed reasoning, and augmented by public information (papers)

- 2. A conceptual ERD of your design
- 3. A logical design utilising skeleton tables:
 - o Primary Keys are underlined, and Foreign Keys have an asterisk next to them.
 - e.g. table_name(<u>table_id</u>, table_attribute, other_table_id*)

- 4. A data privacy analysis verifying that your data follows the privacy by design principles as required by data protection legislation (like the GDPR)
 - This includes identifying all uses of personal data, and the basis upon which this is used (see article 6.1 UK GDPR)
- 5. Indicative (management) report design, outlining what information is provided, for which (management) purposes, and which tables/columns are used for this information
- 6. Data analysis plan, indicating where your data can be used for analytical/prediction purposes, what tables/columns are involved and what (additional) requirements are put upon the data collection to ensure data accuracy and completeness

Intended Learning Outcomes (ILOs)

This unit assesses your ability to:

- 1. To develop an understanding of modern data management technologies
- 2. To perform and critically analyse data modelling
- 3. To design and implement data management solutions using contemporary tools
- 4. To be able to understand and perform common data analytics tasks

Submission Format:

A single document in **Microsoft Word (.doc/.docx) or PDF (.pdf)** format. Your diagrams/designs are expected to reflect an equivalent effort to 1000 words. In addition, the remaining word count limit for this document is **2,000 words, excluding diagrams, tables, samples, references**.

You must ensure that all diagrams/images are fully legible (and not pixelated) – either using vector graphics (SVG/Adobe Illustrator/MS Visio), or high resolution bitmaps (inferior).

How will this be assessed?

Weighting:

- 1. Data management need analysis 25%
- 2. Conceptual ERD 15%
- 3. Logical Design utilising skeleton tables 15%
- 4. Data privacy analysis 15%
- 5. Indication of report creation 15%
- 6. Data analysis plan 15%

To achieve a distinction:

- The data management needs analysis is: insightful, tightly linked to the case, well-motivated, supported by information from additional sources.
- The Conceptual ERD fully covers the case study's entities and relationships. It is linked to the needs analysis. There are justifications provided for the design choices based on the case study's statements. The justifications are thought through, concrete and well-argued.

- The Logical Design is in the required format, and it is directly derived from and related to the produced Conceptual ERD. Where design choices needed to be taken, they are clearly <u>indicated and justified</u>. Problematic relationships, such as many-to-many relationships have been resolved correctly.
- The data privacy analysis reflects a good understanding of privacy by design principles, identifies all relevant personal data, makes sensible (motivated) choices about inclusion and under which ground.
- A clear indication which entities/tables had to be included to produce the required reports, and which matching fields were used
- A mature and concrete data analysis plan that is well-motivated and linked with the other elements of the assignment. It must be specific to the given case study.

To achieve a pass:

- The data management needs analysis identifies most straightforward needs, but has limited justifications, and may miss some non-obvious aspects
- The Conceptual ERD covers most of the case study's entities and relationships. The justifications are limited and only minimally contradict the statements in the case study.
- The Logical Design is in the correct format, and it is largely based on the produced Conceptual ERD.
- For the report design, there are only minor logical issues in the indication of the required entities/tables, and their matching fields.
- A limited data analysis plan is given, it may only be partially alligned with the other elements, and while relevant to the case study is not highly specific to it.

Questions about the assessment:

Questions about the assignment can be asked in lectures and labs, and in individual cases by email or teams message.

Academic Integrity

The work you submit must be your own. Any attempt to gain an unfair advantage in your assessment by **cheating**, deception or fraud is considered an academic offence. The 'Assessment help and support' section of the unit (found under 'Assessment' in the content area) provides more guidance on avoiding academic offences, including **any guidance on what will or will not be considered an academic offence in this specific assessment**

Help and support

The 'Assessment help and support' section of the unit (found under 'Assessment' in the content area) provides information and guidance, including specific information on support for this assessment. It provides help with our policies on deadline extensions and information on support available in the university, including academic skills support and additional learning support for students with disabilities.

Disclaimer

The information provided in this assignment brief is correct at time of publication. In the unlikely event that any changes are deemed necessary, they will be communicated clearly via e-mail and via the VLE and a new version of this coursework brief will be circulated.

Date Issued: 11/11/2024

Case: South Coast Pizza

South Coast Pizza is a restaurant franchise with 70 restaurants (5 directly owned, 65 franchise), mainly in the South of England. South Coast Pizza is aimed at the mid-market with table-service and a variety of options. Where applicable customers can also have their food delivered.

The menu of South Coast Pizza is varied, offering starters, mains and deserts, including various other Italian dishes in addition to the namesake Pizzas. The food is made fresh daily (on customer order), by in-restaurant chefs at high quality/value.

The sourcing of ingredients is done centrally by from Southampton. This includes providing the restaurants with fresh (chilled) sourdough to use in the pizzas. Daily deliveries have been outsourced to a logistics partner to ensure a reliable delivery of the needed ingredients. In addition the chain owns a number of vans for exceptional deliveries. Restaurants may however also have some local "specials" added to the menu.

Pizza IT

There are various bits of IT needed for South Coast Pizza. This includes:

- Logistics ordering and shipping: To/from the central location
- Planning: Ingredients, staff, etc.
- Monitoring and prediction: of everything
- Pricing (depending on ordering channel)
- Handling orders:
 - In-restaurant server-based orders
 - In-restaurant smartphone orders: App/website
 - Remote orders through a South Coast Pizza App (for delivery, or for takeaway)
 - o Remote orders through a South Coast Pizza Website
 - Remote orders through various "delivery" apps: (eg. JustEat, Deliveroo, etc.)
- Payment:
 - In-restaurant card/cash payment (with tip offer)
 - Supporting supermarket "reward" vouchers for some offers
 - In-restaurant payment using the app/website (note this requires the customer to know their table number)
 - Remote orders
- Restaurant management support: Various support functionalities for the restaurant management, including accounting, tip management, staff planning etc.
- Many other functionalities