Computer Science Programme

Sino-British Collaborative Education

CDUT

Database

**Coursework 1 Report**

Date: 18/4/2022

Student number: 201918010119   
Class: L5C-3

1. **Cover Page**
2. **List of content**
3. Question A3
   1. Legal issues of the system3
   2. Risk mitigation instruments3
   3. Covid-19's impact on operations3
4. Question B4
   1. XML advantages and limitations3
   2. JSON advantages and limitations3
5. **Question A**
   1. **Legal issues of the system**

The rise of computer technology has also led to the rapid development of computer database systems. It is undeniable that the application of computer database systems has brought great convenience to information management. At the same time, the legal issues involved in databases are multifaceted. Therefore, various legal issues need to be taken care of:

1. *Privacy problems caused by information database*

The development of the database industry has improved the level of information resources development and utilization and accelerated the speed of social information processing. Unconsciously, personal information from the public is increasingly being accessed in the databases of government and business organizations. For this system, each user's name, gender, time and place of purchase, and the amount he or she purchased after trading in the gift shop can be quickly recorded in the database. However, there are legal issues in collecting this information and handing it over to third parties for data processing. Once the public is not satisfied with disclosing these privacy data, the company needs to fully articulate its consumer privacy view, persuade them about the costs of their work, and its complexity is not something that a software vendor can afford.

1. *Legal liability of database practitioners*

With the development of database industry, the dependence on database will be greater and greater, and the legal responsibility of database operators must be clear. Inevitable technical errors in the database system, such as occasional spelling errors, are usually allowed, but the database supplier shall be responsible for obvious human errors and omissions, which will lead to the loss of users who use the information obtained from the database for decision-making purposes.

* 1. **Risk mitigation instruments**

1. For Question A, the company needs to regulate the information collection behaviour of the database producers. If the collection of information needs the consent and examination of the parties concerned, to ensure the safety of the collected information, and if the parties do not give permission, the transfer of related data may not be transferred to a third party. At the same time, the public should have the right to control the information about themselves. In addition to the exemption provided by other laws and closely related to the national interests, the public should have the right to decide whether or not their information is collected and disseminated, the right to request review and correct their own information records, etc.
2. For Question B, as producer and provider of information, the company must perform its duties with great care. In addition, in compensation services, clear supply and demand contracts should be signed with users, and specific and detailed agreements on related rights and obligations should be made to avoid unnecessary lawsuits.
   1. **Covid-19's impact on operations**

During the period of COVID-19, people could not go to offline consumption to make transactions, which led to online shopping. The trading volume will shrink compared with the past, resulting in a serious decline in revenue and profits. For enterprise operation, it is difficult to restore the level of normal operation in a short time, such as the timely return to work rate, employee arrival rate, job saturation and communication effectiveness, which has an adverse impact on the operation and management of the enterprise.

1. **Question B**
   1. **XML advantages and limitations**

*Advantages of XML*

A. The format is unified and meets the standards;

B. It is easy to interact with other systems remotely, and data sharing is more convenient.

*Limitations of XML*

A. Both server-side and client-side need to spend a lot of code to parse XML, which makes the server-side and client-side code extremely complex and difficult to maintain;

B. XML is a subset of the Standard Universal Markup Language (SGML) and is well suited for Web transport. XML provides a unified way to describe and exchange structured data independent of an application or vendor

C. Parsing XML on the server and client side takes more resources and time.

* 1. **JSON advantages and limitations**

*Advantages of JSON:*

A. The data format is simple, easy to read and write, the format is compressed, and takes up less bandwidth.

B. Because the JSON format can be used directly for server-side code, it greatly simplifies the amount of code development on the server and client sides, does not change tasks, and is easy to maintain.

*Limitations of JSON*

A. No XML format is as popular and popular as it is, and less universal than XML.

B. JSON format is still in its infancy to be promoted in Web Services.