Individual part

**FR-UO-1: Management of USU Membership**

1. **Creation of USU Membership**. The system should support university-specific student unions applying for the membership to USU. An application must provide the following data for USU examination and approval.

* Basic data about the student union, such as name and address of the university that the student union is hosted.
* URL of the student union’s website.
* Union representative personnel, include the name, contact details, student identifiers, and the roles in the union, and USU system user IDs as students.
* Delegated union officers, including their names, contact details, and user IDs in USU system as students.

A successful application of USU membership implies:

* The creation of a customised tenant account in the USU system for the university-specific student union
* The storage of the above registration data of the student union in USU computer system.
* The creation of computer access accounts for the delegated IT officers and ready for activate according to the information provided.
* If required, a website for the student union will be created and hosted on the USU portal; otherwise the existing union website will be mirrored on the USU portal.

1. **Update of USU Membership Registration Data**. The system should enable the union to update its data registered to USU, including the change of union representative personnel information and the delegated union IT officers.
2. **Termination of USU membership**. The system should also enable the union to request the termination its membership to USU. Once the termination request is approved, the data about the union will be removed from the system permanently. The union’s access to the system will be disabled.

## Task 2: Analysis and Specify Software Quality Requirements (20 Marks)

In this task, each member of the team will work as a requirements analyst to produce a document that defines the quality requirements on your subsystem. You are required to submit a document as a part of the coursework submission that defines the quality requirements on ONE functional requirement given in the case study document. The definition of quality requirements should clearly specify the requirements on the following quality attributes.

* **Security and Privacy protection**

The security and privacy are main points when creating a system, since this ensures that all the data provided by the user is kept safe and encrypted, to ensure this we should adhere to The Data protection Act (1988) & (2018).

The data protection act 1988 has eight principles which we must consider while processing the system

The Data protection Act ensures that all data used must be processed fairly and lawfully, all data should be obtained only for specified, lawful purposes, must be adequate and relevant and not excessive for the purpose this is collected, must not be kept for a longer period that necessary for the purpose stated, this must be done in accordance with the rights of data subjects, must be kept secure therefore appropriate measures must be taken to protect the data from unauthorised users, accidental loss or any other damage, as well as this can't be transferred to countries outside the EEA unless appropriate level of protection is provided.

* **Performance**

One of the main points when creating a system is ensuring the user satisfaction, therefore we want to ensure that the system response fast and processes memberships applications and updates within two seconds under normal circumstances. Furthermore, we want it to be able to handle up to 500 concurrent users efficiently therefore the database will be optimised. As well as to ensure stable operation during peak activity we should use load balance and caching mechanism, which means no delays or performance degradation.

* **Reliability**

For the system to be reliable we must achieve a high % such as 99% uptime and it recover automatically from failures within minutes, therefore users don't need to wait long periods to access the system again. To safeguard memberships, we will use regular backups, and to prevent partial updates we will use transactional consistency.

Another common fact we should look at is uninterrupted service and data integrity across all operations; to achieve this error detection, logging and recovery mechanisms will help us, maintaining dependable availability for authorised user, which in a way improves the performance too.

* **Scalability**

A growing number of student unions and users will be accessing this system; therefore, the system must efficiently support them without any sort of loss in the performance. To achieve this, since demand increases, we will use a modular cloud-based architecture allowing resource to be expanded. Furthermore, to manage large scale data the database will support partitioning and replication while sustaining stable performance since the number of members will rise