**Assignment 3 Report**

Course: Software Engineering  
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Instructor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Group 1 Members:

* 1. Isaro Rubagumya Roxane (28762)
* 2. Ishimwe Billy Joshua (28455)
* 3. Joseph Mutangana (29061)
* 4. Rebeka Patience (26277)
* 5. Nsengiyumva George (28491)

# Section A: Nyabihu Solution Ltd – Learning Management System (LMS)

## Question 1

a) Functional Requirements and Justification

1. Course Management – Teachers can create and manage courses.
2. Assignment Submission – Students can upload assignments.
3. Grade Tracking – Teachers record and students view grades.
4. User Authentication – Secure login for teachers and students.
5. Payment Integration – Online payment processing for course fees.

These are functional because they define specific behaviors and operations the system must perform.

b) Non-Functional Requirements and Quality Attributes

1. Performance – Support 10,000 users without lag.
2. Security – Protect student data and prevent unauthorized access.
3. Usability – Intuitive and responsive interface.
4. Reliability – High uptime and error recovery.
5. Scalability – Expand easily as user base grows.

## Question 2

a) User Requirements Definition

User requirements describe what users need from the system in natural language, focusing on user goals and tasks.

b) Examples

For Students:

* Register and enroll in courses.
* Submit assignments and view grades.
* Communicate with teachers through messaging.

For Teachers:

* Create and manage courses.
* Upload assignments and record grades.
* Communicate with students.

## Question 3

a) System requirements specify technical and operational functions that the system must fulfill.

Difference: User requirements describe what users expect; system requirements define how the system will achieve it.

b) Example Conversion:

User requirement: Students should view grades → System requirement: The system shall display grades in the student dashboard retrieved from the database.

User requirement: Teachers should upload assignments → System requirement: The system shall allow teachers to upload assignment files under their respective courses.

# References

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