

SOUTH EASTERN UNIVERSITY OF SRI LANKA
FOURTH EXAMINATION IN BACHELOR OF INFORMATION AND
COMMUNICATION TECHNOLOGY - 2020/2021

SEMESTER – I, NOVEMBER/ DECEMBER 2023

SWT 41051 – PRACTICAL FOR ADVANCED SOFTWARE ENGINEERING

Answer all Questions

Time Allowed: 03 Hours.

Note:

- Read the instructions carefully and answer all questions.
- Use relevant software applications where it's necessary.
- Create a folder in your desktop name as your index number (Ex. ICT001) and save the files into the subfolder name as your question number, for example, Q01, Q02 ... Etc
- Include all the answers (codes) along with screenshots.
- After saving all your documents into the main folder, make a zip for a single file.

Read the following software requirements for the Sri Lankan Journal of Technology (SLJoT) and answer the following questions.

Description:

The system shall facilitate the efficient and transparent submission, review, and management of scholarly manuscripts for the journal. Authors, editors, and reviewers should have user-friendly interfaces that streamline the submission process, provide clear guidelines, and ensure timely and constructive peer review.

List of functionalities of the system:

Author Submission:

- Authors shall be able to create accounts and submit manuscripts through a user-friendly interface.
- The submission process should allow for the upload of various file formats, such as PDF or Word documents.

Submission Guidelines:

- The system shall provide clear guidelines for authors regarding manuscript formatting, style, and any specific requirements.
- Authors should receive automated notifications for incomplete submissions or formatting issues.

Peer Review Assignment:

- Editors shall have the ability to assign manuscripts to appropriate reviewers based on expertise.
- The assignment process should consider reviewer availability and workload.

Review Process:

- Reviewers shall be able to create accounts with a reviewer's privilege.
- Reviewers shall have access to submitted manuscripts and a standardized form for providing feedback.
- The system shall support double-blind review processes as per the journal's policy.

Editorial Decision:

- Editors shall make informed decisions based on reviewers' feedback, considering factors such as originality, quality, and relevance.
- Automated notifications should be sent to authors regarding the editorial decision.

Revision and Resubmission:

- Authors should have the option to revise and resubmit manuscripts based on reviewer comments.
- The system should facilitate clear communication between authors and editors during the revision process.

Publication Workflow:

- Accepted manuscripts should undergo a streamlined process for copyediting, proofreading, and layout for publication.
- Authors should be kept informed about the progress of their manuscripts in the publication workflow.

Access Control:

- Different user roles (authors, reviewers, editors, administrators) shall have defined access levels and permissions within the system.

Archiving(store) and Version Control:

- The system shall maintain an archive of published manuscripts with version control.
- Authors should be able to view and reference their published work.

User Support:

- The system shall provide a helpdesk or support system to assist users with technical issues, submission inquiries, or other queries.

Questions:

1. Draw a use case diagram for the requirement.
(15 Marks)
2. Draw a class diagram for the requirement.
(20 Marks)
3. Draw a sequence diagram for Author authentications and file format of the manuscript before submitting the manuscript to the system.
 - i. Author authentications
 - ii. Validate file format
 - iii. Peer review assignment
 - iv. Review Process (produce review reports)
 - v. Editorial decision based on reviewer report (Rejected, Minor Revision and Major Revision)
(30 Marks)

Note: For the following questions, database connectivity is not required.

4. Design a C# Windows Form Application project by using suitable forms such as:
 - i. Authors registration
 - ii. Manuscript submission
 - iii. Reviewer feedback form (displaying manuscript ID, manuscript file and asking about originality, quality, relevance etc.)
(20 Marks)

Note: Use necessary controllers to design the GUI and alter necessary default values of the properties of controllers.

5. Design a logging window that allows the user to log into the system by using the default user name and password to view the status of the manuscript.

Default user name: user

Default password: password

(15 Marks)

[Total 100 Marks]

***** End of the paper *****