Software Engineering

Assignment # 1

Group Memebers:

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Project Title:

- One Stop Student Service Centre

Problem Statement:

The problem of	The absence of a centralized and efficient One Stop Services Center at Fast Islamabad Campus has resulted in a manual and fragmented student service management system
affects	Students facing prolonged query resolution times
The impact of which is	Inefficient academic progress, student dissatisfaction, and administrative challenges
A successful solution would be	Developing an integrated online One Stop Services Center system will streamline query resolution, enhance communication, and provide a centralized platform for efficient document management, thereby improving transparency, security, and overall effectiveness of student services.

List of Features:

- Dashboard
    a. Activity Tracking
    b. View Requests Dashboard (Director)
- Query Management
    a. File Complaint Form
- In-app messaging/ Notification
    a. Receive Student Notification (FYP Department)
    b. Receive Student Notification (Finance Department)
    c. Receive Student Notification (One Stop Admin)
    d. Receive Bona-fide Letter Request Notification (One Stop Admin)
- Document Management
    a. Document Upload for Students
    b. Submit Research Proposal
- Analytics
    a. Track Processing Time (FYP Department)
    b. Track Processing Time (Director)
    c. View Academic Calendar
- User Management
    a. Update Personal Information
    b. Generate Token
- User Registration/Login
    a. User Registration/Login
- Student Dashboard
    a. View Grades
    b. View Academic Calendar
- Query Submission Form
    a. Submit Degree Issuance Form
- Feedback Mechanism
    a. Feedback on Services
    b. Inform Students about Bonafide Letter Objections (One Stop Admin)
- Search Functionality
    a. Access Library Resources
- Integration with University Database

a. Integration with University Database
- Help and Support
   a. Help and Support
- Integration with Payment Systems
   a. Verify Payments (Finance Department)
   b. Provide Decision (Finance Department)
   c. Submit Scholarship Application
   d. Issue Degree and Transcript (One Stop Admin)
   e. Process Graduation Applications (One Stop Admin)
   f. Request Academic Transcript

User Stories:

Story ID: 1   **Story Title:** Submit Degree Issuance Form

User Story:

As a: Student

I want: to fill and submit the degree issuance form online, providing all necessary details

So that: my form can be processed further

Acceptance Criteria:

And I know I am done when: upon submission, the system acknowledges and provides a receipt of the form.

Importance: need to have feature

Nice to Have: Auto-save feature to prevent data loss in case of session timeouts.

Story ID: 2   **Story Title:** File Complaint Form

User Story:

As a: Student

I want: to have the option to file a complaint about any issues related to my degree, such as spelling mistakes.

So that: there are no errors in my degree

Acceptance Criteria:

And I know I am done when: a confirmation message is displayed upon successful submission of the form.

Importance: need to have feature

Story ID: 3   **Story Title:** Activity Tracking

User Story:

As a: Student

I want: to track the progress of my degree issuance request

So that: I can receive updates like "Request is pending," "One Stop Admin has started processing the request," and "Request is delivered to FYP committee."

Acceptance Criteria:

And I know I am done when: I login to the system and the dashboard displays the current status of the degree issuance request.

Importance: nice to have feature

Story ID: 4   **Story Title:** Receive Student Notification

User Story:

As a: FYP Department Member

I want: to receive notifications when a student initiates a degree issuance request.

So that: I can process the request further.

Acceptance Criteria:

And I know I am done when: I receive a notification as soon as the student initiates degree issuance request. The notification must include a link for direct access to the request.

Importance: need to have feature

Story ID: 5   **Story Title:** Provide Decision

User Story:

As a: FYP Department Member

I want: to review the degree issuance request

So that: I can provide a decision - accepting, rejecting, or raising objections with comments.

Acceptance Criteria:

And I know I am done when: I have made a decision and entered it online. The system must record the timestamp when the decision is made.

Importance: need to have feature

Story ID: 6   **Story Title:** Track Processing time

User Story:

As a: FYP Department Member

I want: the system to record the time taken by the FYP committee to process the request.

So that: the admin can view the times taken to process requests

Acceptance Criteria:

And I know I am done when: The system automatically calculates and displays the time taken by the FYP committee to process each degree issuance request.

Importance: nice to have feature

Nice to Have: Historical data on average processing times for degree issuance requests.

Story ID: 7   **Story Title:** Receive Student Notification

User Story:

As a: Finance Department Member

I want: to receive notifications when a student initiates a degree issuance request.

So that: I can process the request further.

Acceptance Criteria:

And I know I am done when: I receive a notification as soon as the student initiates degree issuance request. The notification must include a link for direct access to the request.

Importance: need to have feature

Story ID: 8   **Story Title:** Verify Payments

User Story:

As a: Finance Department Member

I want: to ensure that all outstanding amounts and degree issuance fees have been paid.

So that: I can process the request further.

Acceptance Criteria:

And I know I am done when: The system displays the payment status, indicating whether all outstanding amounts and degree issuance fees have been paid.

Importance: need to have feature

Story ID: 9   **Story Title:** Provide Decision

User Story:

As a: Finance Department Member

I want: to review the degree issuance request

So that: I can provide a decision - accepting, rejecting, or raising objections with comments.

Acceptance Criteria:

And I know I am done when: I have made a decision and entered it online. The system must record the timestamp when the decision is made.

Importance: need to have feature

Nice to Have: Integration with a payment gateway for real-time verification of payments.

Story ID: 10   **Story Title:** Receive Student Notification

User Story:

As a: One Stop Admin

I want: to receive notifications when a student initiates a degree issuance request.

So that: I can process the request further.

Acceptance Criteria:

And I know I am done when: I receive a notification as soon as the student initiates degree issuance request. The notification must include a link for direct access to the request.

Importance: need to have feature

Story ID: 11   **Story Title:** Generate Token

User Story:

As a: One Stop Admin

I want: to generate a unique token for each student's degree issuance request, including the estimated time for issuance.

So that: the student is aware of the time required to process his request.

Acceptance Criteria:

And I know I am done when: The system generates a unique token for each student's degree issuance request.

Importance: need to have feature

Story ID: 12   **Story Title:** View Requests

User Story:

As a: One Stop Admin

I want: to view and manage all pending, processed, and new degree issuance requests.

So that: no request lefts pending.

Acceptance Criteria:

And I know I am done when: The One Stop admin have access to a dashboard displaying all pending, processed, and new degree issuance requests.

Importance: need to have feature

Nice to Have: Data analytics tools for insights into the efficiency of the One Stop Services Centre.

Story ID: 13   **Story Title:** Inform Students about Objections

User Story:

As a: One Stop Admin

I want: to inform students in case of objections raised by the FYP or Finance department.

So that: students can sort out their objections.

Acceptance Criteria:

And I know I am done when: The system triggers an automatic notification to the student in case of objections raised by the FYP or Finance department.

Importance: need to have feature

Story ID: 14   **Story Title:** Issue Degree and Transcript

User Story:

As a: One Stop Admin

I want: to process and issue degrees to students, updating the processed request list with the issuance time. Additionally, I want to generate and issue transcripts with details like department, CGPA, all course grades, duration, and photograph.

So that: students receive their Degree and transcripts.

Acceptance Criteria:

And I know I am done when: The system updates the processed request list with the issuance time. Transcripts should be generated and issued with accurate details like department, CGPA, all course grades, duration, and photograph.

Importance: need to have feature

Nice to Have: A feature allowing admins to add personalized messages to issued degrees and transcripts.

Story ID: 15   **Story Title:** View Requests Dashboard

User Story:

As a: Director

I want: to view a dashboard displaying all degree issuance requests generated per day, including pending and processed requests.

So that: requests that are pending can be processed as soon as possible.

Acceptance Criteria:

And I know I am done when: The director has access to a dashboard displaying all degree issuance requests generated per day, including pending and processed requests.

Importance: need to have feature

Story ID: 16   **Story Title:** Track Processing Time

User Story:

As a: Director

I want: to track the time taken by each department (FYP, Finance) to process degree issuance requests.

So that: I can keep a check and balance on all the departments.

Acceptance Criteria:

And I know I am done when: The system provides a clear overview of the time taken by each department (FYP, Finance) to process degree issuance requests.

Importance: nice to have feature

Story ID: 17   **Story Title:** Request Bona-fide letter

User Story:

As a: Student

I want: to submit a request for a bona-fide letter through the online system, providing details such as the purpose.

So that: I can be issued a bona-fide letter.

Acceptance Criteria:

And I know I am done when: The form prompts me to input specific details, including the purpose of the letter and the duration for which it is required. Upon submission, I should receive a confirmation notification indicating that my bona-fide letter request has been received.

Importance: need to have feature

Story ID: 18   **Story Title:** Receive Bona-fide Letter Request Notification

User Story:

As a: One stop Admin

I want: to receive timely notifications when a student initiates a bona-fide letter request.

So that: I can process request further.

Acceptance Criteria:

And I know I am done when: The system sends notifications to the One Stop Admin with relevant details, including the student's name, purpose of the letter, and requested duration.

Importance: need to have feature

Story ID: 19   **Story Title:** Inform Students about Bona-fide Letter Objections

User Story:

As a: One stop Admin

I want: the ability to inform students if there are objections during the processing of their bona-fide letter request.

So that: students can sort them out.

Acceptance Criteria:

And I know I am done when: The system provides a communication channel to notify students about objections, including details and guidance for resolution.

Importance: need to have feature

Story ID: 20   **Story Title**: Issue Bona-fide Letter

User Story:

As a: One stop Admin

I want: to process and issue bona-fide letters to students, updating the processed request list with the issuance time.

So that: students know how much more time will be taken.

Acceptance Criteria:

And I know I am done when: The system allows me to issue the bona-fide letter to the student through their online portal.

Importance: need to have features

Story ID: 21   **Story Title**: Update Personal Information

User Story:

As a: Student

I want: to update my personal information (such as address, phone number, email) on the system

So that: the university has my most current information for communication.

Acceptance Criteria:

And I know I am done when: the system confirms that my personal information has been updated successfully.

Importance: need to have feature

Story ID: 22   **Story Title:** View Academic Calendar

User Story:

As a: Student

I want: to view the academic calendar on the system

So that: I can stay informed about important dates and deadlines.

Acceptance Criteria:

And I know I am done when: I can access and view the academic calendar through the system.

Importance: need to have feature

Story ID: 23   **Story Title:** Schedule Appointments with Advisors

User Story:

As a: Student

I want: to schedule appointments with academic advisors or counselors through the system

So that: I can receive guidance and support as needed.

Acceptance Criteria:

And I know I am done when: I can select an available time slot and confirm my appointment with an advisor.

Importance: need to have feature

Story ID: 24   **Story Title:** Feedback on Services

User Story:

As a: Student

I want: to provide feedback on the services received from the One Stop Student Service Centre

So that: the quality of services can be evaluated and improved.

Acceptance Criteria:

And I know I am done when: I have submitted my feedback through the system and received a confirmation of receipt.

Importance: nice to have feature

Story ID: 25   **Story Title:** Access Financial Aid Information

User Story:

As a: Student

I want: to access information on financial aid and scholarships available

So that: I can apply for financial support if needed.

Acceptance Criteria:

And I know I am done when: I can view details of different financial aid options and application procedures.

Importance: need to have feature

Story ID: 26   **Story Title:** Submit Scholarship Application

User Story:

As a: Student

I want: to submit applications for scholarships through the system

So that: I can secure financial assistance for my studies.

Acceptance Criteria:

And I know I am done when: I have completed and submitted the scholarship application form and received a submission confirmation.

Importance: need to have feature

Story ID: 27   **Story Title:** Course Registration

User Story:

As a: Student

I want: to register for courses each semester through the system

So that: I can enroll in classes necessary for my degree program.

Acceptance Criteria:

And I know I am done when: I have successfully registered for my chosen courses and received confirmation.

Importance: need to have feature

Story ID: 28   **Story Title:** View Grades

User Story:

As a: Student

I want: to view my grades for each course at the end of the semester

So that: I can track my academic progress.

Acceptance Criteria:

And I know I am done when: I can access and see my grades for each course on the system.

Importance: need to have feature

Story ID: 29   **Story Title:** Update Course Offerings

User Story:

As a: Department Administrator

I want: to update the list of course offerings each semester

So that: students can view and register for available courses.

Acceptance Criteria:

And I know I am done when: the updated course listings are published on the system for students to view.

Importance: need to have feature

Story ID: 30   **Story Title:** Process Graduation Applications

User Story:

As a: One Stop Admin

I want: to process applications for graduation

So that: students who have completed their degree requirements can graduate.

Acceptance Criteria:

And I know I am done when: I have reviewed the student's record, confirmed they have met all requirements, and updated their status to "eligible for graduation."

Importance: need to have feature

Story ID: 31   **Story Title:** Request Academic Transcript

User Story:

As a: Student

I want: to request an official academic transcript through the system

So that: I can apply for jobs or further education.

Acceptance Criteria:

And I know I am done when: I have submitted my request and the system confirms it has been received.

Importance: need to have feature

Story ID: 32   **Story Title:** Submit Research Proposal

User Story:

As a: Graduate Student

I want: to submit my research proposal online

So that: it can be reviewed by the department for approval.

Acceptance Criteria:

And I know I am done when: I have uploaded my proposal and received a confirmation of submission.

Importance: need to have feature

Story ID: 33   **Story Title:** Access Library Resources

User Story:

As a: Student

I want: to access library resources through the system

So that: I can find books, journals, and other materials for my studies.

Acceptance Criteria:

And I know I am done when: I can search, view, and request library materials online.

Importance: need to have feature

Story ID: 34   **Story Title:** Integration with University Database

User Story:

As a: User

I want: the system to integrate seamlessly with the University Database

So that: the information accessed is up-to-date and accurate.

Acceptance Criteria:

And I know I am done when: The system fetches and displays information from the University Database.

Importance: need to have feature

Story ID: 35   **Story Title:** Help and Support

User Story:

As a: User

I want: easy access to help and support features

So that: it can assist me in navigating and using the system.

Acceptance Criteria:

And I know I am done when: Help and support features are easily accessible, providing relevant information.

Importance: need to have feature

Roles:

Product Owner: Azmeer Sohail, Talal Habshi

Scrum Master: Ibrahim Naeem

Scrum team: Talal Habshi, Ibrahim Naeem, Azmeer Sohail

Duties:

Product owner defined product backlog, gathered and understand the requirements of the project and defined the user stories.

Scrum Master facilitated Scrum events (Sprint Planning, Daily Stand-up, Sprint Review, Sprint Retrospective), ensured the Scrum Team follows Scrum practices and principles.

Scrum team actively participated in Scrum events and contributed to the development process, regularly inspect and adapt their processes for continuous improvement. Discussed the list of features that will be implemented in the project and the problem statement of project and wrote user stories.