Project Report

for

Onestop Degree Issuance System

Version 1.0 approved

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Product Backlog

Sprint 1: Foundation and Basic Functionality

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- 2. Track Request Status
- 3. Receive Degree
- 4. Complaint Form
- 5. Provide Feedback
- 6. Check Incoming Requests Onestop
- 7. Token Generation
- 8. Estimated Time
- 9. View Requests
- 10. Update Request List

Sprint 2: Departmental Integration and Decision Making

- 1. Check Incoming Requests FYP
- 2. Decision Making FYP
- 3. Track Department Performance FYP
- 4. Check Outstanding Fee
- 5. Check Degree Issuance Fee
- 6. Decision Making Finance
- 7. Check Incoming Requests Finance
- 8. FYP Decision Status
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- 10. Pending Request Reminder

Sprint 3: Request Processing and Performance Tracking

- 1. Process Request
- 2. Number of Daily Pending Requests
- 3. Number of Daily Processed Requests
- 4. Track Department Performance
- 5. Track Request Status

Sprint 1: Foundation and Basic Functionality

Sprint Backlog

1. Submit Degree Issuance Form

Story ID: 1

User Story: As a student, I want to be able to submit a degree issuance form so that I can start the degree issuance process.

Tasks:

- 1. Implement frontend form for degree issuance submission.
- 2. Create backend API endpoint to receive and process degree issuance form data.
- 3. Validate submitted form data to ensure completeness and accuracy.
- 4. Store submitted form data in the database for further processing.

2. Track Request Status

Story ID: 2

User Story: As a student, I want to be able to track my request, so that I can know the progress of my request and how much more time it will take to complete. Tasks:

- 1. Design dashboard interface for students to track request status.
- 2. Develop backend functionality to retrieve and display request status for each student.
- 3. Implement real-time updates for request status.

3. Receive Degree

Story ID: 3

User Story: As a student, I want to be able to receive my degree so that I can use it for further studies or job interviews.

Tasks:

- 1. Design and implement interface for students to receive their degrees.
- 2. Develop backend logic to generate and deliver degrees to students upon request.

4. Complaint Form

Story ID: 4

User Story: As a student, I want to be able to submit a complaint form, so that the mistakes in my degree are resolved before my degree is issued. Tasks:

- 1. Create frontend form for students to submit complaints regarding degree issuance.
- 2. Implement backend API to receive and process complaint submissions.

5. Provide Feedback

Story ID: 5

User Story: As a student, I want to provide feedback about the OneStop Administrative Process, so that the system can be improved.

Tasks:

- 1. Design feedback form for students to submit comments and suggestions.
- 2. Develop backend functionality to process and store feedback submissions.

6. Check Incoming Requests - Onestop

Story ID: 13

User Story: As an Onestop admin, I want to get notifications of students applying for degree issuance so that I can attend to and manage incoming requests.

Tasks:

- 1. Design notification system to alert Onestop admin of incoming degree issuance requests.
- 2. Develop backend functionality to generate notifications upon submission of degree issuance forms by students.
- 3. Implement frontend interface for Onestop admin to view and manage incoming requests.
- 4. Test notification system to ensure timely and accurate alerts for Onestop admin.

7. Token Generation

Story ID: 14

User Story: As an Onestop admin, I want the system to be able to generate a unique token/ticket for each student request so that requests can be easily tracked and managed. Tasks:

- 1. Design algorithm for generating unique tokens for degree issuance requests.
- 2. Develop backend functionality to generate tokens upon submission of degree issuance forms by students.
- 3. Integrate token generation logic with frontend interface to display tokens to students and Onestop admin.
- 4. Test token generation process to ensure uniqueness and reliability of generated tokens.

8. Estimated Time

Story ID: 15

User Story: As an Onestop admin, I want the system to notify each student of the estimated time required for degree issuance so that students are informed of the expected timeframe.

Tasks:

- 1. Design algorithm for calculating estimated time required for degree issuance based on current workload and processing times.
- 2. Develop backend functionality to calculate and store estimated times for degree issuance requests.
- 3. Implement frontend interface to display estimated times to students upon submission of degree issuance forms.
- 4. Test estimated time calculation and display to ensure accuracy and relevance of information.

9. View Requests

Story ID: 16

User Story: As an Onestop admin, I want to be able to view all requests and their current status so that I can respond to any queries from the student side.

Tasks:

- 1. Design backend database schema to store information about degree issuance requests.
- 2. Develop backend functionality to retrieve and display all requests along with their current status.
- 3. Implement frontend interface for Onestop admin to view and filter requests based on status and other parameters.
- 4. Test request viewing functionality to ensure completeness and accuracy of displayed information.

10. Update Request List

Story ID: 20

User Story: As an Onestop admin, I want to be able to select and process a student's degree issuance request once all requirements have been met, so that degrees can be issued in a timely and accurate manner.

Tasks:

- 1. Design backend functionality to update request status and processing details upon completion of degree issuance process.
- 2. Implement frontend interface for Onestop admin to update request list and mark requests as processed.
- 3. Test request updating functionality to ensure proper handling of completed requests and accurate status updates.

Trello Snapshots

Start



Middle



End



Scrum Master Actions





Burndown Chart







Gantt Chart



Sprint 2: Departmental Integration and Decision Making

Sprint Backlog

1. Check Incoming Requests - FYP

Story ID: 6

User Story: As the FYP Department Head, I want to receive a notification about the student issuance form, so that I can accept or reject the request.

Tasks:

- 1. Implement frontend interface for FYP Department Head to view and manage incoming requests.
- 2. Test system to ensure timely and accurate alerts for FYP Department Head.

2. Decision Making - FYP

Story ID: 7

User Story: As the FYP Department Head, I want to be able to accept, reject or object to the students request so that this decision can be forwarded to the one stop admin. Tasks:

- 1. Design interface for FYP Department Head to review and make decisions on degree issuance requests.
- 2. Develop backend functionality to process decisions made by FYP Department Head.
- 3. Implement a communication mechanism to relay decisions to Onestop admin.
- 4. Test decision-making process to ensure accuracy and reliability of decision transmission.

3. Track Department Performance - FYP

Story ID: 8

User Story: As the FYP Department Head, I want to be able to keep track of the time taken by the FYP committee to process requests so that it can be improved. Tasks:

- 1. Design dashboard interface for FYP Department Head to monitor processing times and performance metrics.
- 2. Develop backend functionality to calculate and display processing times for FYP committee.
- 3. Implement real-time updates for tracking department performance.
- 4. Test performance tracking system to ensure accuracy and relevance of displayed information.

4. Check Outstanding Fee

Story ID: 9

User Story: As the Finance Department Head, I want to check if all outstanding student fees have been paid, so that I can further process the degree issuance request. Tasks:

- 1. Design frontend interface for Finance Department Head to view outstanding student fees.
- 2. Develop backend functionality to retrieve and display information about outstanding fees.
- 3. Test fee checking system to ensure completeness and accuracy of displayed information.

5. Check Degree Issuance Fee

Story ID: 10

User Story: As the Finance Department Head, I want to be able to check if the student has paid the degree issuance fee so that I can make a decision about the degree issuance request.

Tasks:

- 1. Design frontend interface for Finance Department Head to verify degree issuance fee payment.
- 2. Develop backend functionality to retrieve and validate degree issuance fee payment status.
- 3. Test fee verification system to ensure accuracy and reliability of payment status.

6. Decision Making - Finance

Story ID: 11

User Story: As the Finance Department Head, I want to be able to provide decisions (accept, reject, or raise objections) for degree issuance requests so that the issuance process can proceed smoothly.

Tasks:

- 1. Design frontend interface for Finance Department Head to view and respond to degree issuance requests.
- 2. Develop backend functionality to process decision submissions from Finance Department Head.
- 3. Integrate decision-making logic with frontend interface to allow Finance Department Head to accept, reject, or object to requests.
- 4. Test decision-making process to ensure accuracy and reliability of decision submissions.

7. Check Incoming Requests - Finance

Story ID: 12

User Story: As the Finance Department Head, I want to receive a notification about the student issuance form, so that I can accept or reject the request.

Tasks:

- 1. Implement frontend interface for FinanceDepartment Head to view and manage incoming requests.
- 2. Test system to ensure timely and accurate alerts for Finance Department Head.

8. FYP Decision Status

Story ID: 17

User Story: As a Onestop admin, I want to receive notifications from the FYP department regarding a student's degree issuance request so that I can inform the student so as to deal with any issue promptly.

Tasks:

- 1. Design communication channel between FYP department and Onestop admin for sending request notifications.
- 2. Develop backend functionality to send notifications from FYP department to Onestop admin.
- 3. Implement frontend interface for Onestop admin to view and respond to FYP decision notifications.
- 4. Test notification system to ensure accurate and timely delivery of notifications.

9. Finance Decision Status

Story ID: 18

User Story: As a Onestop admin, I want to receive notifications from the Finance department regarding a student's degree issuance request so that I can inform the student so as to deal with any issue promptly.

Tasks:

- 1. Design communication channel between Finance department and Onestop admin for sending request notifications.
- 2. Develop backend functionality to send notifications from Finance department to Onestop admin.
- 3. Implement frontend interface for Onestop admin to view and respond to Finance decision notifications.
- 4. Test notification system to ensure accurate and timely delivery of notifications.

10. Pending Request Reminder

Story ID: 22

User Story: As a Onestop admin, I want to receive automated reminders for pending requests, so that I can follow up and ensure timely resolution.

Tasks:

- 1. Design reminder system to automatically notify Onestop admin of pending degree issuance requests.
- 2. Develop backend functionality to generate and send reminders for pending requests.
- 3. Implement frontend interface for Onestop admin to view and respond to pending request reminders.
- 4. Test reminder system to ensure timely and accurate delivery of reminders.



Trello Snapshots

Middle



End



Scrum Master Actions





Burndown Chart





Gantt Chart



Gantt Chart (Sprint 2)

Sprint 3: Request Processing and Performance Tracking

Sprint Backlog

1. Process Request

Story ID: 19

User Story: As a Onestop admin, I want to be able to select and process a student's degree issuance request once all requirements have been met, so that degrees can be issued in a timely and accurate manner.

Tasks:

- 1. Design backend functionality to update request status and processing details upon completion of degree issuance process.
- 2. Implement frontend interface for Onestop admin to update request list and mark requests as processed.

2. Number of Daily Pending Requests

Story ID: 23

User Story: As a director, I want to view the number of pending requests generated each day, so that I can gauge the workload and allocate resources accordingly. Tasks:

- 1. Develop backend functionality to calculate and display the number of pending requests generated each day.
- 2. Implement frontend interface for directors to view and analyze daily pending request data.

3. Number of Daily Processed Requests

Story ID: 24

User Story: As a director, I want to view all processed requests generated per day, so that I can track operational efficiency and performance trends.

Tasks:

- 1. Develop backend functionality to calculate and display the number of processed requests generated each day.
- 2. Implement frontend interface for directors to view and analyze daily processed request data.

4. Track Department Performance

Story ID: 25

User Story: As a director, I want to view the time taken by each department to process requests, providing insight into departmental efficiency and potential areas for improvement.

Tasks:

- 1. Develop backend functionality to calculate and display the time taken by each department to process requests.
- 2. Implement frontend interface for directors to view and analyze departmental performance metrics.

5. Track Request Status

Story ID: 26

User Story: As a director, I want to be able to track the activity of each request, allowing me to ensure that requests are progressing smoothly through the workflow. Tasks:

- 1. Develop backend functionality to track and update request statuses and activities.
- 2. Implement frontend interface for directors to view and monitor request statuses and activities.

Trello Snapshots



Middle

Start





End

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Product Backlog ····	Next Sprint	Sprint Backlog ····	In Progress	Code Review	01/5/14 Sprint 3 - Complete ····	29/4/24 Sprint 2 - Complete ····	19/4/24 Sprint 1 - Complete ····
1 card matches filters	2 cards match filters	0 cards match filters	0 cards match filters	0 cards match filters	7 cards match filters	12 cards match filters	12 cards match filters
Scrum Team	Possible Tasks for Next Sprint	+ Add a card	+ Add a card 🛱	+ Add a card	Sprint Goal: Request Processing and Performance Tracking	Sprint Goal: Departmental Integration and Decision Making	Sprint Goal: Foundation and Basic Functionality
+ Add a card 🖾	To be determined				Sprint Review		Sprint Review
Martin Contractor	+ Add a card 🛛 🛱		-0-		₽ P 16	Sprint Review P 11	P 12
					Process Requests	Check Incoming Requests - FYP	Submit Degree Issuance Form
			XAN		Number of Daily Pending Requests	Decision Making - FYP	Complaint Form
				X	Number of Daily Processed Requests	Check Incoming Requests - Finance	Provide Feedback
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6.	- X X /				E .	Decision Making - Finance	Onestop
Ve	* IN				T Add a card	Finance Decision Status	Update Request List
						Check Outstanding Fee	Receive Degree
							· · · · · · · · · · · · · · · · · · ·
			6137	-		+ Add a card	+ Add a card

Scrum Master Actions





Burndown Chart



Test Cases

1. Login

Fields:

- ID

- Password

Equivalent Class Partitions:

Field	Valid Classes	Invalid Classes
ID	Alphanumeric,8 < Length < 50, Unique	Length < 8, Length > 50, not alphanumeric, empty, Not Unique
Password	Alphanumeric,8 < Length < 50	Length < 8, Length > 50, not alphanumeric, empty

Boundary Values:

Field	Boundary Values
ID	Valid: 11111111, 1^50 Invalid: 1^51, 1111111
Password	Valid: 11111111, 1^50 Invalid: 1^51, 1111111

Test Case Counts:

- Weak Equivalence Testing: 3 each
- Strong Equivalence Testing: 15

2. Degree Form

Fields:

- CNIC
- Email
- Submission Date
- Bank Challan Number
- Address

Equivalent Class Partitions:

Field	Valid Classes	Invalid Classes
CNIC	Numeric, Length = 13	Alphanumeric, Length < 13, Length > 13
Email	Contains '@', valid format	No '@', invalid format
Submission Date	Valid format (yyyy-mm-dd)	Invalid format, empty
Bank Challan Number	Numeric, Length < 50	Alphanumeric, Length > 50, empty
Address	Character limit <= 50	Character limit > 50

Boundary Values:

Field	Boundary Values
CNIC	Valid: 111111111111, Invalid: 11111111111, 11111, 11111111,
Email	Valid: example@email.com, Invalid: exampleemail.com, example@.com, @email.com
Submission Date	Valid: 2000-01-01, Invalid: 00-01-01, 2000-1-1, empty
Bank Challan Number	Valid: 1111111, Invalid: 111111111111111111111111111111111111
Address	Valid: Less than or equal to 50 characters, Invalid: More than 50 characters, empty

Test Cases:

- Weak Equivalence Testing: 3 each
- Strong Equivalence Testing: 10 each

3. Complaint form

Fields:

- Submission Date **Equivalent Class Partitions:**

Field	Valid Classes	Invalid Classes
Submission Date	Valid format (yyyy-mm-dd), Token generated	Invalid format, Token not generated

Boundary Values:

Field	Boundary Values	
Submission Date	Valid: 2000-01-01, Invalid: 00-01-01, 2000-1-1, Token not generated	

Test Cases:

- Weak Equivalence Testing: 3
- Strong Equivalence Testing: 10

4. Feedback Form

Fields:

- Submission Date

Equivalent Class Partitions:

Field	Valid Classes	Invalid Classes
Submission Date	Valid format (yyyy-mm-dd), Token generated	Invalid format, Token not generated

Boundary Values:

Field	Boundary Values	
Submission Date	Valid: 2000-01-01, Invalid: 00-01-01, 2000-1-1, Token not generated	

Test Cases:

- Weak Equivalence Testing: 3
- Strong Equivalence Testing: 10

5. Receive Degree

- Cannot be shown until approval **Equivalent Class Partitions:**

Field	Valid Classes	Invalid Classes
Approval Status	Approved	Not Approved, Pending

Test Cases:

- Weak Equivalence Testing: 3
- Strong Equivalence Testing: 10

6. Generate Degree

Fields:

- Cannot generate until all status accepted

Equivalent Class Partitions:

Field	Valid Classes	Invalid Classes
Status	All accepted	Not all accepted

Test Cases:

- Weak Equivalence Testing: 3
- Strong Equivalence Testing: 10

Github Repository

https://github.com/TayyabSohail/FastNuces_Degree_Issuance_Managent_System_-FULL-STA CK-

Video Link

https://drive.google.com/drive/folders/1XhUirl-Febx442eBiHrURHuczX7AfrJm