



## BPMN ASSIGNMENT:02

**MEMBERS: HUZAIFA IMRAN (01-131232-033)  
HASEEB IRFAN (01-131232-029)**

# **QUESTION NO:01**

## **PART-01**

### **FYP PROPOSAL AND MANAGEMENT PROCESS**

#### **Description:**

FYP Proposal and Registration Process is the foundational stage of the Final Year Project. It governs how students formally propose their project ideas, how those proposals are scheduled for review, and the final decision of project approval or rejection. This process ensures that every student has a viable, approved project and an assigned supervisor before official development begins. It involves coordination between Students, the FYP Coordinator, and Faculty members to manage submissions, schedule defenses, and communicate outcomes.

#### **1.1 Student Proposal Submission Task**

**Task Overview** This task involves the student obtaining the official FYP proposal documentation and completing it for submission. The student is responsible for filling out all required fields, detailing the project's scope, objectives, and initial plan, and submitting it through the designated portal by the deadline.

#### **Key Activities**

- Student navigates to the university portal or departmental website to find the "Proposal Form."
- Student downloads the form.
- Student consults with a potential supervisor to refine the project idea.
- Student fills in all sections of the form
- Student obtains the signature of the consenting supervisor .
- Student uploads the completed form to the LMS or portal before the announced deadline.

#### **Role**

- **Student:** Responsible for completing and submitting the form.
- **Faculty (Supervisor):** Provides guidance on the proposal idea and may need to approve it before submission.
- **FYP Coordinator:** Ensures the form is available and collects the submissions.

## Tools

- LMS
- University Portal
- Microsoft Word
- Email

**Importance** This task is the official starting point of the project. A well-prepared proposal form allows the evaluation committee to understand the project's viability and scope, ensuring that the student is starting with a clear and achievable plan. It formalizes the student-supervisor relationship and acts as the primary document for project registration.

## 1.2 Proposal Defense Scheduling Task

**Task Overview** Once proposals are submitted, the FYP Coordinator creates and disseminates a comprehensive schedule for the proposal defenses. This involves setting a timeline, assigning specific dates and time slots for each student or group, and communicating this schedule to all involved faculty and students.

### Key Activities

- The FYP Coordinator announces the overall "Timeline" for the defense period
- The Coordinator groups students by supervisor or project domain.
- A detailed "Proposal defence schedule" (schedule) is created, assigning a specific "Date" and time slot for each proposal.
- Faculty panels for each defense are assigned.
- The Coordinator "provides message side-by-side" on the LMS or via email, publishing the final schedule for all students and faculty.

### Role

- **FYP Coordinator:** The primary owner of this task. Responsible for creating and communicating the entire schedule.
- **Faculty:** Receives the schedule and confirms their availability for the assigned defense panels.

## Tools

- Learning Management System (LMS)

- Email
- Microsoft Excel

**Importance** This task is crucial for operational efficiency. A clear and timely schedule ensures that all proposals are evaluated in an organized manner. It gives students adequate time to prepare their presentations and allows faculty to manage their academic and evaluation commitments effectively.

## 1.3 Proposal Evaluation and Decision Task

**Task Overview** This task is the formal defense where students present their proposal to a faculty panel. Based on the presentation and the submitted form, the panel evaluates the project's feasibility. A decision is made to either approve or reject the project, and this outcome is officially communicated to the student.

### Key Activities

- Student presents their project proposal to the faculty panel.
- The panel asks questions to assess the project's scope and the student's understanding.
- The panel deliberates and makes a final decision.
- "If project approves," the project is registered, and the student is cleared to proceed.
- "If project is rejected," the panel provides feedback on why.
- The final decision is "notified to student" through an official channel

### Role

- **Student:** Presents and defends the proposal.
- **Faculty (Panel):** Evaluates the proposal and makes the final decision.
- **FYP Coordinator:** Records the decision and processes the official notification.

### Tools

- PowerPoint
- LMS
- Email

**Importance** This is a critical quality gate. It prevents students from starting projects that are overly ambitious, lack academic value, or are not feasible within the given timeframe. It ensures that every approved project meets the department's standards before development work begins.

## PART-02

# PROJECT DEVELOPMENT AND DOCUMENTATION PROCESS

### Description

This process covers the main development phase of the Final Year Project. It includes the structured documentation required at the start of the project (SRS) and the mechanism for continuous, weekly monitoring of progress (log forms). This ensures that students are actively working, following software engineering practices, and creating a record of their work for evaluation.

### 2.1 Initial Documentation (SRS) Task

**Task Overview** After project approval, the student must complete and submit a detailed Software Requirements Specification (SRS) document. The department provides a standard template that the student must follow to outline the project's functional and non-functional requirements.

#### Key Activities

- The FYP Coordinator or supervisor provides the "SRS template" to the student.
- The student analyzes their project and details all requirements, use cases, and system models as per the template.
- The student shares drafts of the SRS with their supervisor for feedback.
- Once finalized, the student must "submit" the completed SRS document by the specified deadline.

#### Role

- **Student:** Responsible for writing and submitting the SRS.
- **Supervisor:** Guides the student and provides feedback on the SRS content.

#### Tools

- Microsoft Word
- Diagramming Tools (e.g., Visio, draw.io)
- LMS/Portal (for submission)

**Importance** The SRS serves as the project's "contract." It establishes a clear, agreed-upon scope between the student and the supervisor. This document is essential for guiding the development process and serves as the primary basis for evaluation in later stages, ensuring that the student's final product is measured against the initial, agreed-upon objectives.

## 2.2 Continuous Progress Logging Task

**Task Overview** To ensure consistent effort and provide a basis for ongoing evaluation, students are required to submit "24 log forms," which are filled out "one every week." These forms detail the tasks completed that week, any challenges faced, and the plan for the next week.

### Key Activities

- Student performs development tasks for the week.
- At the end of the week, the student opens the log form template.
- Student fills in the details: tasks accomplished, hours worked, problems encountered, and weekly goals.
- Student submits the weekly log form to their supervisor or on the LMS.
- The supervisor reviews the log form to monitor progress.

### Role

- **Student:** Responsible for filling out and submitting the log form every week.
- **Supervisor:** Reviews the weekly logs to track progress and provide timely intervention if the student is stuck or falling behind.

### Tools

- LMS/Portal
- Microsoft Word or a dedicated online form

**Importance** Weekly log forms are a critical tool for project management and accountability. They encourage students to work consistently rather than leaving work to the last minute. For supervisors, they provide a real-time "paper trail" of the project's status, making it easier to evaluate progress and provide accurate marks.

## PART-03

# PROJECT EVALUATION AND ASSESSMENT PROCESS

### Description

The Project Evaluation and Assessment Process is a series of formal checkpoints used to evaluate the student's progress and the quality of their work throughout the FYP. It consists of two interim evaluations and a final evaluation by an external examiner. This multi-stage process ensures the project is on track and allows for course correction, culminating in a final, unbiased assessment.

### 3.1 First Interim Evaluation Task

**Task Overview** The "First interim evaluation" is the first major project checkpoint. The FYP Coordinator releases a "schedule" for these evaluations, where students present their progress to date (e.g., completed SRS, initial design, and basic prototypes) to a faculty panel.

### Key Activities

- The FYP Coordinator announces that the "First interim evaluation comes."
- A "schedule comes for it," which is communicated to all students and faculty.
- Students prepare presentations and demonstrations based on their progress.
- Students present to the evaluation panel.
- The panel provides feedback and a grade for this stage.

### Role

- **FYP Coordinator:** Manages the scheduling and logistics of the evaluation.
- **Student:** Prepares and presents their work.
- **Faculty (Panel):** Evaluates the student's progress and provides feedback.

### Tools

- LMS (for schedule)
- Presentation Software
- Project Code/Prototype

**Importance** This evaluation is the first formal test of the student's progress. It forces the student to have tangible results early in the project lifecycle and provides a critical feedback

loop, allowing the panel to identify any major issues or risks before they become unmanageable.

## 3.2 Supervisor Mid-Term Evaluation Task

**Task Overview** Separate from the formal interim evaluations, the project supervisor "evaluates [the student] for 6 months" of work. This is a continuous or mid-term assessment based on the supervisor's direct observation, review of weekly logs, and regular meetings. The resulting "Marks are side-by-side on LMS" with other grades.

### Key Activities

- The supervisor meets regularly with the student over the 6-month period.
- The supervisor reviews all 24 weekly log forms.
- The supervisor assesses the student's professionalism, technical growth, and adherence to deadlines.
- Based on this continuous observation, the supervisor assigns a grade.
- This grade is uploaded to the "LMS" as a component of the final FYP mark.

### Role

- **Supervisor:** The sole evaluator in this task, responsible for assessing the student's consistent effort over the semester.
- **Student:** The subject of the evaluation.

### Tools

- LMS (for mark entry)
- Weekly Log Forms

**Importance** This task ensures that the student's *process* and *effort* are evaluated, not just the final product. It rewards consistency, professionalism, and responsiveness to feedback, which are key skills for a software engineer. It also ensures that the person with the most insight into the project (the supervisor) has a significant say in the grade.

## 3.3 Second Interim Evaluation Task

**Task Overview** The "Second interim comes" later in the project lifecycle. This evaluation is similar in format to the first interim but with higher expectations. Students are expected to

present a mostly feature-complete project, demonstrating significant progress since the first evaluation.

## Key Activities

- The FYP Coordinator schedules and announces the second interim evaluations.
- Students prepare presentations and a live demonstration of their nearly finished project.
- Students present to the faculty panel, highlighting the features implemented and challenges overcome.
- The panel evaluates the project's completeness, technical complexity, and quality, providing a grade and final feedback before the external evaluation.

## Role

- **FYP Coordinator:** Manages the scheduling.
- **Student:** Presents and demonstrates the project.
- **Faculty (Panel):** Evaluates the project and assigns a grade.

## Tools

- LMS (for schedule)
- Presentation Software
- Live Project/System

**Importance** This is the final "dress rehearsal" before the final exam. It serves as a major milestone, pushing students to have their projects substantially complete by this deadline. The feedback from this evaluation is the student's last chance to make critical improvements before the final external assessment.

## 3.4 Final Evaluation Task

**Task Overview** This is the final stage of the FYP, where an "External examiner entity" is brought in to provide an unbiased, third-party assessment of the project. This examiner, along with an internal panel, reviews the final report, watches the final presentation and demo, and determines the project's final grade.

## Key Activities

- The department invites and schedules an external examiner (e.g., a professor from another university or an industry expert).

- The student submits their final project report, code, and presentation.
- The student presents their complete, polished project to the final panel (including the external examiner).
- The external examiner asks in-depth questions.
- The panel (internal and external) deliberates to assign the final project grade.

## Role

- **External Examiner:** An outside expert who provides an unbiased final evaluation.
- **Student:** Delivers the final presentation and defends the project.
- **Faculty (Panel):** Participates in the evaluation alongside the external examiner.
- **FYP Coordinator:** Manages the logistics and records the final grades.

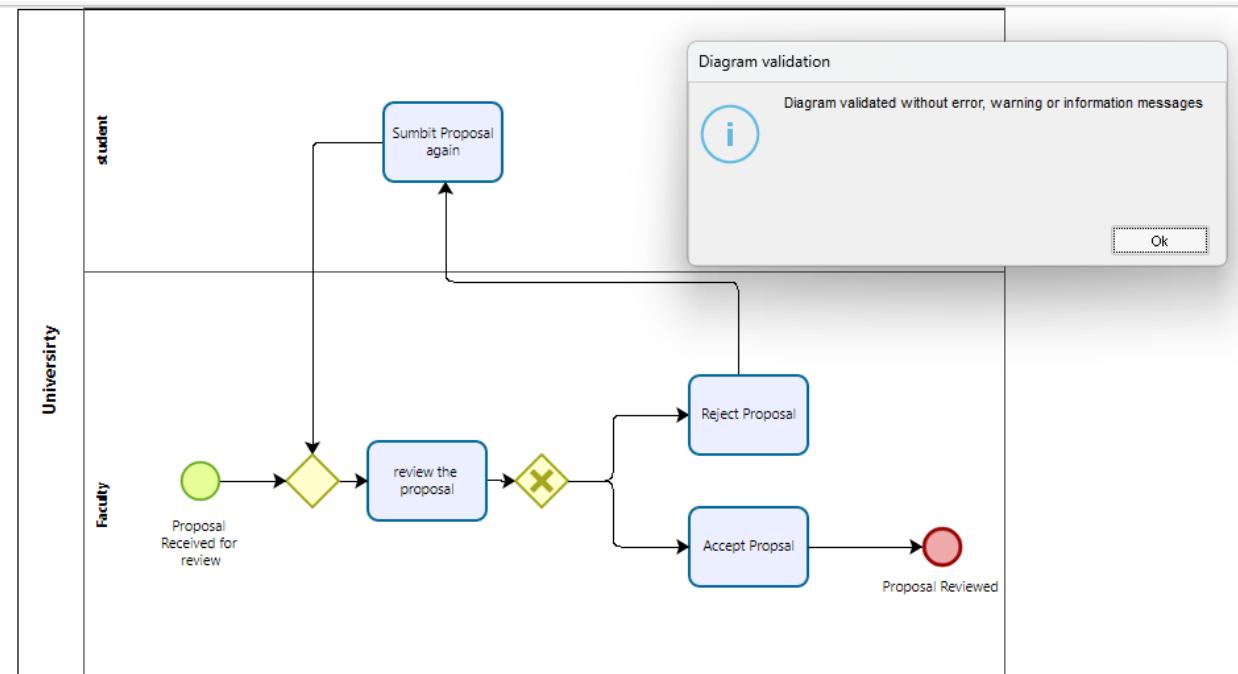
## Tools

- Final Project Report
- Live Project/System
- Presentation Software
- LMS (for final grade entry)

**Importance** The external evaluation ensures fairness and maintains high academic standards. It provides an objective assessment of the project's quality, free from any internal bias. This validates that the student's work meets a standard that is recognized both within and outside the university

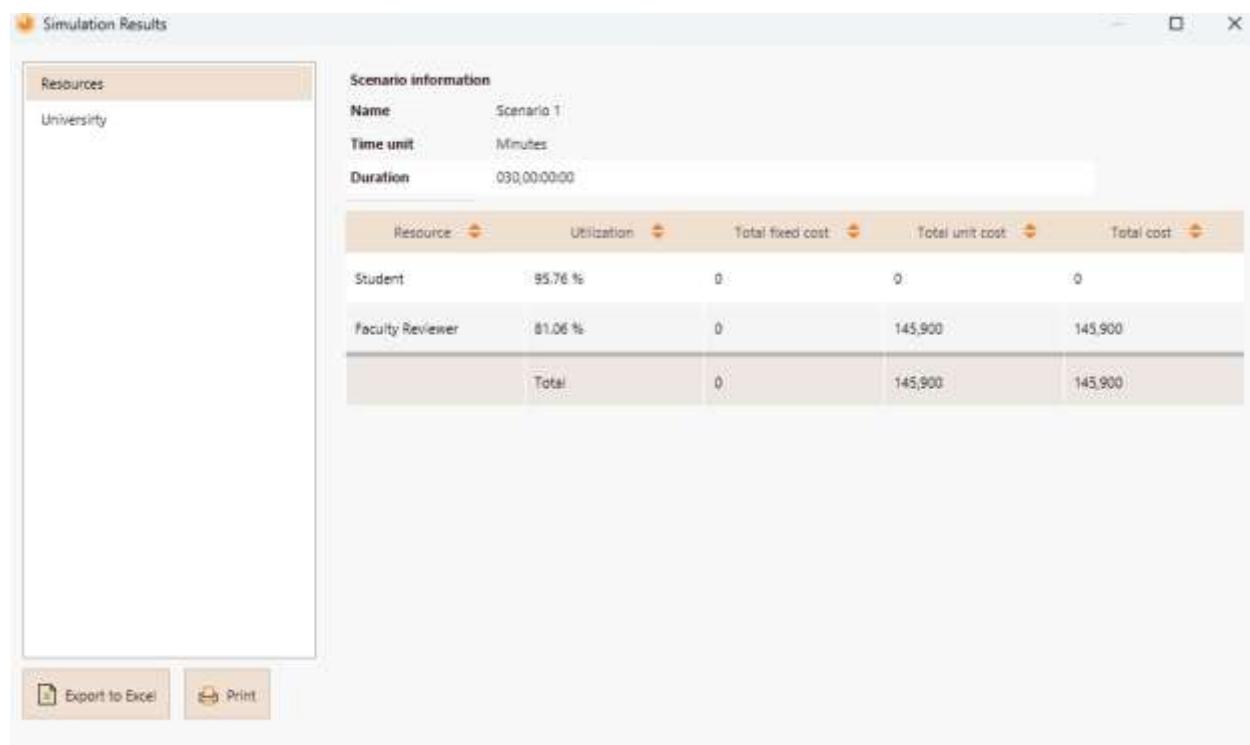
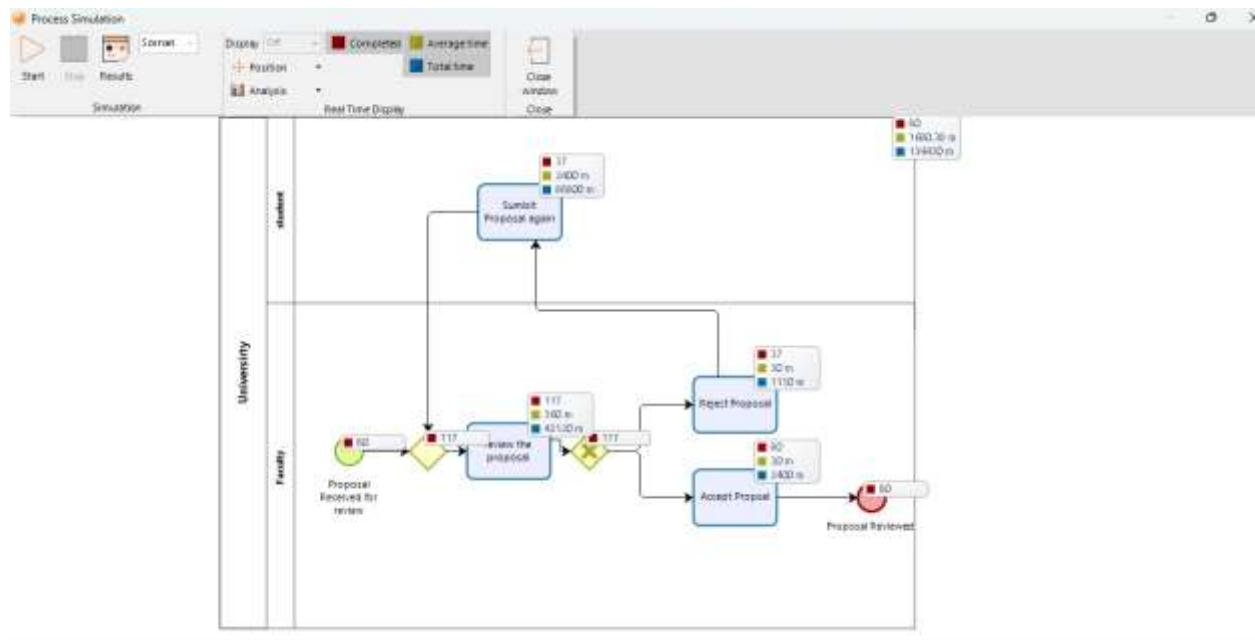
# Process 1: Proposal Review

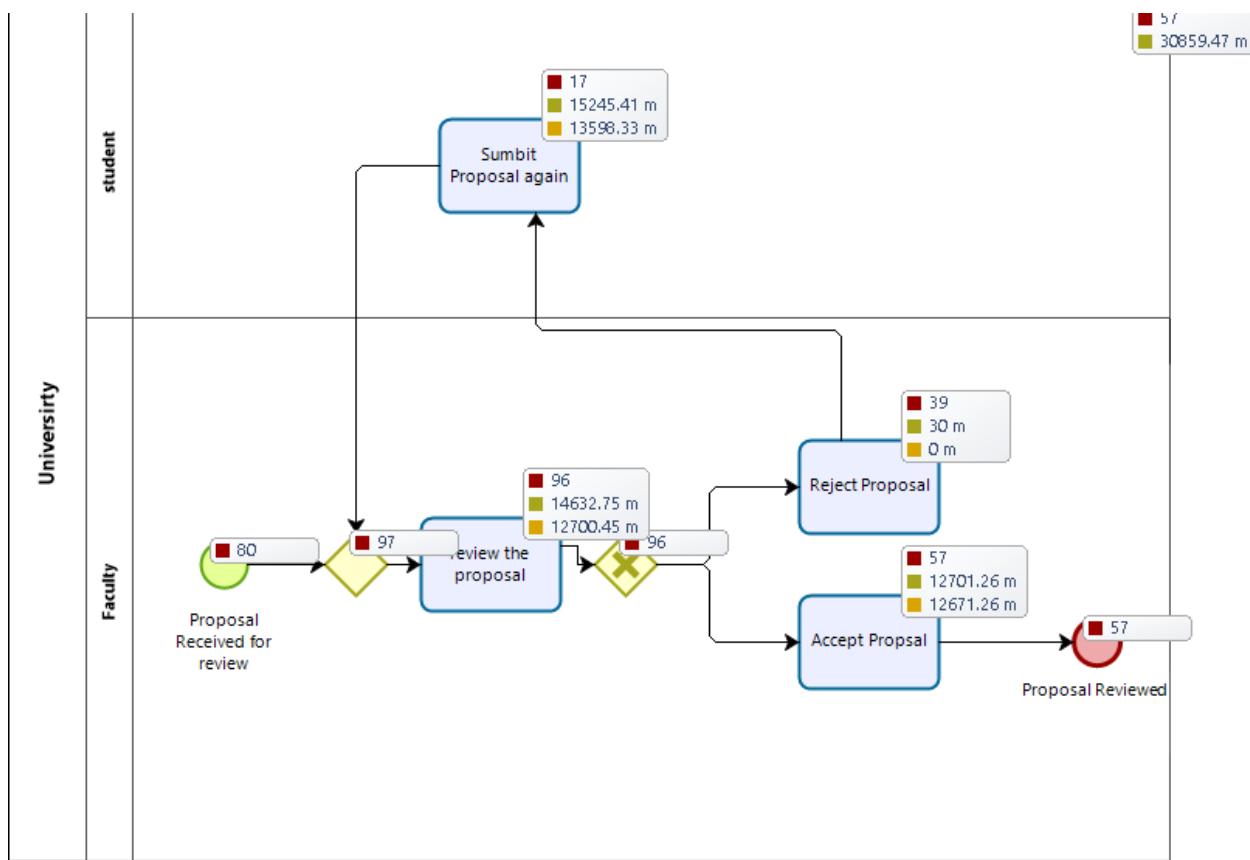
## Process Validation



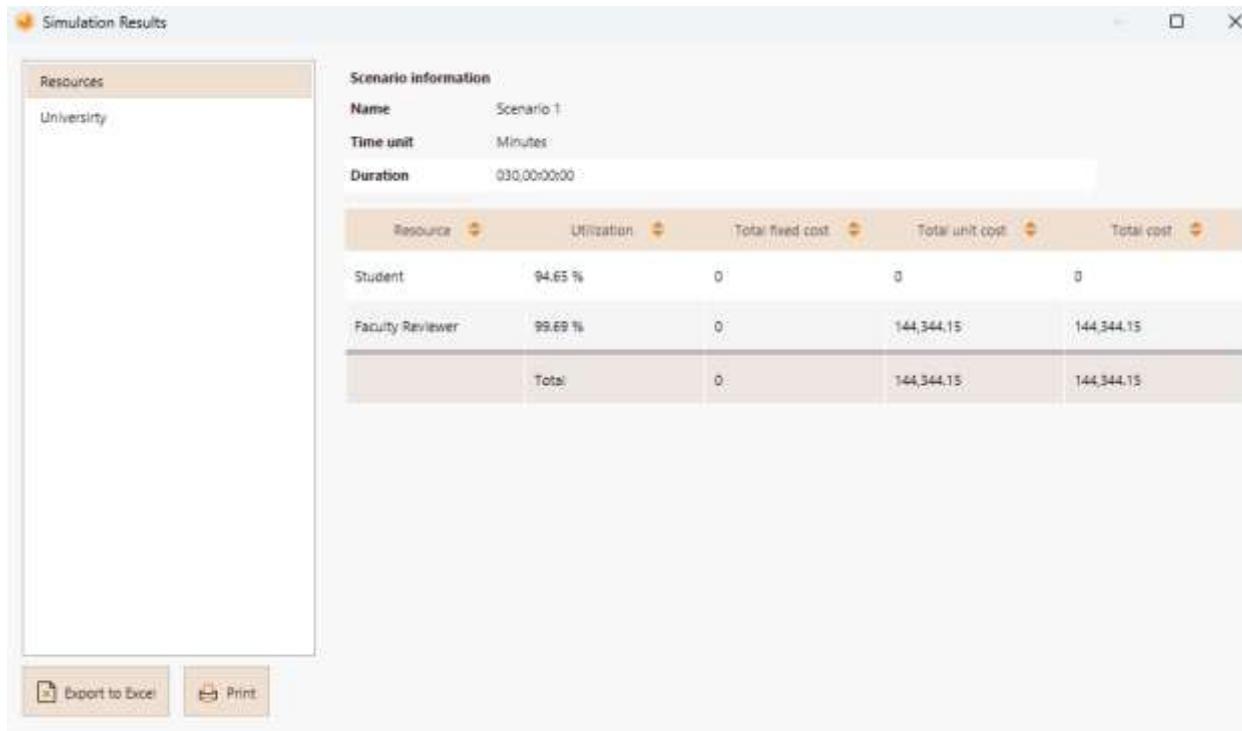
## Time and Resource Analysis

Scenario information							
Name	Scenario 1						
Time unit	Minutes						
Duration	030,00:00:00						
Name	Type	Instances completed	Instances started	Min. time	Max. time	Avg. time	
University	Process	80	80	6h 30m	9d 23h	1d 4h 22s	
Reject Proposal	Task	37	37	30m	30m	30m	
Accept Propsal	Task	80	80	30m	30m	30m	
Submit Proposal again	Task	37	37	1d 16h	1d 16h	1d 16h	
Proposal Received for review	Start event	80					
ExclusiveGateway	Gateway	117	117				
ExclusiveGateway	Gateway	117	117				
review the proposal	Task	117	117	6h	6h	6h	
Proposal Reviewed	End event	80					





## Calendar Analysis

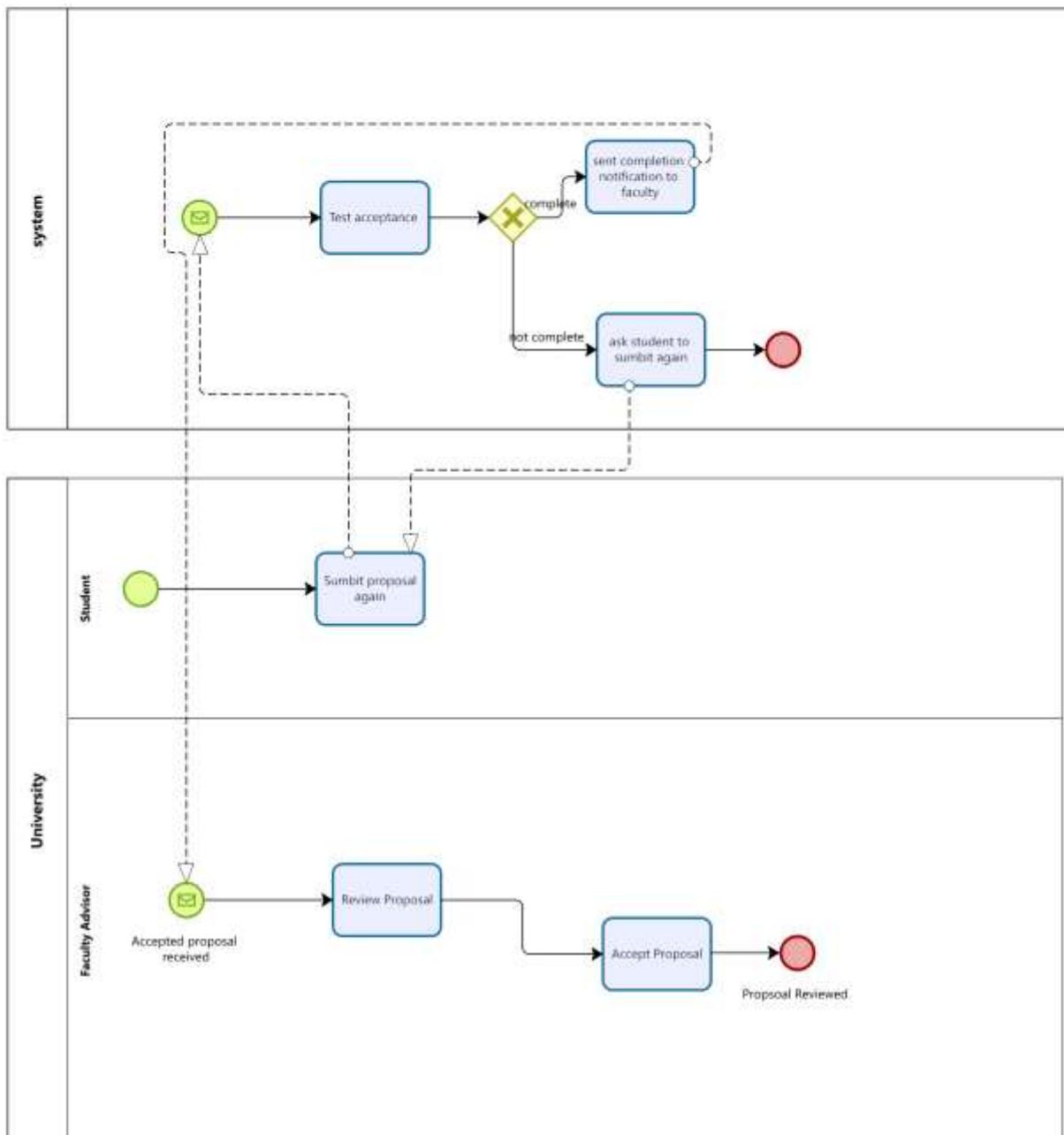


## **Analysis of As-Is Simulation Results**

The As-Is simulation results reveal two major performance issues within the process:

1. Cost Bottleneck: The “*Review Proposal*” task incurs a cost of \$300 per instance, representing approximately 96% of the total variable process cost. This indicates that the reviewing stage is the primary driver of overall process expenses.
2. Rework Bottleneck: A 46.25% rework rate results in 37 additional review cycles, each costing \$300. This rework not only inflates total costs but also extends the cycle time for those 37 students by approximately 4 days, causing significant process inefficiency TO be model

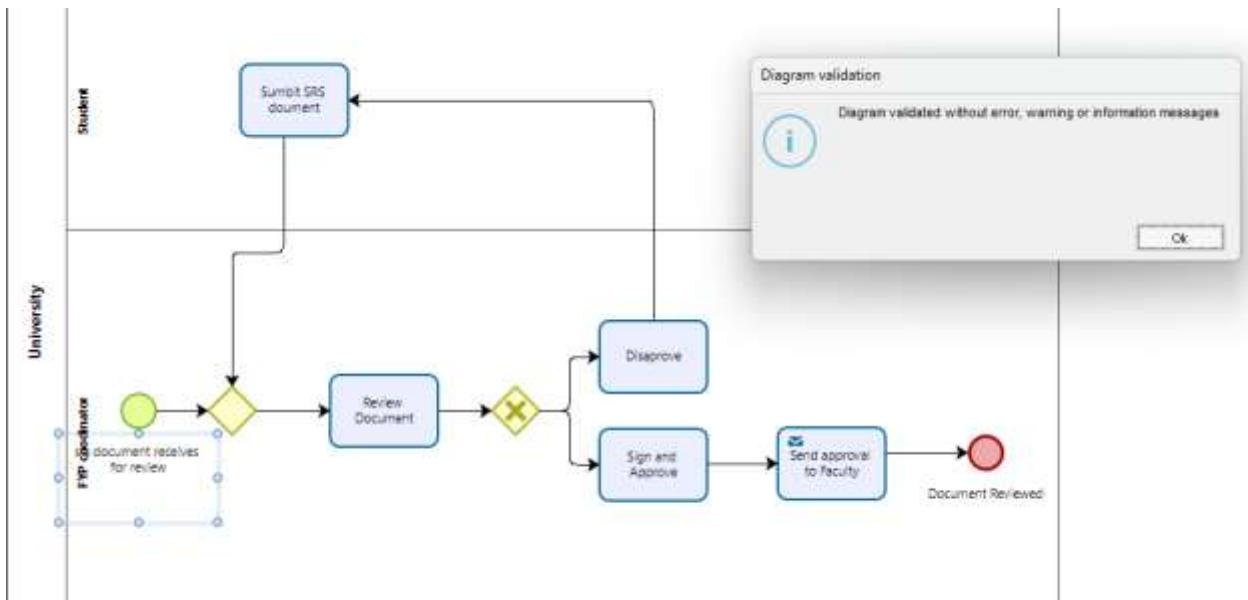
## To be Model



Scenario information								
Name	Scenario 1							
Time unit	Minutes							
Duration	030.000000							
Name	Type	Instances completed	Instances started	Min. time	Max. time	Avg. time	Total time	
University	Process	80	138	30m	6h 30m	6h 18m	21d	
Submit proposal again	Task	22	60	30m	30m	30m	11h	
Accept Proposal	Task	58	58	30m	30m	30m	1d 5h	
Review Proposal	Task	58	58	8h	8h	8h	1d 8h	
Proposal Reviewed	End event	58						
NoneStart	Start event	80						
Accepted proposal received	Start event	58						

## Process 2: SRS document Review

### Process Validation

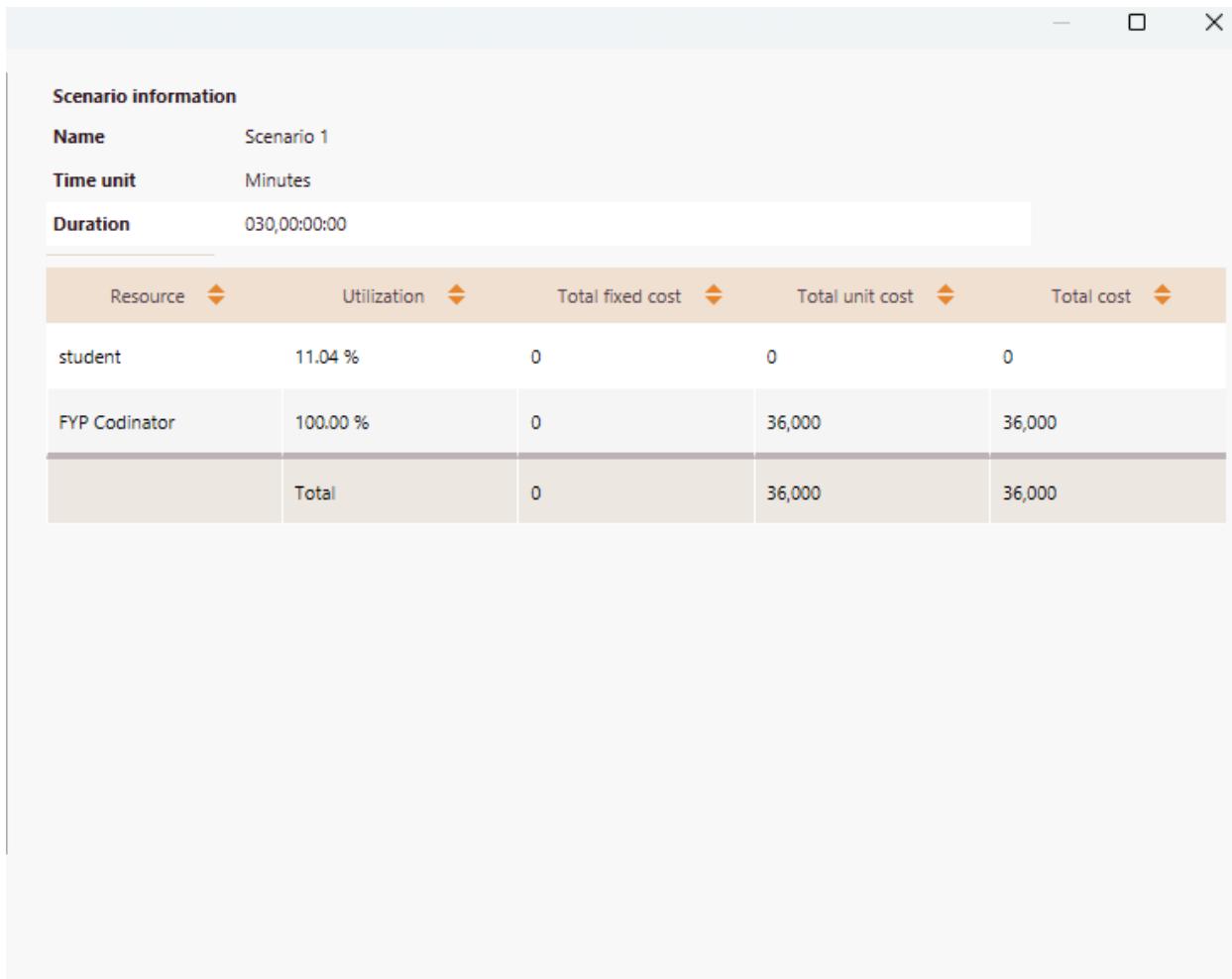


## Time/Resource Analysis

Scenario information								
Name	Scenario 1	Time unit	Minutes	Duration				
Duration	030,000:00							
Name	Type	Instances completed	Instances started	Min. time	Max. time	Avg. time	Total time	
University	Process	80	80	9h	2d 6h	1d 14h 38m 15s	122d 3h	
ExclusiveGateway	Gateway	214	214					
Submit SRS document	Task	134	134	8h	8h	8h	44d 16h	
Sign and Approve	Task	80	80	30m	30m	30m	1d 16h	
Disapprove	Task	134	134	30m	30m	30m	3d 19h	
Send approval to Faculty	Task	80	80	30m	30m	30m	1d 16h	
Review Document	Task	214	214	8h	8h	8h	71d 8h	
Document Reviewed	End event	80						
ExclusiveGateway	Gateway	214	214					
SRS document receives for review	Start event	80						

Scenario information					
Name	Scenario 1	Time unit	Minutes	Duration	
Duration	030,00:00:00				
Resource	Utilization	Total fixed cost	Total unit cost	Total cost	
student	11.04 %	0	0	0	
FYP Codinator	100.00 %	0	36,000	36,000	
	Total	0	36,000	36,000	

## Calendar Analysis

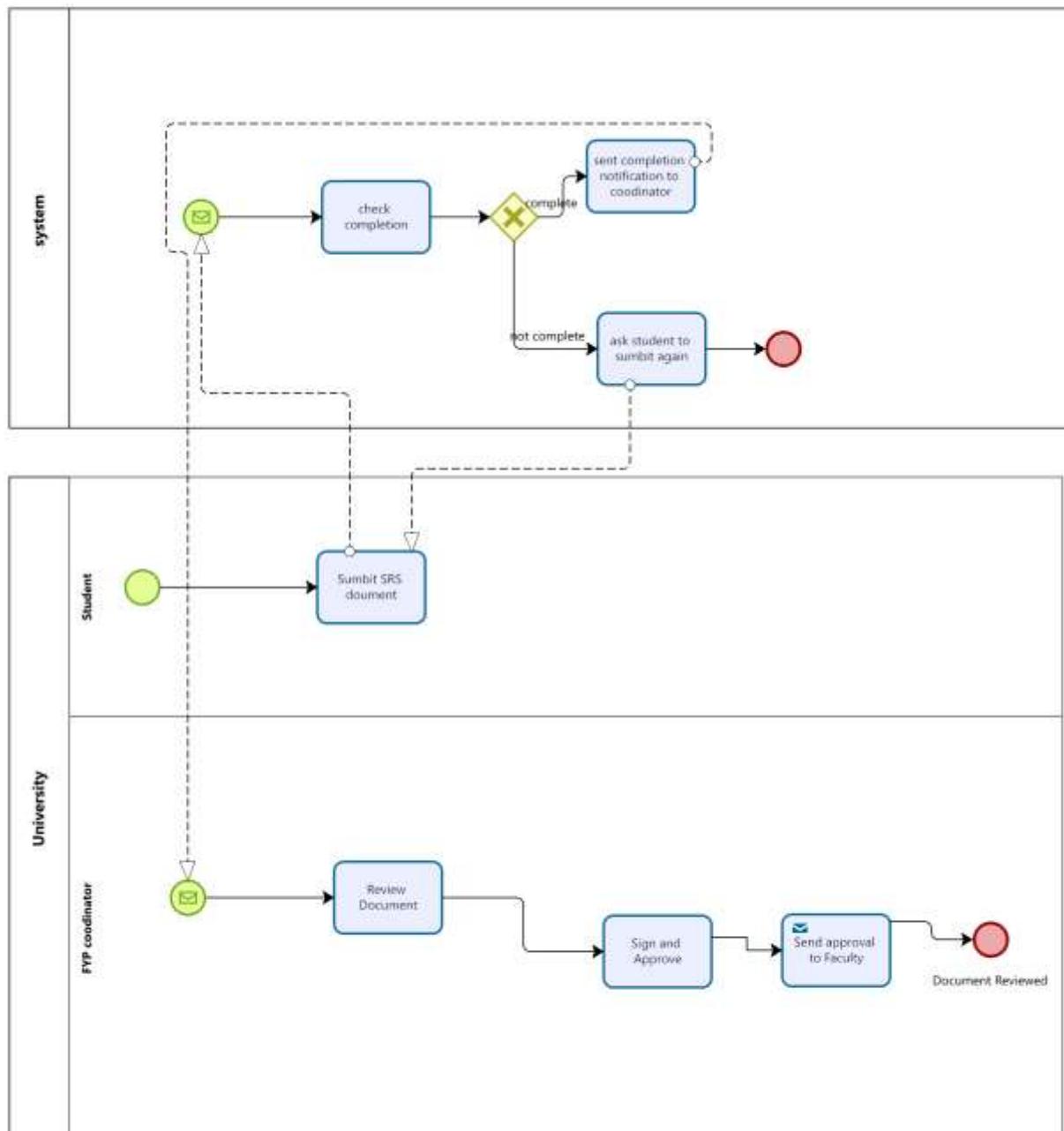


## As-Is Analysis

### Critical Bottleneck: FYP Coordinator Utilization

- **Utilization:** 100% — Critical Bottleneck
- **Effect:** Causes a significant queue buildup and delays across the entire process, as all proposal reviews depend on this single over utilized resource.
- **Impact:** Acts as a single point of failure, preventing the process from scaling or accommodating additional workload efficiently.

## To be Model



Scenario information								
Name	Scenario 1							
Time unit	Minutes							
Duration	050,00:00:00							
name	Type	instances completed	instances started	Min. time	Max. time	Avg. time	Total time	
University	Process	80	125	30m	9h	5h 16m 52s	17d 14h 30m	
Submit SRS document	Task	35	80	30m	30m	30m	17h 30m	
Sign and Approve	Task	45	45	30m	30m	30m	22h 30m	
Send approval to Faculty	Task	45	45	30m	30m	30m	22h 30m	
Review Document	Task	45	45	8h	8h	8h	15d	
Document Reviewed	End event	45						
NoneStart	Start event	80						
MessageStart	Start event	45						