

Software Requirements Specification

for

Purchase and Store- Procedures

Prepared by:

YASH PRATAP SINGH (21BCS248)

ANIKET CHAUDHARI (21BCS021)

MOHIT SAINI (21BCS134)

RISHABH GUPTA (21BCS172)

VAIBHAV SINGH (21BCS232)

STUDENT MENTOR:

SIDDHARTH TANDON (21BCS200)

TEACHER MENTOR:

Dr. Durgesh Singh

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1. Introduction

1.1 Purpose

There exists a lot of time overhead and paper-work involved in the process from indent filing of stock to its final issuance to the indenter .The whole process is quite cumbersome and also inconvenient for different actors involved in this process. With the use of Purchase and Store, the whole notion of indent filing would undergo a major shift from the paper-work based approval of stocks to online.

The project aims at designing and implementing a user-friendly approval of filed indent, which addresses the above-mentioned shortcomings of the traditional system. It would also cater to the needs of different classes of users, i.e., Employee(s), Head(s), Director, Registrar, Purchase Officer, and Dealing assistant.

1.2 Module Scope

The Scope of the Purchase and Store Procedures includes:

- Providing a means for filing an indent.
- Providing a means for tracking the status of the filled indent.
- Providing secured means to get the indent approved.
- Providing a means to keep track of stocks procured/present.

1.3 References

1. [Indent Form](#)

2. Overall Description

2.1 Module Perspective

Indenter (faculty/staff) has a web-based user interface through which they can interact with the Purchase and Store Procedures and perform indent filing. There is a login page for the users (faculty/staff) from where they can log into their accounts. After successfully logging into the account, the user can file an indent for the required product by filling up the indent form and forwarding it to his head/boss. Indentors can also view the status of its approval by higher authorities. This form is part of the employee-side interface.

Higher authorities (Head/Director) also have a web-based user interface through which they can interact with this module and view the received application of indent filed by the indent. He/She can also give a remark for its approval/rejection. These form the part of the head/director interface.

The purchasing officer also has a web-based user interface through which he/she can view the approved application and check the current availability of funds with the corresponding department to give it financial approval.

The dealing assistant has a web-based user interface through which he/she can maintain the entry of procured stocks in the database.

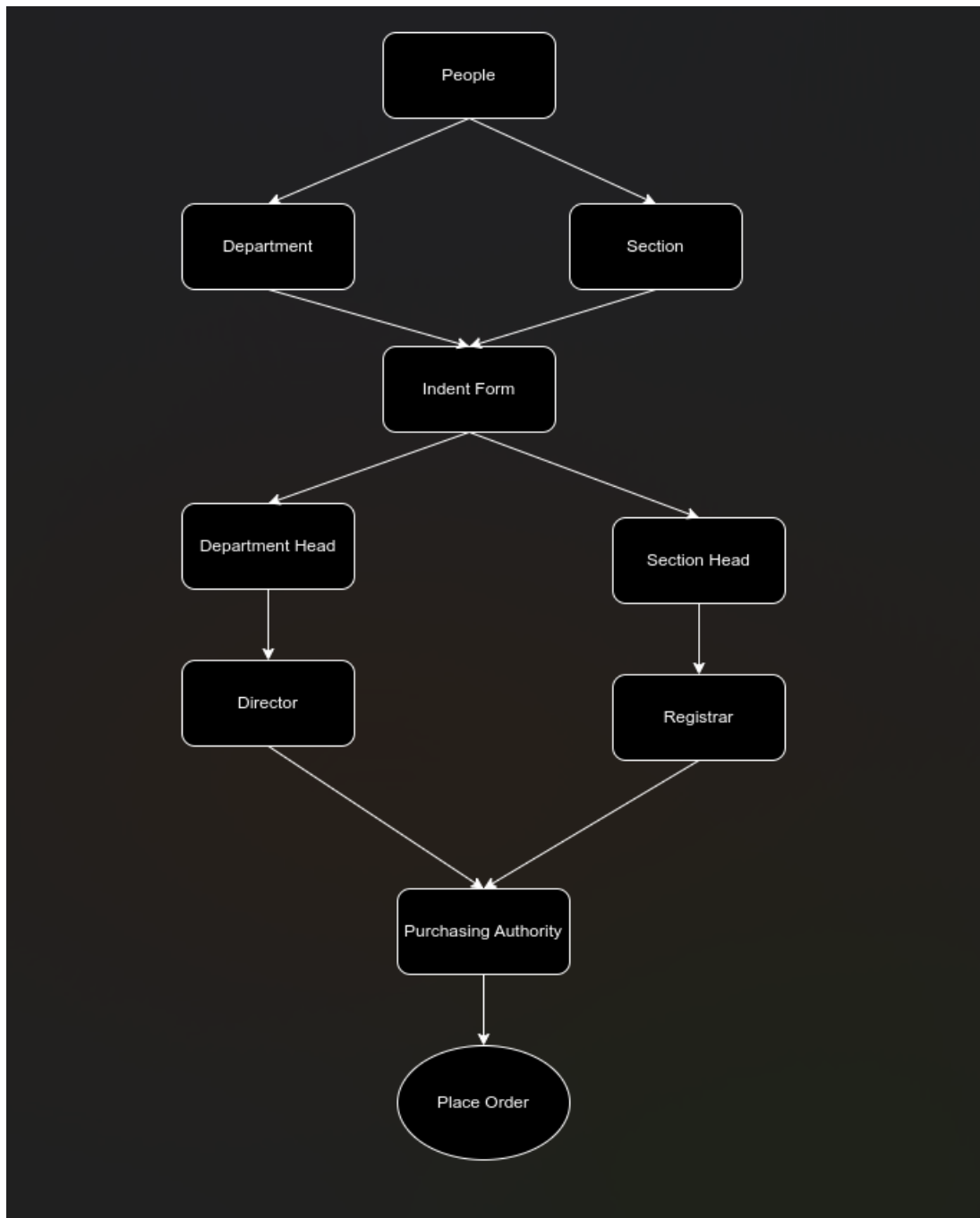
Finally, the bill payment will be processed by the account section.

2.2 Module Functions

This module can be used to file an indent by faculty/staff members, get the indent approved by authorities, manage stocks, and ensure a transparent system to keep track of the application status and payments involved.

An indenter is allowed to fill indent form(s), which will be sent for approval to the concerned person (Director/Registrar) after approval, the procurement procedure will be initiated, and when the items(s) are delivered, an entry of procured items will be made in stock tables followed by payment for the items received.

3. Flow Diagram



Following are the users of the module

Indenter: An indenter is a person serving the PDPM-IIITDM Jabalpur in some capacity, like a faculty or a staff, and should have a PF number and

an official institute email ID, which should be used for accessing the system.

Approver: An approver is a person who will approve the indent filed by the indenter, depending on the indenter, the approver can be the Director (in case of faculty) and Registrar (in case of staff), in some cases the file needs to be approved by an intermediate authority (like HOD) before it is sent to the upper authority.

Purchasing Officer: The person responsible for procurement of the items which have been approved by authorities.

4. System Features (Functional Requirements)

Here we require a file tracking system for all the interfaces for file forwarding. We also need a notification list to check the latest application we received. We need to allow only authorized persons to log in (secured login) through the module. We also need an accept or reject option only for the head/director. The designated person should only do the procurement stock entry (dealing assistant) others cannot access the database.

4.1 Indent Filing

➤ Use Case #1: Indent Filing

| | |
|------------------|---|
| UC ID | UC#1 |
| Use case Name | indent_filing |
| Description | This use case specifies filing of an indent by the indenter, after the form is filled it is forwarded to higher authorities for approval. |

| | | |
|---------------------|---|--|
| Actor | Indenter | |
| Precondition | The indenter must be logged into the system. | |
| Main Flow | S NO. Description | |
| Main Flow | | A Purchase and Store Dashboard is displayed initially to the indenter after successful login. |
| | | The system presents the option of filing a new indent or tracking the status of past indents filed. |
| | | An employee selects one of listed options to perform file operations |
| | | Following operations can be performed by an employee: File an Indent: A new indent can be created by filling the indent form by providing all the necessary details. View Indent Status: The Status of a previously filed indent can be viewed by an indenter on the available dashboard. |

| | | |
|-----------------------|---|--|
| | | A successful message is displayed when indent is filed. |
| Post Condition | After operations are successfully performed, they will be reflected in the database. | |
| Alternate Flow | ID. Description | |

| | | |
|------------------------------|--|--|
| Alternate Flow | | All fields are compulsory to be filled. If any field is left empty, an error pops up. |
| | | If the 'cancel' option is selected, then the operation will be aborted, and the system will be redirected to the home page. |
| | | Post-condition – The system displays the initial screen. |
| Global Alternate Flow | | An employee can ‘cancel’ the operation at any time by exercising such an option. |
| | | Post-condition – The system returns to the actor’s Dashboard – initial screen. |

4.2 Indent Approval

➤ Use Case #1: Section Approval

| | |
|----------------------|---|
| UC ID | UC#2 |
| Use case Name | Department/Section Approval |
| Description | This use case specifies the procedure for acceptance/rejection of proposed intent by department/section. |

| | | |
|-----------------------|---|---|
| Actor | Head/Director/Registrar | |
| Precondition | The user must be logged into the system | |
| Main Flow | S NO. Description | |
| Main Flow | | User finds all proposed indents in his Inbox. |
| | | When the user clicks on an indent, he has the option to accept/reject the given indent. Actor can also give remarks if any changes are needed. |
| | | The indenter will be notified about the status(acceptance/rejection) along with the remark. |
| | | If the application is accepted the Purchasing Officer is notified to proceed with procurement of item(s), if rejected the indenter has the option to edit the indent or file a new one . |
| Postconditions | After the indent is approved the procurement procedure is initiated. | |
| Alternate Flow | AF ID. Description | |

| | | |
|-----------------------|--|--|
| Global | | |
| Alternate Flow | | |
| | | Post-condition – The system returns to the employee ‘Dashboard’ – initial screen. |

➤ Use Case #2: Financial Approval

| | | |
|----------------------|---|---|
| UC ID | UC#3 | |
| Use case Name | Financial Approval | |
| Description | This use case describes the procedure for financial approval of indent | |
| Actor | Purchasing Officer | |
| Precondition | The Purchasing officer must be logged in | |
| Main Flow | S NO. Description | |
| Main Flow | | The user finds all proposed indents which are approved by the director/registrar in his Inbox. |

| | | |
|-----------------|--|--|
| | | <p>When the user clicks on an indent, he/she can check for the availability of funds with the corresponding department/section. If sufficient funds are available, then he can give financial approval for the proposed item, otherwise reject it.</p> |
| | | <p>The indenter will be notified about the status(approval/rejection) along with the</p> <p>remark by purchasing officer.</p> |
| | | <p>If the application is accepted, the Dealing assistant is notified to proceed with procurement of item(s).</p> |
| Post conditions | | <p>After approval/rejection, the corresponding status is reflected in the database.</p> |
| Alternate Flow | | <p>AF ID. Description</p> |
| Sub Flow | | <p>The indenter will be notified about the status(approval/rejection).</p> |
| | | <p>Dealing assistant is notified to proceed with the procurement of item(s) after getting financial approval.</p> |
| | | <p>Post-condition – The system returns to the user ‘Dashboard’ – initial screen.</p> |

5. Non functional requirements

User friendly UI

- The Web portal should provide fast real-time transaction updates with minimal latency, aiming for a minimal response time of less than 2 seconds for transaction queries.
- The Web portal should be compatible with all the latest Browsers like Google Chrome, Edge, and Opera Mini.
- The system should be able to handle a minimum of 1000 concurrent users querying transactions simultaneously without significant performance degradation.
- Comprehensive logging should be implemented to capture relevant information for debugging and auditing purposes.

6. Dependency

- File tracking system module

7. Tech Stack

Django:

- Django is a free and open-source, Python-based web framework that runs on a web server. It follows the model–template–views architectural pattern.

PostgreSQL:

- PostgreSQL is a powerful open-source relational database management system known for its extensibility, scalability, and robust support for complex queries, making it suitable for a wide range of applications.