**Bike Accessories Manufacturing and Selling System**

**Detail Document**

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**Use Case 1: CRUD Employee Records**

* **Scope**: Human Resources(HR) Management Sub-System
* **Level**: User-goal
* **Primary Actor**: Human Resource(HR)
* **Stakeholders and Interests**:
  1. HR: Keeping employee records (Id, Password, Role, Performance rating & Salaries) up-to date and safe.
  2. Employees: To be informed about their roles and credentials crucial for their authentications.

**Preconditions:**

HR should be authenticated and has part of admin privileges.

**Success Guarantee:**

Employee record is created, read, updated and deleted successfully in database.

**Main Success Scenario:**

1. HR logs-in into their system.
2. Employees Record is shown with options of CRUD operation (Add, Update & Delete).
3. Selecting ADD would prompt to enter: Name, Password, Role, Contact information.
4. After Add operation System would automatically provide employee with Id, save the new employee record and display the records with others.
5. Selecting UPDATE will allow to modify HR Employee’s Password, Role and Contact Information.
6. Selecting DELETE will remove an employee prompting that XYZ employee is no Longer Part of Mian Corporation.

**Extensions (Validations):**

* **III a.** System should not allow to add, if there are already One of following: Manger, Quality Supervisor and Shopkeeper; don’t allow to allot this role.
* **IV a.** System should not allot same ids to more than one employee.
* **Va.** System should not allow to update/modify, if there are already one of following: Manger, Quality Supervisor and Shopkeeper.
* **VI a.** System should prompt a warning and asking HR DOB (date of birth), before deleting one of following: Manger, Quality Supervisor and Shopkeeper.

**Special Requirements:**

* Only HR should be able perform CRUD operations (for security reasons).
* System should log changes made to employees records.

**Use Case 2: Employee Complain Registrations**

* **Scope**: HR Management System
* **Level**: User-goal
* **Primary Actor**: HR
* **Stakeholders and Interests**:
  1. Employees: filing complains to be heard and handled fairly.
  2. HR: registering employees complains and providing a resolution.
  3. Manager: reviewing complains and resolution for implementation for better work environment

**Preconditions:**

HR is logged-In and has access to Employee records.

**Success Guarantee:**

After Complaint is saved with proposed solution and forwarded to the manger.

**Main Success Scenario:**

1. Employee reaches out HR; provides Id and Complaint.
2. HR open Complain Form and form prompts for Employee ID and date.
3. With employee id, system auto-fills employee name and contact information.
4. HR writes the complaint.
5. HR writes proposed solution.
6. Form is saved and is accessible by manger too.

**Extensions (Validations):**

* **II a.** Show if Employee ID even exist.
* **IIb.** Check if date is younger than the last complaint date

**Special Requirements:**

* Only HR submit complaints.
* If HR cannot come with a resolution, system should auto-file “Out of HR bond” e.g. complain is about management hierarchal structure.

**Use Case 3: Employee Salary Calculation**

* **Scope**: HR Management System
* **Level**: User-goal
* **Primary Actor**: HR
* **Stakeholders and Interests**:
  1. Supervisor: Sends out rank-based evaluations of employee’s (performance, overtime & bonus).
  2. HR: Wants accurate, automatic salary based on preset conditions.
  3. Employees: Expecting given fair salary which is also transparent.

**Preconditions:**

HR is logged-In and is given access to Supervisor’s Employee Ratings.

**Success Guarantee:**

After Employees’ salaries are calculated based on ratings of performances, over times and bonuses.

**Main Success Scenario:**

1. HR selects Salary Calculation.
2. System loads recent employee scores submitted by Supervisor.
3. System calculates amount by each rating (performance, overtime & bonus).
4. System calculates total salary.
5. HR gives out salary after employee tells their passwords.

**Extensions (Validations):**

* **II a.** Check if ranking data is submitted for each employee
* **III a.** Check if preset values are set
* **V a.** After salary is given out check it as given so no one is paid more than what is theirs.
* **V b.** Check if credentials match of the employee.

**Special Requirements:**

* HR should not be allowed to modify rating.
* Each Component rating (performance, overtime & bonus) should have separate columns of total amount so reports can be generated.

**Use Case 4: Employee Login interface**

* **Scope**: Login with recovery system
* **Level**: User-goal
* **Primary Actor**: Manger, Supervisor & Shopkeeper
* **Stakeholders and Interests**:
  1. Employees (Manger, Supervisor & Shopkeeper): Access their personal dashboard to perform their job required functions accordingly using automated system.
  2. HR: providing or resetting modifiable credentials upon request.

**Preconditions:**

Employee (Manger, Supervisor or Shopkeeper) are already registered in system with valid Id by HR beforehand.

**Success Guarantee:**

After Employees’ successfully logs-in and can access their respective interface even after new credentials are provided by HR upon on request.

**Main Success Scenario:**

1. Employee opens login system.
2. Employee can click forget password:
3. Employees enters their ID
4. A request is made to HR to reset password
5. HR reset password and sends to employee listed contact Info
6. Employee receives new password.
7. Employees enters their ID and Passwords.
8. System verifies Credentials.
9. System checks Role of employee (Manger, Supervisor or Shopkeeper).
10. System redirects employee to their interface.
11. Employee carry on with their respective tasks.

**Extensions (Validations):**

* **II iii a.**  HR updates changes credentials in Employee Records to sync system.
* **III a.** Prompts “Invalid Id” if ID doesn’t match
* **III b.** Prompts “Inaccurate Password” if id match but password doesn’t.

**Special Requirements:**

* After resting of passwords by HR, email should be send to employee.
* Each Interface of employee should be accessed by just respective employees with those roles.

**Use Case 5: Employee Ranking System**

* **Scope**: Evaluation and Reporting System
* **Level**: User-goal
* **Primary Actor**: Supervisor
* **Stakeholders and Interests**:
  1. Supervisor: wants to fairly assess employee work and submit accurate ratings
  2. HR: view these ratings to pay salaries.
  3. Employees: Expect fair record keeping for their efforts and hours worked.

**Preconditions:**

Employees are already part of the system (entered by HR).

**Success Guarantee:**

Rankings are being updated and overtime are submitted to HR successfully.

**Main Success Scenario:**

1. Supervisor logs into the System.
2. Selects Employee Ranking Module
3. Selects Employee from the list
4. Rates Performance Out of 5.
5. Rates Bonus Out of 5.
6. Rate Overtime Out of 10 (which is time overtime is allowed)
7. Repeat for all employees
8. Submit Complete list
9. System Forwards it to HR

**Extensions (Validations):**

* **III a.**  If no employees are found prompt HR to recruit employees.
* **IV,V,VI a.** ranking is within given bound (1-5 or 1-10 for overtime)
* **VIII a.** If supervisor misses one or more employee system prompts to tell that XYZ employee are left too

**Special Requirements:**

* There should also a “leave/vacation/etc.” button should also be included so they are compensated accordingly.
* Not allow Modification after Submission.

**Use Case 6: Tracking & Update Raw Material Usage**

* **Scope**: Raw Material Inventory Management System
* **Level**: User-goal
* **Primary Actor**: Supervisor
* **Stakeholders and Interests**:
  1. Supervisor: Track material usage accurately and in real time.
  2. Manager: Monitor remaining raw material levels in real time for future purchases.

**Preconditions:**

Raw material inventory list is shared by manger.

**Success Guarantee:**

The Stock level of raw material are successfully changed and visible to manger.

**Main Success Scenario:**

1. Supervisor logs into the System.
2. Opens “Raw Material Inventory” section
3. List shows current level of stocks of material along with material name and unit
4. Selects raw material currently under production.
5. Supervisor enter amount of material used
6. System subtract that amount from existing quantity
7. System auto updates new list
8. Supervisor can repeat steps as much time he wants

**Extensions (Validations):**

* **III a.** In case of no material prompt Manager to provide material.
* **V a.**  Entered used amount should not exceed existing amount
* **VII a.** System should not fail while updating (entry is saved in temporary queue and retried)

**Special Requirements:**

* Supervisor cannot Increase amount of material (only reduce)

**Use Case 7: Record Finished Accessories**

* **Scope**: Recording Manufactured Products System
* **Level**: User-goal
* **Primary Actor**: Supervisor
* **Stakeholders and Interests**:
  1. Supervisor: Wants to Report Finished goods efficiently after manufacturing.
  2. Manager: needs this list to ready and dispatch accessories.

**Preconditions:**

Raw materials are manufactured into finished accessories. And list of accessories names already exist to update.

**Success Guarantee:**

The Stock level of accessories are successfully increased and visible to manger.

**Main Success Scenario:**

1. Supervisor logs into the System.
2. Opens “Record Finished Accessories” section
3. List shows current level of stocks of material along with material name and unit
4. Selects accessories name which is to be updated.
5. Supervisor enter quantity of accessories manufactured.
6. Supervisor clicks confirm
7. System adds that amount to the existing quantity
8. System auto updates new list
9. Supervisor can repeat steps as much time he wants

**Extensions (Validations):**

* **III a.** If no accessories are manufactured show zero quantity for all
* **VII a.** System should not fail while updating (entry is saved in temporary queue and retried)

**Special Requirements:**

* Supervisor cannot decrease amount of accessories (only increase)
* Only supervisor is allowed to increase quantity not manager.
* Quantities and accessory types must match pre-approved catalog

**Use Case 8: Resolve Employee Complaints**

* **Scope**: Employee Management System
* **Level**: User-goal
* **Primary Actor**: Manager
* **Stakeholders and Interests**:
  1. Manager: Resolving employee issues efficiently to maintain positive work life environment among employees.
  2. HR: Wants complaints to be addressed by appropriate authority.
  3. Employees: Notified about action being taken on their complaints.

**Preconditions:**

Manager Should be logged in and HR has to submit employee complaints before hand.

**Success Guarantee:**

After issue is marked as Resolved or employee is notified.

**Main Success Scenario:**

1. Manager logs into the System.
2. Opens “Employee Complains” section
3. List shows current employee id, contact information, complain and a solution to it
4. Selects Complaint
5. Manager try to resolve the issue manually.
6. Mark the status of complaint
7. Notifies using contact info.
8. Repeat as long as he/she want to.

**Extensions (Validations):**

* **III a.** If no complaints show “Good Job! No complains”
* **VI a.** If not marked resolved keeps showing
* **VI b.** if resolved delete from list

**Special Requirements:**

* Manager should contact HR if a complaint or solution is unclear.

**Use Case 9: Managing Raw Material Inventory**

* **Scope**: Raw Material Inventory Management
* **Level**: User-goal
* **Primary Actor**: Manager
* **Stakeholders and Interests**:
  1. Manager: Ensure sufficient supply for manufacturing with more effective automation.
  2. Supervisor: needs up to date stock to avoid manufacturing.

**Preconditions:**

Manager should be logged in and a list of Raw Material name should exist.

**Success Guarantee:**

Crud operations are done successfully on raw materials.

**Main Success Scenario:**

1. Manager logs into the System.
2. Opens “Raw Material Inventory” section
3. Three Options are shown;
4. View
5. Order
6. Order Status
7. Selecting “View” shows current Raw material’s name and quantity
8. Selecting “Order” shows Raw material’s name
9. Select name of raw material
10. Enter quantity to order
11. Click confirm
12. This order is status is automatic set to “in process”
13. Selecting “Order Status” shows status of orders
14. Mark status of order
15. Marking “Processed” would update Inventory quantity

**Extensions (Validations):**

* **V a.** should not be more preset maximum allowed
* **VI a.** If not marked “Processed” keeps showing
* **VI b.** if “Processed” delete from list

**Special Requirements:**

* Only manger should be able to order raw material

**Use Case 10: Managing Finished Accessories Inventory**

* **Scope**: Accessories Inventory Management
* **Level**: User-goal
* **Primary Actor**: Manager
* **Stakeholders and Interests**:
  1. Manager: Ensure sufficient supply for retail with more effective automation.
  2. Shopkeeper: needs timely accessories stock for customers.
  3. Supervisor: provide finished accessories.

**Preconditions:**

Manager should be logged in and Supervisor should have submitted a list of accessories.

**Success Guarantee:**

Crud operations are done successfully on accessories inventory.

**Main Success Scenario:**

1. Manager logs into the System.
2. Opens “Raw Material Inventory” section
3. Three Options are shown;
4. Manufactured product Status
5. Shopkeeper Request
6. View
7. Selecting “Manufactured product Status”
8. Shows list of all Manufactured products
9. Manager selects manufactured product
10. Clicks “Arrive” for each arrived products
11. System adds quantity to current available accessories
12. Selecting “Shopkeeper Request ” shows current Raw material’s name and quantity
13. Select Request
14. Mark “Accept” or “Decline”
15. clicking accept automatically decrease product from the current inventory
16. Clicking decline doesn’t affect inventory
17. Selecting “View” shows current Invnetory

**Extensions (Validations):**

* **V a.** marking Shopkeeper request removes from list
* Unprocessed without marked on status remain same

**Special Requirements:**

* Only manger should be able to Access and change Status of shopkeeper request and manufactured products.

**Use Case 11: Add to Cart**

* **Scope**: Customer shopping module(online / onsite)
* **Level**: User-goal
* **Primary Actor**: Customer
* **Stakeholders and Interests**:
  1. Customer: Wants to add the products detail easily and quickly and can also maintain a list of products for later.
  2. Business: Wants to keep track the all products purchased corresponding to the customers, update the inventory immediately and also in the system simultaneously .

**Preconditions:**

Customers can browse any product. If available, then I can add to cart other wise this is considered as out of stock .

**Success Guarantee:**

The selected items should successfully added to the customers cart corresponding customer account . It can also update , delete , add any item (complete CRUD).

**Main Success Scenario:**

1. **Product Selection:** The customer clicks on a product to view its details.
2. **Product Browsing:** The customer navigates the product catalog or search results
3. **Initiate Add to Cart:** The customer selects the “Add to Cart” option available on the product detail page.
4. **System Processing :**

The system verify the product availability .

The system should add the products to the current customer cart.

1. **Confirmation:** The system displays an updated cart summary confirming the addition.

**Extensions (Validations):**

**II a . Out-of-Stock Scenario:**

* + - If the product is no longer in stock, the system will display a message such as “Product not available” and prevent adding the item.

**I a. Quantity Limit:**

* + - If the customer attempts to add a quantity exceeding the available stock, the system prompts with a warning and suggests entering a valid quantity.

**III a. Session Expiration:**

* + - If the customer’s session has expired during the process, the system prompts for re-authentication and then retries the add-to-cart operation.
* **Special Requirements:**
  + The system must update the shopping cart in real time and maintain data integrity in multi-device scenarios.
  + Inventory count updates must be synchronized with the cart operation to avoid overselling.

**Use Case 12: Check out**

* **Scope**: customer shopping module (online)
* **Level**: User-goal
* **Primary Actor**: Customer
* **Stakeholders and Interests**:
  1. Customer : Expects a smooth check out process with clear details about customer and list of products shipping details and also payment method .
  2. Business : Requires seamless order processing , accurate sells proceesing , correct way of tracking all payments (online , COD) .
  3. Payment processor : Ensure secure payments .

**Preconditions:**

The customer has at least one item in their shopping cart.

The customer has provided or is prompted to provide valid shipping and payment information.

**Success Guarantee:**

The order is successfully processed and confirmed; the customer receives an order confirmation and a record of the transaction is saved for fulfillment.

**Main Success Scenario:**

1. **Initiate Checkout:** The customer selects the “Check Out” option from the shopping cart.
2. **Review Order:**

The system displays the list of items with pricing, applicable taxes, and total amount.

The customer reviews and confirms the items.

1. **Enter Shipping information:**

The system prompts the customer to input or confirm shipping address details.

1. **Enter Payment details:**

The customer provides payment details (credit/debit card, digital wallet, etc.)

1. **Validation and processing:**

The system validates the shipping and payment information.

The payment gateway processes the transaction.

1. **Order confirmation:**

Once verified, the system confirms the order, generates an order number, and displays a confirmation message.

A confirmation email is sent to the customer with order details.

**Extensions (Validations):**

**IV a. Payment Failure:**

* + If the payment is declined or fails verification, the system alerts the customer with the appropriate error, allowing them to retry or choose another payment method.

**III a. Invalid Shipping Information:**

* + The system performs address validation and informs the customer in case of errors before allowing them to proceed.

**V a. Cart Modification:**

* + If changes are made to the cart during checkout (e.g., item removal or quantity change), the system recalculates totals and prompts the customer to re-confirm details.

**Special Requirements:**

* Secure transmission of sensitive customer payment information (e.g., through SSL/TLS encryption).
* Compliance with applicable payment security standards (e.g., PCI DSS).
* Detailed logging of the checkout process for audit and troubleshooting purposes.

**Use Case 13: Reviews and queries**

* **Scope**: Customer’s UI
* **Level**: User-goal
* **Primary Actor**: Customer
* **Stakeholders and Interests**:
  1. Customer : Want to send reviews of the customers and also can check the rating of the products for surety and trust .
  2. System : Can check the products ratings and reviews and find out the engaging products according to ratings .

**Preconditions:**

The customer must have purchased a product to provide a review.

The product must have an existing review or rating system enabled.

**Success Guarantee:**

The customer’s rating or review is saved, and the updated average ratings and customer reviews are immediately available for query and display.

**Main Success Scenario:**

1. The customer can navigates the reviews / rating section .
2. The system provides the section to input the reviews and can also query any question .
3. Validation and submission:

For review submission, the system validates that the rating is within acceptable bounds and the review text meets any specified requirements (e.g., character limits, profanity filters).

The system verifies the customer’s eligibility (such as confirming purchase history, if necessary).

1. Once submitted the system should update the rating at once in the system.
2. All the reviews should be checked by manger .

**Extensions (Validations):**

**I a. Ineligible Reviewer:**

* + If the system detects that the customer has not purchased the product, it may restrict review submission .

**III a. Input Validation Errors:**

* + If the rating is out-of-range or the review text violates length or content policies, the system prompts the customer to adjust their submission accordingly.

**III b. Query Refinement:**

* + The customer may apply filters (e.g., rating thresholds, sort order) to query reviews; the system processes and displays the refined results accordingly.

**Special Requirements:**

* The system should ensure that submitted reviews are moderated to prevent inappropriate content.
* Real-time updates to the average rating and review listing to reflect the latest customer feedback.
* Integration with customer profile verification to maintain review authenticity.

**Use Case 14: Check Out Receipt**

* **Scope**: Shopkeeper sales module
* **Level**: User-goal
* **Primary Actor**: Shopkeeper
* **Stakeholders and Interests**:
  1. Shopkeeper: Wants an easy and reliable module to check out the receipts and finalize the bill according to the customer satisfaction.
  2. Customer : Wants accurate and clear bill (receipt) of all its purchased items as a proof of purchasing .
  3. System : Should automatically manage the inventory and update the products according to the purchases and also track all payments perfectly with its corresponding customer ids .

**Preconditions:**

The shopkeeper is logged into the sales system and has access to the transaction module.

The shopping cart (or point-of-sale system) reflects the current transaction.

**Success Guarantee:**

A receipt is generated detailing the sold items, prices, taxes, and total amount.

Transaction is recorded in the system and printed or emailed to the customer.

**Main Success Scenario:**

1. The shopkeeper finalize the receipt by confirm it the bill of items .
2. The system displays an itemized list of products, prices, discounts, tax calculations, and total amount. Can also be updated .
3. The shopkeeper confirm the payment method from the customer .
4. The system generates a receipt that includes the transaction details, date, time, and unique transaction ID.
5. The transaction stored in the system for auditing and inventory management system .

**Extensions (Validations):**

**III a. Payment Failure:**

* + If the payment fails, the system prompts the shopkeeper to retry or select an alternate method.

**II a. Correction Request:**

* + If an item is returned or changes are required before finalizing, the shopkeeper can modify the transaction details. The system calculates the totals before generating the final receipt.

**IV a. System Error:**

* + In the event of a system error during receipt generation, the shopkeeper is notified immediately and instructed to reinitiate the transaction .

**Special Requirements:**

* Secure and reliable connectivity with the inventory and financial systems is necessary to update stock and record sales.
* Compliance with local taxation rules and receipt formatting requirements.

**Use Case 15: Check Demand Product**

* **Scope**: Inventory Management
* **Level**: User-goal
* **Primary Actor**: Shopkeeper
* **Stakeholders and Interests**:
  1. Shopkeeper: Shopkeeper can keep track the products in demands and add these products to the list of products to be in stock .
  2. Business: can keep track the daily sales and find the most sales product .

**Preconditions:**

Shopkeeper should logged in the inventory management system and check the all products in demand or to be stocked earlier.

**Success Guarantee:**

A report is generated for all products may be sorted by number of sales .

The shopkeeper can make decision to order the stock according to the demand of sales of products .

**Main Success Scenario:**

1. The shopkeeper can enter the option of “Check demand product “ from dashboard.
2. The system should retrieve the list of history of all saled items .
3. The system can sort the items according to demand of the products .
4. The shopkeeper will check the history and also can order and can automatically trigger the restock .

**Extensions (Validations):**

* **II a.** The error occurred fetched the demand products and may be incorrect items retrieved .
* **IV a.** There is a issue trigger the restock button or option .

**Special Requirements:**

* Data accuracy and real-time synchronization .
* History of sale products and how much ? and what thew demand all the things must be true and accurate .