

Gujranwala Inventory Futuristics Trade (GIFT) System



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Requirement Specification:

1. Business Requirements:

According to the business requirements collected from the Client:
The System should be able to:

- BR-01:** Allow the computer operator to login to the system.
- BR-02:** Allow Computer operator to add product in inventory.
- BR-03:** Allow Computer operator to add discount on total amount.
- BR-04:** Show out of stock alert when product will be less than 1.
- BR-05:** Update inventory (when sell or purchase products).
- BR-06:** Allow Computer operator to add products to cart.
- BR-07:** Calculate bill automatically (using products price, quantity, and discount).
- BR-08:** Remove selected product from cart.
- BR-09:** Print the bill.
- BR-10:** Save the bill.

2. User Requirements:

According to the user requirements collected from the Computer Operator,
He/she should be able to:

- UR-01:** Login to the system.
- UR-02:** Add product to the inventory.
- UR-03:** Update the product details in inventory.
- UR-04:** View Product details from inventory.
- UR-05:** Add products to cart.
- UR-06:** Delete Product from cart.
- UR-07:** Search product by product name.
- UR-08:** Print the bill.
- UR-09:** Save the bill.

UR-10: Search/view the bill by its id.

UR-11: Change the Password.

UR-12: Reset the password.

3. Functional Requirements:

System shall provide the facility to:

FR-01: Login to the system.

FR-02: Add product in inventory.

FR-03: View product from inventory.

FR-04: Update product details from inventory.

FR-05: Delete/Remove product from inventory.

FR-06: Search the product by its name.

FR-07: Search the bill by its id.

FR-08: Print the bill.

FR-09: Add discount on total amount.

FR-10: Alert out of stock automatically when quantity is less than 1.

FR-12: Update the inventory (when sell or purchase products).

FR-13: Add products to cart.

FR-13: Remove selected product from cart.

FR-15: Calculate the bill automatically (using products price, quantity, and discount).

FR-16: Save the bill.

FR-17: Change the password.

FR-18: Reset the password.

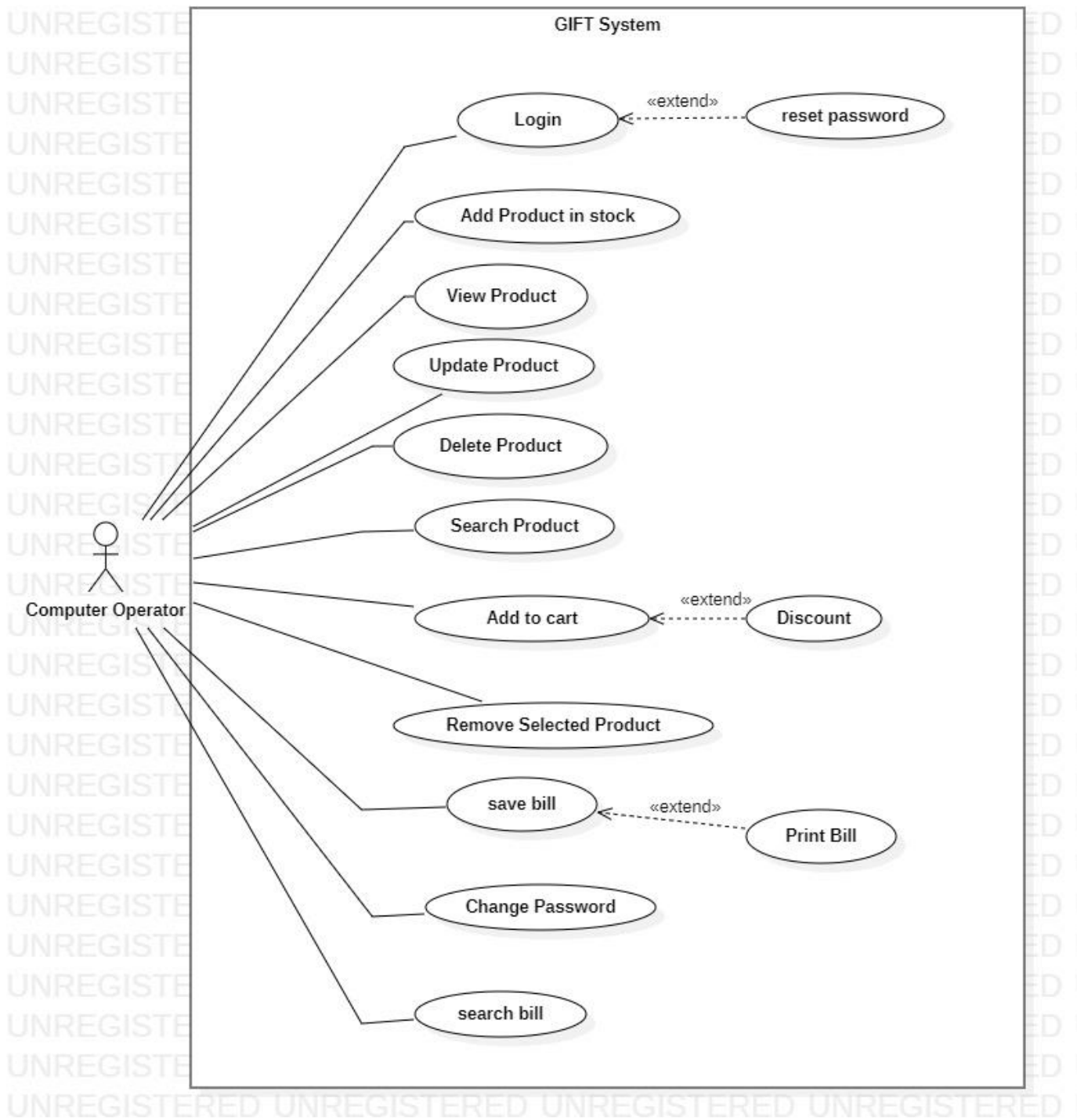
4. Non-Functional Requirements:

NFR-1: Efficiency: - Computer operator search product approximately within 5 seconds.

NFR-2: Efficiency: - Computer operator delete product approximately within 2 seconds.

NFR-3: Efficiency: - Computer operator add the product approximately within 2 seconds.

Use Case Diagram:



Use Case Scenarios:

ID and Name:	Ur-01 (Login)
Created By:	Hamza Aslam
Primary Actor:	Computer Operator
Description:	The Computer Operator will login to the system by using its username and password in the fields and then click on the login button.
Trigger:	When Computer Operator wants to have the access of the system and he want to perform different tasks.
Preconditions:	Pre-01: Computer Operator shall enter his/her username and password. Pre-02: Computer Operator will click on the login button.
Post conditions:	After login, a dashboard will appear.
Normal Flow:	1. The System will display fields to enter username and password. 2. Computer Operator will enter id. 3. Computer Operator will enter password. 4. Computer Operator will click on login button. 5. System will authorize the data from the database. 6. A dashboard will appear. 7. The use case ends.
Alternative Flows:	5A1: System cannot authorize the user: 1. System will generate an error message that display, "You entered invalid username/password. Enter again!" 2. The use case return to step 1.
Exceptions:	Database did not work properly.
Priority:	High
Frequency of Use:	Maximum
Business Rules:	BR-01
Relationship:	N/A
Assumptions:	1. Database is working properly. 2. User login data is in the database.

ID and Name:	UR -02 (Add product in stock)
Created By:	Hamza Aslam
Primary Actor:	Computer Operator
Description:	The Computer Operator will add new products in the stock (Product inventory), by entering its name, description, rate, and quantity. After that Computer Operator will click on add button.
Trigger:	When computer operator wants to add new products in the stock, the data will save of new products in the stock.
Preconditions:	Pre-01: Computer Operator shall enter the name, description, rate, and quantity of the product. Pre-02: Computer Operator will click on the add button.
Post conditions:	After adding the product, a message will appear. (Product added successfully).
Normal Flow:	<ol style="list-style-type: none"> 1. The System will display fields to enter the detail of new product. 2. Computer Operator will enter product name. 3. Computer Operator will enter product description. 4. Computer Operator will enter product price. 5. Computer Operator will enter product quantity. 6. Computer Operator will click on add button. 7. System will store the data to the database. 8. A message will appear. 9. The use case ends.
Alternative Flows:	8A1: System cannot add the product. <ol style="list-style-type: none"> 1. System will generate an error message that display, "You have entered existing product name. Enter again with different name or update the product!" 2. The use case return to step 1.
Exceptions:	Database did not work properly.
Priority:	High
Frequency of Use:	Minimum
Business Rules:	BR-02
Relationship:	Login
Assumptions:	<ol style="list-style-type: none"> 1. Database is working properly. 2. User is login in the system.

ID and Name:	UR-03 (Update product)
Created By:	Hamza Aslam
Primary Actor:	Computer Operator
Description:	The Computer Operator will add new information of existing products of the stock (Product inventory), by entering its existing name. Then description, price, and quantity. After that Computer Operator will click on update button.
Trigger:	When computer operator wants to update existing product in the stock, the data will save of existing product in the stock.
Preconditions:	<p>Pre-01: Computer Operator shall enter the name, description, price, and quantity of the product.</p> <p>Pre-02: Computer Operator will click on the update button.</p>
Post conditions:	<ul style="list-style-type: none"> After updating the product, a message will appear.
Normal Flow:	<ol style="list-style-type: none"> The System will display fields to enter the detail of existing product. Computer Operator will enter product name. Computer Operator will enter product description. Computer Operator will enter product price. Computer Operator will enter product quantity. Computer Operator will click on update button. System will store the data to the database. A message will appear. The use case ends.
Alternative Flows:	<p>8A1: System cannot update the product.</p> <ol style="list-style-type: none"> System will generate an error message that display, "You have entered invalid product name. Enter again with existing name to update the product!" The use case return to step 1.
Exceptions:	Database did not work properly.
Priority:	Low
Frequency of Use:	Minimum
Business Rules:	N/A
Relationship:	Login
Assumptions:	<ol style="list-style-type: none"> Database is working properly. User is login in the system.

ID and Name:	UR -04 (View Product)
Created By:	Hamza Aslam
Primary Actor:	Computer Operator
Description:	The Computer Operator will view the existing product form stock by entering its name. After that Computer Operator will click on view button.
Trigger:	When computer operator wants to view product from the stock, the data will retrieve of existing product from the stock.
Preconditions:	Pre-01: Computer Operator will enter the name of the product. Pre-02: Computer Operator will click on the view button.
Post conditions:	<ul style="list-style-type: none"> After clicking on view button, the result of product will appear.
Normal Flow:	<ol style="list-style-type: none"> The System will display fields to enter the detail of view product. Computer Operator will enter product name. Computer Operator will click on view button. System will retrieve the data from the database. The result of product will appear. The use case ends.
Alternative Flows:	4A1: System cannot find the product. <ol style="list-style-type: none"> System will generate an error message that display, "Product not exist. Enter again with correct name to view the product!" The use case return to step 1.
Exceptions:	Database did not work properly.
Priority:	Low
Frequency of Use:	Minimum
Business Rules:	N/A
Relationship:	Login
Assumptions:	<ol style="list-style-type: none"> Database is working properly. User is login in the system.

ID and Name:	UR-05 (Delete product)
Created By:	Hamza Aslam
Primary Actor:	Computer Operator
Description:	The Computer Operator will delete product from the stock (Product inventory), by entering its name. After that Computer Operator will click on delete button.
Trigger:	When computer operator wants to delete existing product from the stock, the data will be deleted of existing product from the stock.
Preconditions:	Pre-01: Computer Operator will enter the name of the product. Pre-02: Computer Operator will click on the delete button.
Post conditions:	<ul style="list-style-type: none"> After clicking on delete button, a message will appear.
Normal Flow:	<ol style="list-style-type: none"> The System will display fields to enter the detail of delete product. Computer Operator will enter product name. Computer Operator will click on delete button. System will delete the data from the database. The use case ends.
Alternative Flows:	4A1: System cannot find the product. <ol style="list-style-type: none"> System will generate an error message that display, "Product not exist. Enter again with correct name to delete the product!" The use case return to step 1.
Exceptions:	Database did not work properly.
Priority:	High
Frequency of Use:	Low
Business Rules:	N/A
Relationship:	Login
Assumptions:	<ol style="list-style-type: none"> Database is working properly. User is login in the system.

ID and Name:	UR-06 (Search product)
Created By:	Hamza Aslam
Primary Actor:	Computer Operator
Description:	The Computer Operator will search the existing product by entering its name. After that Computer Operator will click on Search button.
Trigger:	When computer operator wants to search product from the stock, the data will retrieve of existing product from the stock.
Pre-conditions:	Pre-01: Computer Operator will enter the name of the product. Pre-02: Computer Operator will click on the search button.
Post conditions:	<ul style="list-style-type: none"> After clicking on search button, the result of product will appear.
Normal Flow:	<ol style="list-style-type: none"> The System will display fields to enter the detail of search product. Computer Operator will enter product name. Computer Operator will click on search button. System will retrieve the data from the database. The result of product will appear. The use case ends.
Alternative Flows:	4A1: System cannot find the product. <ol style="list-style-type: none"> System will generate an error message that display, "Product not exist. Enter again with correct name to search the product!" The use case return to step 1.
Exceptions:	Database did not work properly.
Priority:	High
Frequency of Use:	Minimum
Business Rules:	N/A
Relationship:	Login
Assumptions:	<ol style="list-style-type: none"> Database is working properly. User is login in the system.

ID and Name:	UR-07 (Add to cart)
Created By:	Hamza Aslam
Primary Actor:	Computer Operator
Description:	The Computer Operator will add new product from stock in the cart by entering its name. After that Computer Operator will click on Add button.
Trigger:	When computer operator wants to add product to the cart, the data will retrieve of existing product from the stock and add to cart.
Pre-conditions:	Pre-01: Computer Operator will enter the title of the product. Pre-02: Computer Operator will click on the add button.
Post conditions:	<ul style="list-style-type: none"> After clicking on add button, the product will add to the cart.
Normal Flow:	<ol style="list-style-type: none"> The System will display fields to enter the detail of product. Computer Operator will enter product name. Computer Operator will click on add button. System will retrieve the data from the database. The product will add to cart. The use case ends.
Alternative Flows:	4A1: System cannot find the product. <ol style="list-style-type: none"> System will generate an error message that display, "Product not exist. Enter again with correct name to add the product!" The use case return to step 1.
Exceptions:	Database did not work properly.
Priority:	High
Frequency of Use:	Maximum
Business Rules:	BR-06
Relationship:	Login
Assumptions:	<ol style="list-style-type: none"> Database is working properly. User is login in the system.

ID and Name:	UR-08 (remove selected product)
Created By:	Hamza Aslam
Primary Actor:	Computer Operator
Description:	The Computer Operator will remove existing product from the cart by clicking on x (delete) button.
Trigger:	When computer operator wants to remove product from the cart, the data will remove from the list.
Preconditions:	Pre-01: Computer Operator will click on the x (delete) button.
Post conditions:	After clicking on x (delete) button, the product will be removed from the cart.
Normal Flow:	<ol style="list-style-type: none"> 1. The System will display product(s) in the cart. 2. Computer Operator will click on the x (delete) button. 3. System will remove the data from the list. 4. The use case ends.
Alternative Flows:	N/A
Exceptions:	Database did not work properly.
Priority:	High
Frequency of Use:	Maximum
Business Rules:	BR-08
Relationship:	Login
Assumptions:	<ol style="list-style-type: none"> 1. Database is working properly. 2. User is login in the system.

ID and Name:	UR-09 (Discount)
Created By:	Hamza Aslam
Primary Actor:	Computer Operator
Description:	The Computer Operator will add discount on bill to the customer by adding its value between (1 - 99).
Trigger:	When computer operator wants to add discount, the bill will be calculated according to the discount.
Preconditions:	Pre-01: Computer Operator will add products to cart. Pre-02: Computer Operator will enter a value in discount field.
Post conditions:	<ul style="list-style-type: none"> After entering the value, the discount will be added to the calculation.
Normal Flow:	<ol style="list-style-type: none"> The System will display field to enter the value. Computer Operator will enter discount value. System will recalculate the total bill. The use case ends.
Alternative Flows:	3A1: System cannot add discount on products. <ol style="list-style-type: none"> System will generate an error message that display, "You can't add discount greater than 99%. Enter value again, value should be between (1 - 99)!" The use case return to step 1.
Exceptions:	Database did not work properly.
Priority:	High
Frequency of Use:	Maximum
Business Rules:	BR-03
Relationship:	Login, product add in list
Assumptions:	<ol style="list-style-type: none"> Database is working properly. User is login in the system.

ID and Name:	UR-10 (save bill)
Created By:	Hamza Aslam
Primary Actor:	Computer Operator
Description:	The Computer Operator will save the bill after adding products in the cart and calculation.
Trigger:	When computer operator wants to save the bill, the data will be saved to the system.
Preconditions:	Pre-01: Computer Operator will add products to cart. Pre-02: Computer Operator will enter a value in discount field (optional). Pre-03: Computer Operator will click on save button.
Post conditions:	After clicking on save button, the bill will be saved in the system.
Normal Flow:	<ol style="list-style-type: none"> 1. The System will display field to enter the value. 2. Computer Operator will add product to the cart by its name. 3. Computer Operator will enter discount value (optional). 4. Computer Operator will click on the save button. 5. System will store data of that bill. 6. The use case ends.
Alternative Flows:	5A1. System cannot save bill <ol style="list-style-type: none"> 1. System will generate an error message that display, "you have not added any product please add product." 2. The use case return to step 1.
Exceptions:	Database did not work properly.
Priority:	High
Frequency of Use:	Maximum
Business Rules:	BR-10
Relationship:	Login, add product in list
Assumptions:	<ol style="list-style-type: none"> 1. Database is working properly. 2. User is login in the system.

ID and Name:	UR-11 (Change password)
Created By:	Hamza Aslam
Primary Actor:	Computer Operator
Description:	The Computer Operator will change the password if he/she wants the change it.
Trigger:	When computer operator wants to change the password, the new password will be saved to the system.
Preconditions:	Pre-01: Computer Operator will enter old password. Pre-02: Computer Operator will enter new password. Pre-03: Computer Operator will enter pin code. Pre-04: Computer Operator will click on change password button.
Post conditions:	<ul style="list-style-type: none"> After clicking on change password button, the new password will be saved in the system.
Normal Flow:	1. The System will display field to enter the value. 2. Computer Operator will enter old password. 3. Computer Operator will enter new password. 4. Computer Operator will enter pin code. 5. Computer Operator will click on change password button. 6. System will change the password. 7. The use case ends.
Alternative Flows:	6A1: System cannot change the password 1. System will generate an error message that display, "You entered invalid Pin code /Password. Enter again!" 2. The use case return to step 1.
Exceptions:	Database did not work properly.
Priority:	High
Frequency of Use:	Minimum
Business Rules:	N/A
Relationship:	Login
Assumptions:	1. Database is working properly. 2. User is login in the system.

The End

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