AVANTIKA UNIVERSITY, CSE

Technical Specification

Title	BusyLess
Document Name	BusyLess Desktop Application
Version No.	1.0
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Version History

Version	Date	Author	Change	Sections Affected
1.0	02-12-2021	Sheikh Muhammed Tadeeb	Initial design as per in high fidelity wireframe	User-Interface
1.1	04-12-2021	Sheikh Muhammed Tadeeb	Changes In functionalities such as popups, fetching of data & dropdown	Database, User-Interface

Sponsor(s)

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Document References

Related Documents:
https://www.comp.nus.edu.sg/~lingtw/cs4221/er.pdf
https://cs.uwaterloo.ca/~tozsu/courses/CS338/lectures/12%20ER%20to%20Rel.pdf
https://www.electronjs.org/docs/latest

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1. Introduction

The main aim of this project is to propose a desktop application that helps the businessmen to maintain their records digitally. The biggest hurdle that all businessmen face today is the management of hardcopies which hold all their records. This system allows businessman to access their data fast and easily. Secondly keeping a check on how much amount is due on them and how much amount is due on their customers becomes very easy with desktop application without wasting time in searching hard-coded records.

Project Requirement

1.1.1. Functional

| Section/Requirement ID	Requirement Identification
FR1.0	The system shall authentication feature.
FR1.0.1	The system "Authentication feature" must include signup/login which could check for user authenticity.
FR2.0	The system shall have home page.
FR2.1	The system home page shall have a dashboard where the end user could easily navigate through different features of the Application.
FR2.1.1	The system dashboard shall have six blocks i.e. Purchased goods record, Sold goods record, Profit record Analysis of goods, Credit amount on business, Credit amount on Customers.
FR2.1.2	All the blocks shall have an option to get data in printed format. i.e. a print option.
FR2.2	The system home page shall have a Side Panel.
FR2.2.1	The system side panel sould include recent activities of user as well as Logout option.
FR2.3	The system home page shall have a top menu bar.
FR2.3.1	The system menu bar shall have name of the business and logo of the application.
FR3.0	The system Purchased goods record block shall have separate window.

FR3.0.1	This window shall have a form where user can enter NAME, QUANTITY, TYPE OF GOOD, DATE & TIME, TOTAL COST and AMOUNT PAYED.
FR4.0	The system Sold goods record block shall have separate window.
FR4.0.1	This window shall have a form where user can enter QUANTITY, TYPE OF GOOD, DATE & TIME, SOLD COST, CUSTOMER NAME and AMOUNT PAYED.
FR5.0	The system Profit record block shall display the profit made by the busines on various types of products (in my case sheets).
FR5.0.1	This window shall display profit by analyzing Purchased goods record (PURCHASED COST) and Sold goods record (SOLD COST).
FR6.0	The system Analyze record block shall have separate window.
FR6.0.1	This window shall display highest profit, Product Flow (how much time it took to get sold) by analyzing Purchased goods record and Sold goods record (PURCHASED, SOLD D&T).
FR7.0	The system Credit amount on business shall have a separate window.
FR7.0.1	This window shall display credit amount due on the business from various wholesalers.
FR7.0.2	This window will analyze Purchased goods record. (PURCHASED COST, AMOUNT PAYED).
FR8.0	The system Credit amount on customers shall have a separate window.
FR8.0.1	This window shall display credit amount due on the customers.
FR8.0.2	This window will analyze Sold goods record. (SOLD COST, AMOUNT PAYED).
FR9.0	The system window shall have search feature.
FR10.0	The system should show products with their limit period.

1.1.2. Non-Functional

Section/ Requirement ID	Requirement Identification

NFR 1	Developing Customer – Business Bonds
NFR 2	Developing Vendor – Business Bonds
NFR 3	Giving Discount to lucky customers
NFR 4	Giving Discount to Regular customers

2. Technical Design
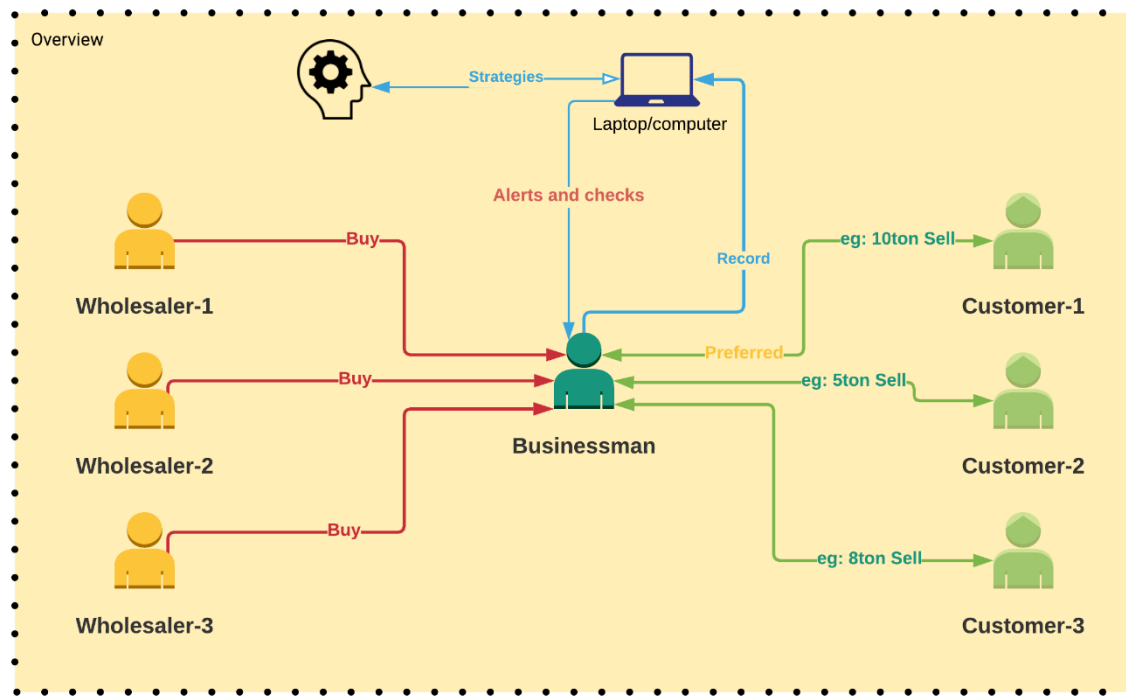
Technical Approach

1) These days businessmen are focusing more on saving time. So, they are gradually switching to digital platforms with good security aspects where they can keep track of their business details like credit amount left on them as well as on different customers to whom they have sold their product.

2) Also making decisions based on the amount and type of goods sold in particular period of the year which could help them to increase their profits.

Scope

2.1.1. In Scope

In this era of digital world, business is one of the fields that has received a lot of attention from problem solvers. It is said that time is money. So, I also decided to make some contribution. The following are the points which tells the scope of project:

1) I propose a system that uses desktop application which keeps record of all the business records and helps the businessmen to make good decisions for their business.

2) My system requires the user to enter various goods/products detail (if required) in a desktop app.

The data goes in the database where the processing is done and profitable suggestions could be made based on the stored data.

2.1.2. Out of Scope

1. Generating report at the end of year about different goods and their selling pattern.

2. Prediction of most profitable good and future purchasing pattern of the business

Assumptions

The frequency of this deals is weekly. When he sells it to his customer, he either sell it in cash or on credit. When selling goods on credit he puts some condition on the customer i.e. the customer needs to pay a fixed amount (decided by seller) every week. Secondly, he had to keep track of profits gained on particular type of sheets at particular duration of the year.

Issues

1. The biggest hurdle that all businessmen face today is the management of hardcopies which hold all their records.

2. Keeping a check on how much amount is due on them and how much amount is due on their customers.

Risks

1. Leaking of business data such as Customer and goods record.

2. Loss of business data if the application data is not backed-up or if something goes wrong.

2.1.3. Code

Sl.	Object	Event	Logic
1	Register Button	onsubmit()	The data of registration fields gets inserted into the database.
2	Forget Password Text	onClick()	It will take us to another page with windows.href tag
3	Login Button	onsubmit()	The data of login page gets inserted into the database.
4	Help & Documentation text	onClick()	It will take us to another page with windows.href tag where guide to use application is present
5	Cards	onClick()	It helps in navigation to different pages with help of anchor <a> tag.
6	Dropdowns	onClick()	The data from the database is being fetched here.

2.1.4. Field

Field Name	Short Name	Long Name	Data Type	Format	Len	Translate Y/N
Username	Username	Username	varchar	text	50	N
Password	Password	Password	varchar	password	20	N
4-digit key	key	4-digit key	integer	number	4	N
Business name	Bname	Business name	varchar	text	50	N
Business type	Btype	Business type	varchar	text	50	N
Goods name	gName	Goods name	varchar	text	50	N
Goods type	gType	Goods type	varchar	text	50	N
Vendor name	Vname	Vendor name	varchar	text	50	N
Goods quantity	gQty	Goods quantity	integer	number	_	N
Purchasing cost	Purchasing cost	Purchasing cost	integer	number	_	N
Sold cost	Sold cost	Sold cost	integer	number	_	N
Amount paid	Amount paid	Amount paid	integer	number	_	N

Purchased goods	Pgoods	Purchased goods	varchar	text	50	N
Sold goods	Sgoods	Sold goods	varchar	text	50	N
Customer code	Cus_code	Customer code	char	text	50	N
Discount%	discount	discount	integer	number	_	N

2.1.5. Message Catalog

Set Nbr	Msg Nbr	Severity	Description	Explain Text
1	1	error	Please fill the fields	If user leaves some mandatory field, then an error message will be displayed asking the user to fill the fields.
2	2	warning	Kindly check <specified> field	If user tries to give wrong input in the field, then a message will be prompted to check that field again.
3	3	alert	Login successful	If user types in correct credentials then a message will be prompted to show visibility of system status.
4	4	alert	Registration successful	If user enters credentials correct while registering then a message will be prompted to show visibility of system status.
5	5	Fading Pop-up	Data entry successful	When user does some entry of purchased or sold product then the user will be notified about the status.

2.1.6. Process Definition

Process Name	Type	Component	Process Groups
Register process	Registration	Page	Authorization
Login process	Login	Page	Authentication
Data Entry process	Purchased records	Page	Insertion
Data Entry process	Sold records	Page	Insertion
Data fetching	Goods Analysis	Page	Read
Data fetching	Profit Analysis	Page	Read
Data fetching	Customer Credit	Page	Read
Data fetching	Business Credit	Page	Read

2.1.7. Security Requirements

Object Name	Navigation / Portal Tab	Roles / Permission List	Access Type
Authorization	Registration	Admin	Full Access
Authentication	Login	Admin	Full Access

3. Testing

Desktop app testing is a software testing practice that examines the functionality, security, usability, and stability of the app after it is deployed.

In desktop app testing, we need to pay close attention to installation as well as uninstallation tests to fully cover the app's testing requirements.

Test Plan

Snos	Test Cases	Response time	Usability	Reliability
1.	Authentication	Very Quick	95%	95%
2.	Authorization	Very Quick	95%	95%
3.	User Control and Freedom	Quick	95%	95%
4.	Identification of Customer Code	Quick	80%	80%
5.	Visibility of system status	Very Quick	90%	90%
6.	Processing on Computer itself	Quick	98%	98%
7.	Searching by name	Quick	85%	85%
8.	API integration	_	0%	0%
9.	Authenticity of Profit values	Quick	98%	98%
10.	Taking Goods sold and purchased data from user	Very Quick	100%	100%

11.	Analysis data on Desktop Application	Quick	95%	95%
12.	Easy Navigation Dashboard	Quick	95%	95%
13.	Smart Decisions	Very Quick	98%	98%
14.	Alert Notifications	Quick	80%	80%

Test Data

1. **Authorization: -** If I try to login with wrong login credentials the application won't allow me to do that.

   (Status: PASSED)

2. **Authentication: -**

   To be a valid user of the system we must register into it. (Status: PASSED)

3. **User-Control and freedom: -**

   User has full control on the system as eve if he/she forgets the password they can recover it just by entering their key which they entered during their registration.

   (Status: PASSED)

4. **Visibility of system status:**

   Any action user does in the application has some feedback/response to the user by which the user feels connected with the system e.g.: hovering effects, login updates etc.

   (Status: PASSED)

5. **Error prevention:**

The user is provided with the validations which help the user to be free from errors while using the application.

(Status: PASSED)

6. **Help and Documentation:**
The user is provided with a page to which he can browse and check how to use the application.

(Status: PASSED)

7. **Numeric values:**

Allowing only numeric values in key at the time of registration. (Status: PASSED)

8. **Consistency & standard: -**

Consistency in color and font-style. I have changed it on forms and home page as well.

(Status: PASSED)

9. **Dropdown list:**

In business type I have given a dropdown list so that the user gets help from the application in quickly choosing the category/type of product. (Status: PASSED)

10. **Auto-generated Codes:**

Customer code will get automatically generated for new customers and will be fetched in the form from the database. (Status: PASSED)

Third Party Requirements

1. Implementation of Vendors phone number, email address and location.

2. Implementation of Customers phone number, email address and location.

4. Issues

Issue	Status
Alert box at time of login	Solved
Dropdown in type/category	Solved
Autogenerated customer code	Solved