2021

COMPUTER SCIENCE PROJECT

GROCERY STORE MANAGEMENT SYSTEM

SUBMITTED BY:

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CERTIFICATE

This is to certify that the project work "Grocery Store Management System" is a bonafide record of work done by Tanay Goenka under my guidance and supervision.

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ACKNOWLEDGEMENT

I would like to express my gratitude to my teacher Dr. Ruchika Thukral as well as our Principal Mr. Surender Pal Sachdeva who gave me the golden opportunity to do this wonderful project on the topic **Grocery Store Management System**. This has allowed me to do a lot of research through which my knowledge base has increased on programming and web designing.

I would also like to thank my parents and friends who helped me a lot in finalizing this project within the limited time frame.0.

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AIM/OBJECTIVE

INTRODUCTION

The **Grocery store management system** (GMS) is an integrated **software** that handles different directions of market workflows.

I have made this program for small store vendors. However, it can be adapted to meet the needs of any small scale industry and help them thrive which in turn can help in boosting our country's economic growth as most of our industries fall under that category.

I have used MYSQL to store the data and python to write the code and retrieve and display the data accordingly.

PROGRAM DETAILS

This program deals with three main aspects of any grocery store workplace :- inventorial management, generating invoice and recording financial transactions.

Inventorial Management :- In any grocery store, multiple changes happen to the inventory in a single business day. The number of items change due to customer purchase, arrival of new shipments and expiration of products. Their prices can also change or a new product can be introduced in the market place. All this can be recorded and kept track of using the program. Here, I have used a sample database and shown how all these changes can be made to the data as well as retrieved as required by the employees.

Generating invoice And recording financial transactions : We have all encountered this in our daily life where we shop at a market and then the employee bills our items and hands us the receipt. Using this program, we can find the total amount the customer has to pay along with the price and quantity of each item displayed in a tabular fashion . Also this transaction is recorded so we can know how much money has been collected.

These recorded transactions can also be viewed in daily and monthly manner and comparison can be made between sales, thus reviewing the store's performance

DATABASE

In the development of the program, 2 distinct tables viz , “transactions “ and “inventory”

have been used. These two tables have been created in MYSQL and stored in the same database viz “bankproject”. The schemas and sample data of the table are as below:

Table “ transactions”

Schema

	Field	Type	Null	Key	Default	Extra
▶	tid	int	NO	PRI	NULL	auto_increment
	dot	date	YES		NULL	
	amount	int	YES		NULL	

Sample data

tid	dot	amount
1	2021-12-10	2000
2	2021-12-10	2000
3	2021-12-10	1800
4	2021-12-10	2000
5	2021-12-10	200
6	2021-10-12	400
7	2021-10-12	300
8	2021-10-13	900
9	2021-10-13	70
10	2021-09-30	100
11	2021-10-14	570
12	2021-10-15	80
NULL	NULL	NULL

Table “inventory”

Schema

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Field	Type	Null	Key	Default	Extra
product_id	int	NO	PRI	NULL	
product_name	varchar(20)	YES		NULL	
price	int	YES		NULL	
amount_available	int	YES		NULL	

Sample data

product_id	product_name	price	amount_available
1	chips	20	17
2	chocolate	100	11
3	cookies	80	7
4	cheese	299	0
5	orange juice	40	5
6	coke	30	15
7	pepsi	30	12
8	milk box	15	10
9	wheat	199	14
10	breakfast cereal	200	1
11	water bottle	99	3
12	sanitizer	70	15
13	mask	5	50
NULL	NULL	NULL	NULL

SOURCE CODE

```
import mysql.connector
from datetime import date
import random
conn = mysql.connector.connect(
      host='localhost', database='bankproject', user='root', password='Shahid@1')
cursor = conn.cursor()
if conn.is_connected():
   print("connection complete")

def clear():
   for _ in range(65):
      print()

def main_menu():
   while True:
      clear()
      print(' Main Menu')
      print('\n1.  Modify inventory')
      print('\n2.  Add_Item_To_Inventory')
      print('\n3.  Search_Inventory')
      print('\n4.  Generate_invoice')
      print('\n5.  Transaction_Menu')
      print('\n6.  Close application')
      print('\n\n')
      choice = int(input('Enter your choice ...: '))
      if choice == 1:
         modify_inventory()
      if choice == 2:
         add_item_to_inventory()
      if choice == 3:
         search_inventory()
      if choice == 4:
         generate_invoice()
      if choice == 5:
         transaction_menu()
      if choice == 6:
         break
def modify_inventory():

   clear()
   acno = input('Enter product id :')
   print('Modify screen ')
```

```
    print('\n 1.  Product name')
    print('\n 2.  product quantity')
    print('\n 3.  product price')
    choice = int(input('What do you want to change ? '))
    new_data = input('Enter New value :')
    field_name = ''
    if choice == 1:
        field_name = 'product_name'
    if choice == 2:
        field_name = 'amount_available'
    if choice == 3:
        field_name = 'price'
    sql = 'update inventory set ' + field_name + '="' + new_data + '" where product_id=' + acno +
';'
    print(sql)
    cursor.execute(sql)
    print('inventory modified..')

def add_item_to_inventory():
    product_id = input('Enter product_id :')
    product_name = input('Enter Name :')
    price = input('Enter price ')
    amount_available = input('Enter quantity :')
    sql = 'insert into inventory(product_name,product_id,price,amount_available) values ( "' +
product_name + '",' + product_id + ',' + price + ','+amount_available+');'
    cursor.execute(sql)
    conn.close()
    print('New item added successfully')
    conn.close()
    wait = input('\n\n\n Press any key to continue....')
def search_inventory():

    while True:
        clear()
        print(' Search Menu')
        print("\n1.  product_id")
        print('\n2.  product_name')
        print('\n3.  price')
        print('\n4.  product quantity')
        print('\n6.  Back to Main Menu')
        choice = int(input('Enter your choice ...: '))
        field_name = ''

        if choice == 1:
```

```
            field_name = 'product_id'

        if choice == 2:
            field_name = 'product_name'

        if choice == 3:
            field_name = 'price'

        if choice == 4:
            field_name = 'amount_available'

        if choice == 6:
            break
        msg = 'Enter ' + field_name + ': '
        value = input(msg)
        if field_name == 'product_name':
            sql = 'select * from inventory where ' + field_name + ' like "%' + value + '%";'
        else:
            sql = 'select * from inventory where ' + field_name + ' = ' + value + ';'
        # print(sql)
        cursor.execute(sql)
        records = cursor.fetchall()
        n = len(records)
        clear()
        print('Search Result for ', field_name, ' ', value)
        print('-' * 80)
        for record in records:
            print(record[0], record[1], record[2], record[3])
        if (n <= 0):
            print(field_name, ' ', value, ' does not exist')
        wait = input('\n\n\n Press any key to continue....')

    conn.close()
    wait = input('\n\n\n Press any key to continue....')


def generate_invoice():
    today = date.today()
    items = []
    sl_no = []
    quantity = []
    price = []
    no_of_items = int(input("Enter no of items"))#ASKING ITEMS ONE BY ONE
    for i in range(1,no_of_items+1):
```

```
        item_name = input("enter name of item")
        item_quantity = input("enter quantity")
        sql1 = "select price,amount_available,product_id from inventory where product_name
='" + item_name + "';"
        cursor.execute(sql1)
        result1= cursor.fetchone()
        if result1[1] <int(item_quantity):  #CHECKING STOCK
            print("Insufficient stock")
            conn.close()
            wait = input('\n\n\n Press any key to continue....')

        else:
            sql2 = "update inventory set amount_available = amount_available-" + item_quantity
+ ' where product_id = ' + str(result1[2]) + ' ;'
            cursor.execute(sql2)
            sl_no.append(i)
            items.append(item_name)
            quantity.append(item_quantity)
            price.append(int(result1[0])*int(item_quantity))

    print("invoice")
    print("sl_no","items","quantity","price")
    for i in range(0,no_of_items):
        print(i+1,items[i],quantity[i],price[i])
    print("total:",sum(price))

    sql3 = 'insert into transactions(amount,dot) values(' +str(sum(price)) + ',"' + str(today) +
'");'
    cursor.execute(sql3)
    conn.close()
    wait = input('\n\n\n Press any key to continue....')
def transaction_menu():
    while True:
        clear()
        print(' Transaction Menu')
        print("\n1.  Daily Transactions")
        print('\n2.  Monthly Transactions')
        print('\n3.  Back to Main Menu')
        choice = int(input('Enter your choice ...: '))
        if choice == 1:
            daily_transactions()
        if choice == 2:
            monthly_transactions()
        if choice == 3:
```

```
            break
def daily_transactions():
    clear()

    today = date.today()
    sql = 'select tid,dot,amount from transactions t where dot="' + str(today) + '";'
    cursor.execute(sql)
    records = cursor.fetchall()
    clear()
    print('Daily Report :', today)

    print("Transaction id,Transaction date,Amount")
    print('-' * 120)
    for record in records:
        print(record[0], record[1], record[2])
    print('-' * 120)

    conn.close()
    wait = input('\n\n\n Press any key to continue....')

def monthly_transactions():
    clear()

    today = date.today()
    sql = 'select tid,dot,amount from transactions t where month(dot)="' + \
          str(today).split('-')[1] + '";'
    cursor.execute(sql)
    records = cursor.fetchall()
    clear()
    print(sql)
    print('Monthly Report :', str(today).split(
        '-')[1], '-,', str(today).split('-')[0])

    print("Transaction id,Transaction date,Amount")
    print('-' * 120)
    for record in records:
        print(record[0], record[1], record[2])
    print('-' * 120)

    conn.close()
    wait = input('\n\n\n Press any key to continue....')

if __name__ == "__main__":
    main_menu()
```

Working(Screenshots)

Main Menu :- It is a number driven menu that lets the user select the required function by asking the corresponding number as the input.

```
 Main Menu

1.   Modify inventory

2.   Add_Item_To_Inventory

3.   Search_Inventory

4.   Generate_invoice

5.   Transaction_Menu

6.   Close application


Enter your choice ...:
```

Adding item to inventory :- The user can add new items to the inventory.

```
Enter your choice ...: 2
Enter product_id :14
Enter Name :cream
Enter price 99
Enter quantity :13
New item added successfully



 Press any key to continue....
```

Search Menu :- The user can search the inventory on multiple grounds.

```
  Search Menu

  1.  product_id

  2.  product_name

  3.  price

  4.  product quantity

  6.  Back to Main Menu
  Enter your choice ...: 1
```

Searching using name

```
1.  product_id

2.  product_name

3.  price

4.  product quantity

6.  Back to Main Menu
Enter your choice ...: 2
Enter product_name: cookies
Search Result for  product_name   cookies
------------------------------------------------------------------------
product id product name price amount available
3 cookies 80 7
```

Searching using price

```
1.  product_id

2.  product_name

3.  price

4.  product quantity

6.  Back to Main Menu
Enter your choice ...: 3
Enter price: 200
Search Result for  price   200
--------------------------------------------------------------------------------
product id product name price amount available
10 breakfast cereal 200 1



 Press any key to continue....
```

Modifying Inventory

```
Enter product id :2
Modify screen

 1.  Product name

 2.  product quantity

 3.  product price
What do you want to change ? 2
Enter New value :20
update inventory set amount_available="20" where product_id=2;
inventory modified..
```

Generating invoice

```
Enter your choice ...: 4
Enter no of items2
enter name of itemchips
enter quantity1
enter name of itemcoke
enter quantity2
invoice
sl_no items quantity price
1 chips 1 20
2 coke 2 60
total: 80
```

Transaction menu

```
 Transaction Menu

1.  Daily Transactions

2.  Monthly Transactions

3.  Back to Main Menu
Enter your choice ...:
```

Daily transactions

```
Daily Report : 2021-10-15
Transaction id,Transaction date,Amount
------------------------------------------------------------------------------------------
12 2021-10-15 80
------------------------------------------------------------------------------------------



 Press any key to continue....
```

Monthly transactions

```
Monthly Report : 10 -, 2021
Transaction id,Transaction date,Amount
------------------------------------------------------------------------
6 2021-10-12 400
7 2021-10-12 300
8 2021-10-13 900
9 2021-10-13 70
11 2021-10-14 570
12 2021-10-15 80
------------------------------------------------------------------------



 Press any key to continue....
```

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