**19.Inventory Database Program**

**Aim :** To write an R program to connect with a MySQL database using RMySQL and DBI packages, retrieve data from tables, perform join operations, and calculate transaction-wise and item-wise net amounts.

**Algorithm :  
Step 1:** Start the process to connect R with MySQL and perform data analysis.  
**Step 2:** Open RStudio and load the required libraries RMySQL and DBI.  
**Step 3:** Define the MySQL driver using dbDriver("MySQL").  
**Step 4:** Establish a connection with the database test1 by providing username, password, database name, and host.  
**Step 5:** Retrieve and display all tables from the database using dbListTables().  
**Step 6:** Execute a query "SELECT \* FROM Items" using dbSendQuery().  
Fetch the results into a data frame.Print the Items table.  
**Step 7:** Execute a query "SELECT \* FROM Transaction" using dbSendQuery().  
Fetch the results into a data frame.Print the Transaction table.  
**Step 8:** Perform an INNER JOIN between Transaction and Items tables to calculate transaction-wise net amounts.Query: SELECT UID, ItemCode, ItemName, ItemQty, ItemRate, (ItemRate \* ItemQty) AS NetAmount.Fetch the results and print them.  
**Step 9:** Perform an INNER JOIN with GROUP BY to calculate item-wise total amounts.  
Query: SELECT ItemCode, ItemName, SUM(ItemRate \* ItemQty) AS NetAmount.  
Fetch the results and print them.  
**Step 10:** End the program.

**Program :**

#Install RMysql Package ...

library(RMySQL)

library(DBI)

drv <- dbDriver("MySQL")

mysqlconnection = dbConnect(drv,username='root',password='',dbname='test1',host='localhost')

dbListTables(mysqlconnection)

ItemMaster <- dbSendQuery(mysqlconnection,"select \* from items")

data.frame <- fetch(ItemMaster)

print(data.frame)

Transaction <- dbSendQuery(mysqlconnection,"select \* from Transaction")

data.frame <- fetch(Transaction)

print(data.frame)

TransactionAmount <- dbSendQuery(mysqlconnection,"select T.UID,I.ItemCode,I.ItemName,T.ItemQty,I.ItemRate,

(I.ItemRate \* T.ItemQty)as NetAmount

from Transaction T inner join Items I on I.ItemCode = T.ItemCode ")

data.frame <- fetch(TransactionAmount)

print(data.frame)

ItemAmount <- dbSendQuery(mysqlconnection,"select I.ItemCode,I.ItemName,

sum((I.ItemRate \* T.ItemQty))as NetAmount

from Transaction T inner join Items I on I.ItemCode = T.ItemCode

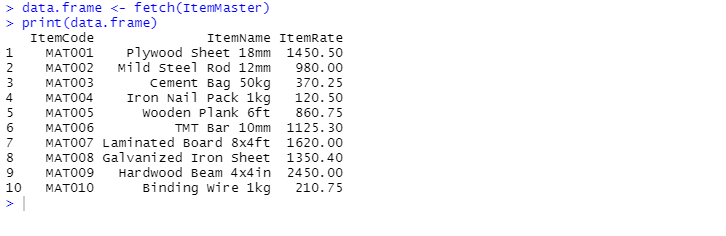
group by I.ItemCode,I.ItemName

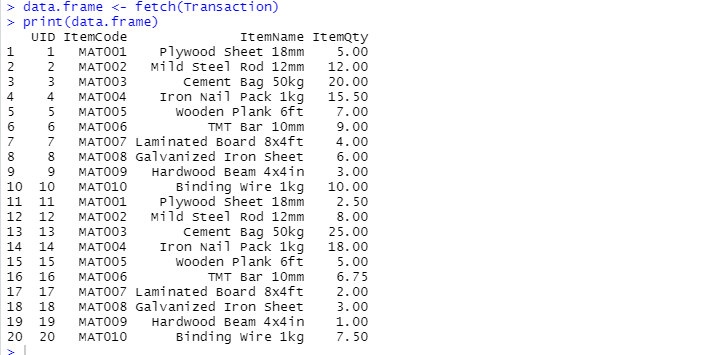
")

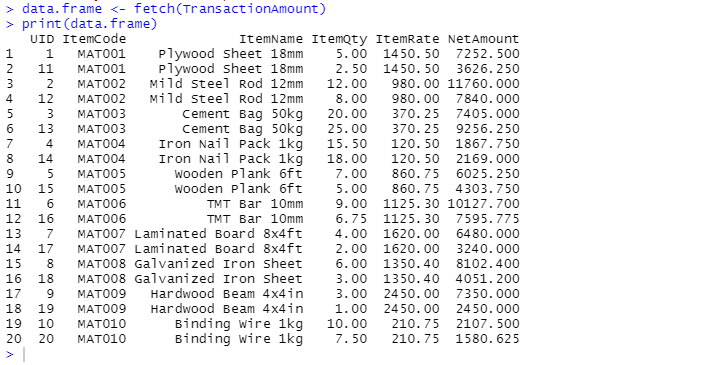
data.frame <- fetch(ItemAmount)

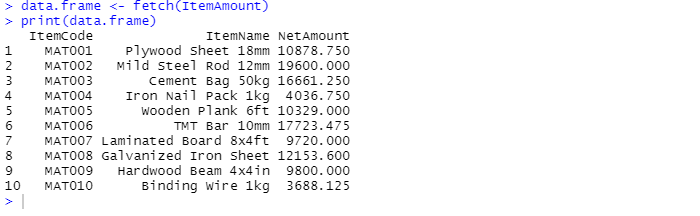
print(data.frame)

**OUTPUT:**









**RESULT:**

This, our program has been successfully saved and executed.