

Course and Course code: OOP and 2CS302

Project Name: Stock Management System

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Program:

User.java

```
import java.lang.*;
import java.io.*;
import java.util.*;
interface color{
    public static final String RESET = "\u001B[0m";
    public static final String RED = "\u001B[31m";
    public static final String GREEN = "\u001B[32m";
    public static final String YELLOW = "\u001B[33m";
    public static final String BLUE = "\u001B[34m";
    public static final String PURPLE = "\u001B[35m";
    public static final String CYAN = "\u001B[36m";
}
class User
{
    private static int i=0;
    String user_name,password;
    String firm_name;
    int user_id;
    User(String user_name, String password, String firm_name)
    {
        this.user_name=user_name;
        this.password=password;
        this.user_id=i;
        this.firm_name=firm_name;
        i++;
    }
}
class Manage extends User implements color{
    Scanner sc = new Scanner(System.in);
    int stock_id = 0;
    private Stock[] stocks = new Stock[100];
    private Stock[] dispatch = new Stock[100];
    int dispatch_id = 0;
    int extra = 0;

    Manage(String user_name, String password, String firm_name) {
```

```

        super(user_name, password, firm_name);
    }

    private class Stock {
        String category, item_name, supplier, item_companyname;
        int no_of_items;
        int price;
        int value;

        Stock(String category, String item_name, String supplier, String item_comp
anyname, int price, int no_of_items) {
            this.category = category;
            this.item_name = item_name;
            this.item_companyname = item_companyname;
            this.supplier = supplier;
            this.no_of_items = no_of_items;
            this.price = price;
            this.value = price * no_of_items;
        }
    }

    void enter_stock() {
        System.out.print(YELLOW+"Category:");
        String category = sc.next();
        System.out.print("Item Name:");
        String item_name = sc.nextLine();
        item_name = sc.nextLine();
        System.out.print("Company Name of item:");
        String item_companyname = sc.nextLine();
        System.out.print("Supplier:");
        String supplier = sc.nextLine();
        System.out.print("Quantity:"+RESET);
        int no_of_items = 0;
        while (no_of_items <= 0) {
            no_of_items = sc.nextInt();
            if (no_of_items <= 0)
                System.out.print(RED+"Please Enter Valid Quantity!" +RESET);
        }

        System.out.print(BLUE+"Price Of a Item:" +RESET);
        int price = 0;
        while (price <= 0) {
            price = sc.nextInt();
            if (price <= 0)
                System.out.print(RED+"Please Enter Valid Price!" +RESET);
        }
    }

```

```

        stocks[stock_id] = new Stock(category, item_name, supplier, item_companyname, price, no_of_items);
        stock_id++;
    }

    void view_stock() {
        System.out.println(CYAN+"=====
===== ");
        System.out.println(PURPLE+"id\tCategory\tItem_Name\tCompany_name\tSupplier\tQuantity\tPrice(Rs)\tValue(Rs)");
        System.out.println(CYAN+"=====
===== ");
        for (int j = 0; j < stock_id; j++) {
            System.out.printf(PURPLE+"%d\t%-8s\t%-9s\t%-12s\t%-8s\t%-10d\t%-8d\t%-8d\t", (j + 1), stocks[j].category, stocks[j].item_name, stocks[j].item_companyname, stocks[j].supplier, stocks[j].no_of_items, stocks[j].price, stocks[j].value);
            System.out.println();
        }
        System.out.println(CYAN+"=====
===== "+RESET);
    }

    void view_stock_category(String s) {
        System.out.println(CYAN+"=====
===== ");
        System.out.println(YELLOW+"id\tCategory\tItem_Name\tCompany_name\tSupplier\tQuantity\tPrice(Rs)\tValue(Rs)");
        System.out.println(CYAN+"=====
===== ");
        for (int j = 0; j < stock_id; j++) {
            if (stocks[j].category.equals(s)) {
                System.out.printf(YELLOW+"%d\t%-8s\t%-9s\t%-12s\t%-8s\t%-10d\t%-8d\t%-8d\t", (j + 1), stocks[j].category, stocks[j].item_name, stocks[j].item_companyname, stocks[j].supplier, stocks[j].no_of_items, stocks[j].price, stocks[j].value);
                System.out.println();
            }
        }
        System.out.println(CYAN+"=====
===== "+RESET);
    }

    void view_stock_supplier(String s) {
        System.out.println(CYAN+"=====
===== ");
        System.out.println(PURPLE+"id\tCategory\tItem_Name\tCompany_name\tSupplier\tQuantity\tPrice(Rs)\tValue(Rs)");

```

```

        System.out.println(CYAN+"=====
===== ");
        for (int j = 0; j < stock_id; j++) {
            if (stocks[j].supplier.equals(s)) {
                System.out.printf(YELLOW+"%d\t%-8s\t%-9s\t%-12s\t%-8s\t%-10d\t%-
8d\t%-
8d\t", (j + 1), stocks[j].category, stocks[j].item_name, stocks[j].item_companynam
e, stocks[j].supplier, stocks[j].no_of_items, stocks[j].price, stocks[j].value);
                System.out.println();
            }
        }
        System.out.println(CYAN+"=====
===== "+RESET);
    }

    void view_stock_itemname(String s) {
        System.out.println(CYAN+"=====
===== ");
        System.out.println(PURPLE+"id\tCategory\tItem_Name\tCompany_name\tSupplier
\tQuantity\tPrice(Rs)\tValue(Rs)");
        System.out.println(CYAN+"=====
===== ");
        for (int j = 0; j < stock_id; j++) {
            if (stocks[j].item_name.equals(s)) {
                System.out.printf(GREEN+"%d\t%-8s\t%-9s\t%-12s\t%-8s\t%-10d\t%-
8d\t%-
8d\t", (j + 1), stocks[j].category, stocks[j].item_name, stocks[j].item_companynam
e, stocks[j].supplier, stocks[j].no_of_items, stocks[j].price, stocks[j].value);
                System.out.println();
            }
        }
        System.out.println(CYAN+"=====
===== "+RESET);
    }

    boolean dispatch_id(int id, int q) {
        id--;
        if (id >= stock_id || id < 0) {
            System.out.println(RED+"Id is out of range!! Please enter Id in range.
"+RESET);
            return false;
        } else if (q > stocks[id].no_of_items || q < 0) {
            System.out.println(RED+"Quantity is Limited!! Please Dispatch item in
lesser Qauntity."+RESET);
            return false;
        } else {
            if (q == stocks[id].no_of_items) {

```

```

        dispatch[dispatch_id] = new Stock(stocks[id].category, stocks[id].
item_name, stocks[id].item_companyname, stocks[id].supplier, stocks[id].price, sto
cks[id].no_of_items);
        dispatch_id++;
        for (int j = id; id < stock_id - 1; j++) {
            stocks[j] = stocks[j + 1];
        }
        stock_id--;
    } else {
        dispatch[dispatch_id] = new Stock(stocks[id].category, stocks[id].
item_name, stocks[id].item_companyname, stocks[id].supplier, stocks[id].price, q);
        stocks[id].value = q * stocks[id].price;
        stocks[id].no_of_items -= q;
        stocks[id].value = stocks[id].no_of_items * stocks[id].price;
        dispatch_id++;
    }
    return true;
}
}

```

```

void view_dispatch_stock() {
    System.out.println(CYAN+"=====
===== ");
    System.out.println(PURPLE+"id\tCategory\tItem_Name\tCompany_name\tSupplier
\tQuantity\tPrice(Rs)\tValue(Rs)");
    System.out.println(CYAN+"=====
===== ");
    System.out.print(PURPLE);
    for (int j = 0; j < dispatch_id; j++) {
        System.out.printf("%d\t%-8s\t%-9s\t%-12s\t%-8s\t%-10d\t%-8d\t%-
8d\t", (j + 1), dispatch[j].category, dispatch[j].item_name, dispatch[j].item_comp
anyname, dispatch[j].supplier, dispatch[j].no_of_items, dispatch[j].price, dispatch
h[j].value);
        System.out.println();
    }
    System.out.print(CYAN);
    System.out.println("=====
===== ");
    System.out.println(RESET);
}
}

```

Main.java

```

public class Main implements color{
    static String firm_name,user_name,password;
    static Scanner sc=new Scanner(System.in);
    static Manage[] user= new Manage[100];
    static int i=0;
    public static void main(String args[])

```

```
{
    System.out.println();
    System.out.println(GREEN);

    System.out.println("                #               # # # # # #
    # # #   # #   #           #   # # # #       ");
    System.out.println("                #   #           #   #         #
#       #   #   # #   # #   #                   ");
    System.out.println("                #   #   #   #   # # #   #
#       #   #   #   #   #   #   # #   #       ");
    System.out.println("                # #   #   #   #           #
#       #   #   #   #   #   #   #           ");
    System.out.println("                #           #   # # # # #
# # #   # # #   # #   #   #   # # # #       ");
    System.out.println(RESET+"\n");
    run();
}
static void run()
{
    System.out.println(BLUE+"=====
=====");
    System.out.println(YELLOW+"                        Welcome to LOGIN
                    ");
    System.out.println(BLUE+"=====
=====");
    System.out.println(GREEN);
    System.out.print("1. login\n2. create new Account \n3. exit: ");
    System.out.println(RESET);
    Scanner sc = new Scanner(System.in);
    int n = Integer.parseInt(sc.nextLine());

    if(n==1)
    {
        login();
        run();
    }
    else if(n==2)
    {
        user[i]=sign_up();
        i++;
        run();
    }
    else if(n==3)
        System.exit(0);
    else System.out.println(RED+"Oops! Invalid Input."+RESET);
}
static void login()
{
```

```

        System.out.print(YELLOW+"USERNAME: ");
        String user_name=sc.next();
        System.out.print("PASSWORD: ");
        String password=sc.nextLine();
        password=sc.nextLine();
        System.out.print(RESET);
        for(int j=0;j<i;j++)
        {
            if(user[j].user_name.equals(user_name) && user[j].password.equals(password))
            {
                home(user[j]);
            }
        }
        System.out.println(RED+"Invalid USERNAME or PASSWORD!! "+RESET);
    }
    static void home(Manage cur_user)
    {
        System.out.println(GREEN+"=====
===== ");
        System.out.println(BLUE+"Welcome "+cur_user.user_name+" to HOME PAGE::");
        System.out.println(GREEN+"=====
===== ");
        System.out.print(RESET);
        System.out.print(BLUE+"1. Enter Stocks\n2. View Stock\n3. Dispatch Stock\n
4. View Dispatched Stock\n5. Log Out ---> "+RESET);

        int k=Integer.parseInt(sc.nextLine());
        if(k==1)
        {
            cur_user.enter_stock();
            System.out.println(GREEN+"loading....loading....loading...." );
            System.out.println("Stock Entered Successfully!!"+RESET);
            home(cur_user);
        }
        else if(k==2)
        {
            int t;
            System.out.print(PURPLE+"1. View whole Stock\n2. View Stock by Category\n3. View Stock by Supplier\n4. View Stock by Item Name ---> "+RESET);
            t=Integer.parseInt(sc.nextLine());
            if(t==1)
            {
                cur_user.view_stock();
                home(cur_user);
            }
            else if(t==2)
            {

```

```

        System.out.print(YELLOW+"Enter the category: "+RESET);
        String s=new String();
        s=sc.nextLine();
        cur_user.view_stock_category(s);
        home(cur_user);
    }
    else if(t==3)
    {
        System.out.print(YELLOW+"Enter the Supplier Name: "+RESET);
        String s=sc.nextLine();
        cur_user.view_stock_supplier(s);
        home(cur_user);
    }
    else if(t==4)
    {
        System.out.print(YELLOW+"Enter the Item Name: "+RESET);
        String s=sc.nextLine();
        cur_user.view_stock_itemname(s);
        home(cur_user);
    }
    else
    {
        System.out.println(GREEN+"Oops! Invalid Input.");
        System.out.println("Please Input Again."+RESET);
        home(cur_user);
    }
}
else if(k==3)
{
    cur_user.view_stock();
    System.out.print(BLUE+"Enter the Id of stock to dispatch:");
    int id=Integer.parseInt(sc.nextLine());
    System.out.print("Enter the quantity of item to be dispatched:"+RESET);
;

    int q=Integer.parseInt(sc.nextLine());
    boolean b=cur_user.dispatch_id(id,q);
    if(b)
    {
        System.out.println(RED+"loading....loading....loading....") ;
        System.out.println("Stock Dispatched Successfully!!"+RESET);
    }
    home(cur_user);
}
else if(k==4)
{
    cur_user.view_dispatch_stock();
    home(cur_user);
}

```



```

    }
    else if(k==5)
    {
        run();
    }
    else
    {
        System.out.println(RED+"Oops! Invalid Input.");
        System.out.println("Please Input Again."+RESET);
        home(cur_user);
    }
}

static Manage sign_up()
{
    System.out.println(GREEN+"=====
===== ");
    System.out.println(YELLOW+"Creating new Account");
    System.out.print(GREEN+"Firm Name:");
    firm_name=sc.nextLine();
    System.out.print(GREEN+"USERNAME: "+RESET);
    boolean b=true;
    while(b)
    {
        user_name=sc.nextLine();
        b=check_username(user_name);
        if(b) System.out.println(RED+"USERNAME Already taken!!"+RESET);
    }
    System.out.print(RED+"PASSWORD (MIN 5 CHARACTER): "+RESET);
    b=true;
    while(b)
    {
        password=sc.nextLine();
        b=check_password(password);
        if(b) System.out.println(YELLOW+"PASSWORD must be five charcters long.
"+RESET);
    }
    Manage u = new Manage(user_name,password,firm_name);
    System.out.println(GREEN+"Account created Successfully!!"+RESET);
    return u;
}

static boolean check_username(String s)
{
    for(int j=0;j<i;j++)
    {
        if(s.equals(user[j].user_name)) return true;
    }
    return false;
}

```

Output:



```
=====
Creating new Account
Firm Name:rudra
USERNAME: r_123
PASSWORD (MIN 5 CHARACTER): r_123
Account created Successfully!!
=====
```

Welcome to LOGIN

```
=====
1. login
2. create new Account
3. exit:
```

```
1
USERNAME: r_123
PASSWORD: r_123
=====
```

Welcome r_123 to HOME PAGE::

```
=====
1. Enter Stocks
2. View Stock
3. Dispatch Stock
4. View Dispatched Stock
5. Log Out ---> 1
Category:chocolate
Item Name:kitkat
Company Name of item:parle
Supplier:parle
Quantity:2000
Price Of a Item:30
loading....loading....loading....
Stock Entered Successfully!!
=====
```

Welcome r_123 to HOME PAGE::

```
=====
1. Enter Stocks
2. View Stock
3. Dispatch Stock
4. View Dispatched Stock
5. Log Out ---> 1
Category:chocolate
Item Name:bourville
Company Name of item:amul
Supplier:amrita agency
Quantity:
500
Price Of a Item:45
loading....loading....loading....
Stock Entered Successfully!!
=====
```

Welcome r_123 to HOME PAGE::

```
=====
1. Enter Stocks
2. View Stock
3. Dispatch Stock
4. View Dispatched Stock
5. Log Out ---> 2
1. View whole Stock
2. View Stock by Category
3. View Stock by Supplier
4. View Stock by Item Name ---> 1
=====
```

Id	Category	Item_Name	Company_name	Supplier	Quantity	Price (Rs)	Value (Rs)
----	----------	-----------	--------------	----------	----------	------------	------------

4. View Stock by Item Name ---> 1

id	Category	Item_Name	Company_name	Supplier	Quantity	Price (Rs)	Value (Rs)
1	chocolate	kitkat	parle	parle	2000	30	60000
2	chocolate	bournvile	amul	amrita agency	500	45	22500

Welcome r_123 to HOME PAGE::

1. Enter Stocks
2. View Stock
3. Dispatch Stock
4. Veiw Dispatched Stock
5. Log Out ---> 2

1. View whole Stock
2. View Stock by Category
3. View Stock by Supplier
4. View Stock by Item Name ---> 2

Enter the category: chocolate

id	Category	Item_Name	Company_name	Supplier	Quantity	Price (Rs)	Value (Rs)
1	chocolate	kitkat	parle	parle	2000	30	60000
2	chocolate	bournvile	amul	amrita agency	500	45	22500

Welcome r_123 to HOME PAGE::

1. Enter Stocks
2. View Stock
3. Dispatch Stock

Welcome r_123 to HOME PAGE::

1. Enter Stocks
2. View Stock
3. Dispatch Stock
4. View Dispatched Stock
5. Log Out ---> 4

id	Category	Item_Name	Company_name	Supplier	Quantity	Price (Rs)	Value (Rs)
1	chocolate	kitkat	parle	parle	500	30	15000

Welcome r_123 to HOME PAGE::

1. Enter Stocks
 2. View Stock
 3. Dispatch Stock
 4. View Dispatched Stock
 5. Log Out ---> 2
1. View whole Stock
 2. View Stock by Category
 3. View Stock by Supplier
 4. View Stock by Item Name ---> 1

id	Category	Item_Name	Company_name	Supplier	Quantity	Price (Rs)	Value (Rs)
1	chocolate	kitkat	parle	parle	1500	30	45000
2	chocolate	bournvile	amul	amrita agency	500	45	22500

4. View Dispatched Stock

5. Log Out ---> 2
1. View whole Stock
 2. View Stock by Category
 3. View Stock by Supplier
 4. View Stock by Item Name ---> 3

Enter the Supplier Name: parle

id	Category	Item_Name	Company_name	Supplier	Quantity	Price (Rs)	Value (Rs)
1	chocolate	kitkat	parle	parle	2000	30	60000

Welcome r_123 to HOME PAGE::

1. Enter Stocks
2. View Stock
3. Dispatch Stock
4. View Dispatched Stock
5. Log Out ---> 3

id	Category	Item_Name	Company_name	Supplier	Quantity	Price (Rs)	Value (Rs)
1	chocolate	kitkat	parle	parle	2000	30	60000
2	chocolate	bournvile	amul	amrita agency	500	45	22500

Enter the Id of stock to dispatch:1

Enter the quantity of item to be dispatched:500

loading....loading....loading....

Stock Dispatched Successfully!!

Welcome r_123 to HOME PAGE::

```
1. Enter Stocks
2. View Stock
3. Dispatch Stock
4. Veiw Dispatched Stock
5. Log Out ---> 2
1. View whole Stock
2. View Stock by Category
3. View Stock by Supplier
4. View Stock by Item Name ---> 1
```

id	Category	Item_Name	Company_name	Supplier	Quantity	Price (Rs)	Value (Rs)
1	chocolate	kitkat	parle	parle	1500	30	45000
2	chocolate	bournvile	amul	amrita agency	500	45	22500

```
Welcome r_123 to HOME PAGE::
```

```
1. Enter Stocks
2. View Stock
3. Dispatch Stock
4. Veiw Dispatched Stock
5. Log Out ---> 5
```

```
Welcome to LOGIN
```

```
1. login
2. create new Account
3. exit:
3
```