

ZCART

Task: 1-Customer Initialization

We are going to write a software to perform an online shopping application called Z-Kart

The backbone for every online retail application is its customers. The initial customer details for our system will be given in a file zusers_db.txt.

The file contains multiple lines and every line will be of the form

UserName/Email	EncryptedPwd	Name	Mobile
abc@zoho.com	ApipNbjm	Rahul	9922992299
123@zoho.com	Cboljoh	Anitha	8564119904
user@zoho.com	kbwb22	Arpan	9872345693

At first, the Z-Kart application will read the contents of this file and initialize its customer base.

Task: 2- Inventory Initialization

Z-Kart is an online shopping kart focussing on selling electronic gadgets especially laptops, mobiles and tablets.

Category	Brand	Model	Price	Stock
Mobile	Apple	6S	60000	10
Mobile	Motorola	G	12000	5
Laptop	HP	Elite	56000	20
Tablet	Google	ChromeBook	80000	12

Read the file and initialize the Z-Kart inventory database.

Task: 3- New Account Signups

There must be provision to sign up new accounts. While adding new customers, get their email-id, name, mobile number and password as input. Ask the user to re-type password to avoid any typos. Ensure that the password and re-typed password match.

Since every customer needs to be identified uniquely, ensure that the given email-id is not existing in our registered Z-Kart database. If so, prompt the user to sign in instead of sign up.

Append the newly added customer details into the zusers_db.txt

Task: 4-Encryption

It's generally not advised to store passwords directly in files. So the passwords present in the file are obtained by applying a simple encryption technique to each and every individual character in the plain password.

The encryption rule is very simple add + 1 to original char to encrypt it will be encrypted as b

m as n, z as a (wrap around)....

1 as 2, 9 as 0, 0 as 1.....

A as B, C as D. Z as A.....

Please take care of encrypting the password while writing to external storage

Task: 5-Login

Already signed up customers can login into Z-Kart for shopping in the login screen, get the username and password. Check whether the username entered is a valid registered user. If not, prompt the user to sign up instead of sign in.

As the users are not aware of and are abstracted from the encryptions applied to passwords, they will input the simple plain password which they provided. Encrypt it and verify with the stored encrypted password for authentication.

Task: 6-Shopping

The system will guide the user to ease his shopping effort. The user will choose what he looks for (Mobile / Laptop / Tablet). The system will display the models, brand and price based on the user's preference.

The user will choose the brand and model. The system will ask for the user to continue shopping where he can add any number of additional products. Once he decides to check out the cart, the system will check the availability of stock for all the items in the cart and present the user with an invoice.

The system will generate a unique invoice number and present the order details to the user.

Task : 7 - Admin mode

Z-Kart supports a special login for the admin with the username admin@zoho.com and password "xyzy".

When the password entered is correct, the user will be taken to the admin section.

When the admin enters, first the app will display a list of items whose stock is less

than or equal to a configured threshold (say 10) to help him in placing the re-order. Once the admin places the re-order, the stock details should get updated.

Task: 8-Attractive & Unique Deals for every customer

Z-Kart wants to make their customers buy more and more. Every customer after making their initial 3 purchases or after buying goods worth more than 20000, will be presented with a unique discount code.

The discount code is a randomly generated alphanumeric string of length 6.

Persist the unique discount code against the other customer details in `zusers_db.txt`.

The customer can use this code for his next 3 transactions. Then the code automatically expires.

When the user enters the code, check the validity of the code (correctness and number of uses)

and if it's valid, Z-Kart will give x% discount to the customer. (the value of x is a random number generated between 20-30).

Display the amount saved while displaying the invoice.

Task: 9-Deal of the Moment

Z-Kart will analyze the stock in hand for all its Rems. The item which has the highest stock will be given a special discount of 10%.

The Deal of the Moment will be automatically applied to that particular item irrespective of applying any discount code and the deal item changes after every purchase as stock will be recalculated

Task: 10- Persistence of Order History

The order history will be persisted for every user. Any user after successful login, is allowed to check his order history. The sample format of history is displayed below

Invoice Number 312684

Date 19-Jul-2016

Category	Brand	Model	Price
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Mobile	Apple	6S	60000
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Total-60000

Invoice Number 132793

Date 1-Jun-2016

Category	Brand	Model	Price
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Tablet	Google	ChromeBook	8000
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Total - 8000