CM sale booster

This app should be installed on most of the commercial system(store,restaurant,supermarket..) and general system such as linux,unix,MSwindows. It must be web based app, not hybrids technologies like flutter or react.

The app's software,code algorithm should be protected.Copy,analyses should be prohibited by any means such as encryption, anti-debug or anti-decompile.

This app provide both sign up and sign in function.

For the users who are not the member of our platform, the APP's window will ask user to input company name, address,city,province,country, telephone,website, category, keyword, email,discount percentage, product name, soon after download. Once signing up is completed ,the app connect to seller's center and all the deals(applying the coupon to get instant cashback) will be recorded in our database.The APP also provide a link to our website, the client will be directed to user's center when he click this link, and then he can surf his account or other pages.

After a process of this app starting up, it will receive 2 parameter from system: the value of the purchase and 16-digit coupon series code: such as ZGDKPN0199051712.

The app will store a value and series numbers group in database.a given value will map to 1000 series numbers,for example $19.77->G(0000,0001,0002,0003,....9999), this means this value will .

Each process of the app will return a bool value "true/false" to system.

The function and procedure of the app

Step 1

When a customer check out with a coupon, the cashier will input the 16-digit coupon series code, in this format;

<div align="center">ZGDKPN0199051712</div>

Main program will decompose this code into 3 parts

6-digit-alphabetical-string   **seller_id code**:ZGDKPN

4-digit-numeric-string   **series number: 0199**

6-digit-numeric-string   **calculated code**: 051712

If the 6 character string is NOT the seller's id,the app will not start up a process, this means the coupon is invalid; otherwise a process will start up.

Step 2

The process now calculate the coupon face value, the purchase total amount times the discount percentage(10% by default, client can also adjust this discount in APP's interface), for example the total amount is $123.33, the coupon face value will be

$$\$121.33 \times 10\% = \$12.133$$

Now the process will change this amount to an integer by times 100 and round up the rest value:

$$round(12.133 \times 100) = 1213$$

The process add 0 in front of the number string until it reach 6-digits number string,in this example the process will add "00" to form a 6-digits number string,we call this string "**value string**"

$$001213$$

Step 3

The process will turn the seller code ZGDKPN   into a number in this principle:we assign a value to each letter of 6-character-string seller_id code**,** this value is the position number in alphabet order as following:

$$A=1;$$

$$B=2;$$

$$C=3;$$

$$D=4;$$

$$E=5;$$

$$..........$$

$$Y=25;$$

$$Z=26;$$

Thus, in this case we turn ZGDKPN into **26-7-3-11-16-14,**we call this string **id string**.

Step 4

Add the value string and id string in this way:

$$E1=26+0=26$$

$$E2=7+0=7$$

$$E3=3+1=4$$

$$E4=11+2=13$$

$$E5=16+1=17$$

$$E6=14+3=17$$

We connect these elements to give a new value (numeric-string), example:

$$E1+E2+E3+E4+E5+E6=2674131717$$

6-digit-numeric-string calculated code: we take the square root of this value

$$sqrt(2674131717)=51712.00747,$$

we round the decimals($<=0.49$) and get 51712. We need a 6 digits string code, so we put 0 in the front corresponding to the how many digits the code is missing from becoming a 6 digit code. So, we have 051712 , we name this code **mixed string**.

 Step 5

Compare the mixed string 051712 and the **calculated code**, we can see that they are the same in this example, then go to step 6; otherwise the APP return "false" to main program,means this coupon is invalid, the process is terminated then.

Step 6

We search the **mixed string** 051712 in database and the correspond series number, the database is empty because this is first time to run a app process, so we can't find the **mixed string** 051712 and any series number. The process return "true" to main program, and then store 051712, and series number 0199 (051712,0199)into database.

If the cashier will receive the same coupon code,the app process will search the value (051712,0199) in database, this means this code has been used, this is a invalid coupon. this means this code has been used, this is a invalid coupon.

Step 7

The App will send seller's id, coupon code to our server(we have a page to receive these data and update database), then the process is terminated.