Project Design Document

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Module Name	Input Parameters	Output Parameters	Description
Class Admin			
setAdminInfo	string1 : ID string2: name string3: email string4:password	Void	This module set the parameters of successful **logged** admin from database.
listProductsFullInfo	no	no	Use product manager to list products of chosen category with full information of that categor's products.
addNewProduct	**no**	**no**	**Use product manager object to add new product to database.**
updateProductInfo	**no**	**no**	**Use product manager object to update products.**
deleteProduct	**no**	**no**	**Use Product manager object to delete product from database.**
toString	**no**	**String**	**Return string with current login admin information.**
Class Cart			
addProduct	**string:product_ID**	**boolean**	**Add new product to crate, if it exist in database and there are enough quantity of that product.**
isEmptyCarte	**no**	**boolean**	**Check if the carte is empty or not**
removeProdcutFromCarte	**String : product_ID**	**boolean**	**Remove product from carte if it exist in the carte.**
printMyProducts	**no**	**no**	**Print products of the carte if the carte hold products**
resetCarte	**no**	**boolean**	**Reset all carte attributes to the initial value after successful payment operation.**
class Customer			
setValues	**String1:ID** **String2: name** **String3: email** **String4: phone** **String5: country**	**no**	**Set logged customer accounts with it's information from the database.**

	String6: city String7: password		
addProductToCart	String1: product_ID	no	Use carte object to add new product to carte
printMyCart	no	no	Use Carte object to print products in carte.
removeProductFromCart	no	no	Use cart object to remove product from carte if it exist.
doPayment	no	boolean	Use class Payment as payment API to make payment
toString	no	string	Return string of current logged customer full informations.
DataBase			**Do all operations that need to access database**
setDatabaseConnectionInfo	no	no	Read given informations about database that needed to access that database, from file "DatabaseInfo.txt"
executeQuerry	string1:sql_statement	no	Execute retrieve database query and the result updated in resultSet attribute.
upaateQueerry	string1:sql_update_statement	int	Execute update database query and the return is affected rows with that update.
Payment			**Inner class into DataBase**
updateProductTable	ArrayList<String> productsIDs	boolean	Update the purchased products into database.
checkValidCard	String1: ardNumber String2: cardCCV String3 : cardDate DoubleWarapper1: cardBalance	boolean	Check if the provided info if for valid card
checkEnoughBalance	DoubleWarapper1: balance DoubleWarapper2: amountToPay	boolean	Check if this card have enough balance to pay.
withDrawFromCard	String1: ardNumber String2: cardCCV String3 : cardDate DoubleWarapper1: cardBalance DoubleWarapper2 :amountToPay	boolean	Do withdraw operation from the card with provided parameters.

doPayment	String1: ardNumber String2: cardCCV String3 : cardDate DoubleWarapper1: cardBalance StrWrapper1: paymentResult	boolean	Start the payment operation of the provide information and do the needed operations to make successful payment, And update paymentResult parameter with the payment operation result status.
SignUp			**Inner class into DataBase**
checkIFAvilablePlace	string1:mail	boolean	Check if the provided email if available to signup with or not.
addNewCustomer	String1: name String2: email String3: phone String4: country String5: city String6: password	boolean	Add new row to database with the provided parameters (customers informations).
Login			**Inner class into DataBase**
checkLogin	String1: login_type String1:email String3:password	boolean	Check if the provide parameters are for valid customer or admin based on string1 and if it valid it update the admin or customer with the matched information from the database.
ProductOperations			**Inner class into DataBase**
getProductInfo	String1:product_id Product1:product	boolean	Check if the provided product_id is valid and if it is valid it updates the product object with the matched information from the database.
print_products	int1: columns_to_display	no	It print products with their information and based on columns_to_diaplay it display specified informations about the product Customer : 6 columns. admin : 8 columns
listProducts	int1: col_n_display	no	t print products with their information and based on columns_to_diaplay it display specified informations about the product Customer : 6 columns. admin : 8 columns
ProductManipulation			**Inner class into DataBase**
listProductFullInof	no	no	It used productOperations class to print full products with full infrmations, it used by productManager for admin display for products

addNewProduct	Product1:product	boolean	It add the new product information to database with provided product objects attributes values.
upadateProductInfo	String1: prodcutID String2: updateInfo float1: value	boolean	It update database row of product matches with productID, and update database column which matches with updateInfo by the provided value.
DeleteProduct	String productID	boolean	Delete rows of products that matches with provided productID.
DoubleWarapper			**Wrapper for double value**
getDoubleVar	non	double	Return value of wrappered double value.
setDoublVar	double	non	Set value of wrappered double value.
Login			
start	no	no	Start login operation
setEmailAndPassword	no	no	Get login info and validate it from database.
MySystem			
MainSystemOperations			**Inner class in MySystem**
runSystem	NO	NO	Start point to run the program.
listProductsOrLoginOrSignup	no	boolean	List first layer of choices if user want to view products ,login or signup
setWhoMadeLogin	String1: set_who_made_login	no	Set attribute whoMadeLogin to use in decide which operation to run, cust
PrintColoredText			**Inner class in MySystem**
printGreenText	String1: str String2: newlineOrSpace	no	Print str into console with green color And decide the last character to be space or new line.
printRedText	String1: str String2: newlineOrSpace	no	Print str into console with red color And decide the last character to be space or new line.
DataValidation			**Inner class in MySystem**
checkValidIntInput	String message	int	Validate int input value and return it
checkValidFloatInput	String message	float	Validate float input value and return it

checkValidEmail	no	string	Validate string email input and return it
checkValidPhoneNumber	not	string	Validate input phone number and return it
isValidPhoneNumber	string:phoneNumber	boolean	Check passed phoneNumber is valid or not.
CustomerOperations			**Inner class in MySystem**
setCustomerValues	String1: name String2: email String3: phone String4: country String5: city String6: password	no	Set informations of logged customer by database after success login operation
customerOperations	no	no	Print to the customer the available choices of operations he can do and based on his decision do the corresponding operation.
AdminOperations			**Inner class in MySystem**
setAdminInfo	string1 : ID string2: name string3: email string4:password	void	Set informations of logged admin by database after success login operation
adminOperations			Print to the admin the available choices of operations he can do and based on his decision do the corresponding operation.
Payment			
startPayment	Cart1:cart	boolean	Start the payment operation based on the provided cart object to decide the total price.
getPaymentInfo	StrWrapper1:cardNumber StrWrapper2:cardDate StrWrapper3:cardCCV	no	Set value of provided parameters with card info, number , data, and CCV.
Product			
setValues	String1: ID String2: name float1: price int1: quantity String3:category float2: discount	no	Set value of product object attributes.

	float3: revenue int2: sold_quantity		
printProductToCustomer	no	string	Form a string of customer product 's information and return it.
printProductToAdmin	no	string	Form a string of admin product 's information and return it.
getFianlPrice	no	float	Calculate the final price of product after applying the discount and return it.
ProductManager			
listProductsForAdmin	no	no	Print products with full information to admin.
addNewProduct	no	boolean	Get information of new product and add it to database.
printChoicesFor	no	int	Choice continue in add product or not
printProductInfo	String1: productID String2: whoCallMe	void	Print product matches productID from database, and print information based on whoCallMe attribute, customer or the admin
updateProductInfo	no	no	Update product ,baeson on chosen information about provided product ID
deleteProduct	no	no	Delete product from database, based on provided product ID
getProductID	no	string	Return the product ID which was entered by the user from the console.
getProductInfo	product	no	Update parameter product with information to add it to the database.
getProductCategory	no	string	Select from choices which category selected for product that will be added to the database.
getProductQuantity	String productID	int	Return the available quantity of provided productID from database.
SignUp			
startSignUpOperation	no	no	Start operation of signup from getting new customer information and validate it and finally add it to the database.
setSignupInfo	no	no	Set information that is needed for signup
printInfoThatWasSet	no	no	Print the inormation that will be stored into database for user.

StrWrapper			Wrapper for String attribute.
getStr	no	String	Return the wrapped string value.
setStr	String	no	set the wrapped string value.
User			Super class for admin and customer, that holds common information about them
Visitor			Super class for User.
listProducts	no	no	Print products information as usual customer.