

The Cellar Door

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Section 1: Mission Statement

This project aims to provide an efficient and user-friendly database for consumers to shop for wine using a relational database and user interface programmed in Java. Our goal is to optimize search queries so that the customer can quickly and easily find any product sold by the wine store.

Section 2: Executive Summary

The wine industry is expanding at unprecedented levels in the Okanagan valley. In the last decade, many wineries use consumer-facing systems for online sales that are either outdated, inefficient, or not intended for the wine industry. We aim to provide an interface for wineries that will allow consumers efficiently to access any product that a winery might offer through the winery's website, and provide the ability for the user to access up to date and comprehensive information and specifications on any wine.

This will be achieved by modelling our database using the entity relationship model and constructing a UML diagram. The UML will be the basis of a relational database written in SQLServer, allowing for efficient, optimized, and fast search queries. The user interface will be coded in Java, allowing user access through the winery's website using JSPs and/or servlets. Customers will have their own login credentials, storing their contact information in the database for the winery's use. A standard shopping cart feature will allow the user to add or remove items and see their subtotal before placing an order. With SQLServer database implementation, the shopping cart will be saved in the database and will remain tied to the user until an order is placed or the user is removed from the system (allowing for a user to logout and bring up their shopping cart the next time they login). Implementing a SQLServer database through JDBC will also allow concurrent access from multiple customers and/or employees of the winery. The review feature will allow customers to leave a review for any product in the online shop, and allow customers to read reviews left by others. The system will accept any payment method accepted by the winery, allowing flexibility from store to store.

Using the JDBC API's three-tier user-client architecture will protect the database from malicious attacks since the database is not directly accessible by the interface. Furthermore, using prepared statements in Java will safeguard against SQL injection attacks. Using constraints in the database, login credentials, and implementing customer, wineshop employee and developer views will prevent both malicious and unintended deleterious alterations to the database.

With the lack of efficient online store solutions for wineries in the Okanagan, our system will provide an invaluable service for Okanagan wineries. The customer-friendly interface and easy-to-use backend system will help with both increasing online sales and reducing the administrative overhead for winery teams, allowing winery staff to focus on what's most important: making incredible, world-class wines.

Final Overall System	Category	Possible	Points	Comments / Code Files
Features		Points		
Documentation (10 total	points)		1	
Executive Summary (up	Core	2		See above
to 1 page)				
System Features (2	Core	2		Current section
pages)				
Walkthrough with	Core	6		See Section 4
screenshots (up to 10				
pages)				
Hosting (5 total points)	1	1	1	
Running on cosc304 or	Core	5		https://cosc304.ok.ubc.ca/66122573/tomcat/final/index.jsp
external server				
Main/Home Page (up to 1	4 total point	:s)	1	
Search for a product by	Core	1		Search on header.jsp and listProd.jsp
name				

Section 3: System Features

Browse products by	Core	1	listProd.jsp organizes items by category id
category			
List products (by	Core	1	listProd.jsp
search/browse)			
List products with image	Core	1	product.jsp
Page header with menu	Basic	1	header.jsp
Page header shows	Basic	1	header.jsp
current logged in user			
Improved UI (user- friendly, images, etc.)	Basic	2	-Implemented Bootstrap 4 and css in WebContent/css/custom.css -Created an image carousel -Created cards as links to listProd.jsp, login.jsp, and
			newCustomer.jsp
Shopping Cart (up to 9 to	tal points) Core	1	addeart ion
Add to shopping cart		1	addcart.jsp
View shopping cart	Core	1	showcart.jsp
Update quantity (with data validation)	Basic	2	showcart.jsp
Remove item from	Basic	1	showcart.jsp
shopping cart			
Improved formatting/UI	Basic	1	Link to shopping cart on header
(e.g. in header bar)			
Cart stored in database between sessions	Basic	3	Cart is loaded from customer database on login (validateLogin.jsp), then saved on logout (logout.jsp)
Checkout (up to 9 total po	pints)		
Checkout with customer id	Core	1	order.jsp (note: we stopped using checkout.jsp and ask the user to input their userId and password before checking out)
Product Detail Page (up to			
Product detail page and item description	Core	1	product.jsp
Product detail has an	Core	1	product.jsp
image			
Product detail has an image from database	Core	1	product.jsp (note: the way we set up the site, uploaded images will go straight to the db, and indeed all of our images are from the db. However, image URLs are
User Accounts/Login (up	to 16 total v	points)	supported as well)
Create user account page	Basic	3	newCustomer.jsp
Create account with data validation	Basic	3	newCustomer.jsp (all fields required, email validation at html input level, check for whether user id already exists in the db)

Login/logout	Core	2	login.jsp, validateLogin.jsp, logout.jsp, header.jsp
Register user/Forgot	Advanced	4	Register user: newCustomer.jsp
password email			No forgot password email functionality
Page listing all orders for	Core	1	customerOrder.jsp
user			
Product Reviews (up to 5	total points		
Ability to enter a review	Basic	2	product.jsp
on a product			
Display product review on	Basic	1	product.jsp
product detail page			
Administrator Portal (up t		oints)	
Secured by login	Core	1	validateLogin.jsp ; If user that logs in has admin privileges, the admin portal shows up on the header and is accessible. If not, the portal does not show up on the header and the pages will redirect to login
List all customers	Core	1	listCustomer.jsp
List report showing total	Core	1	listOrder.jsp
sales/orders			
Add new product	Basic	2	addProduct.jsp ; option to add an image file to be sent to the db
Update/delete product	Basic	2	Update: updateProduct.jsp ; we felt that deleting a product from the db was not a useful feature for our store
OR: Upload a photo to	Advanced	4	addProduct.jsp and updateProduct.jsp
database for product			
Database System/Genera		· · ·	
User interface and navigation/usability		Up to 5	Bootstrap formatting, automatic display/hide of options based on login (login, admin, your information, logout), basic theme of site
Others (your suggestions)		Up to 5	The automatic hiding/showing of different user options based on login status (logged out, logged in as customer, logged in as admin), use of icons in header, search bar in header, carousel on home page, use of custom logo for header and as watermark on images, our hilarious and informative product descriptions
Total: (out of 50 with			
maximum of 10 bonus			
marks. i.e. 60 points out			
of 50 is max.)			

The Cellar Door is an online wine shop that allows users to create accounts, build carts from a wide selection of products, and place orders. The shop is hosted on the Computer Science 304 server and users who visit are greeted with a carousel of pictures taken by group member Barret Jackson. The home page contains links to the product list, the login page, and the sign up page, all accompanied by more wine-related pictures and a short piece of flavour text. This site review will explain the major features of the Cellar Door, and give insight as to how they were implemented.

If the products link is selected from the home page, the user will be brought to a list of all products hosted on the Cellar Door, organized by category. This page features a search bar which can also be found at the top right corner of the website at all times. Upon clicking a product, the user will be brought to a page featuring a picture of the product in question, as well as the product id, price, and a short product description. Each picture features a watermark of the Cellar Door logo, which can also be seen on the top left of the website, acting as a link to the homepage. Users can add the product to the shopping cart, return to the list of products, or leave a review for other users to see accompanied by a rating from 1 to 5.

Upon adding an item to the cart, the user will be shown what is currently in their cart. At this point they can update the quantity of items they would like to purchase (if a quantity of 0 is entered, the product will be removed from the cart.) Furthermore, through the inCart relation, the carts are saved to the database and linked to the user by their userld. This means that users can create a cart, log out, and later log back in to find their cart unchanged from how they left it. When an order is placed, the user is asked to enter their account information before the shopping cart is emptied and the user is brought to a page giving them their order reference number and a link back to the home page.

When logged in as a customer, the header of the website is updated with a link that will display the customer information. If, however, a user is logged into an account with admin permissions, an additional option labelled "Admin" will appear. Clicking this displays a drop down menu with various options. Admin accounts can choose to view a page listing of all orders made, a page that lists the sum of money made each day, and a page listing all registered accounts including drop down. They can also choose to upload a new product to the database by entering a name, price, description, category, and representative image. Finally, admins can update an existing product by changing its existing values.

The visual design of the page was done using bootstrap formatting. The page was created using a primarily grey color palette to impart a classy feel, including a grayscale CSS on the homepage for all images. At the top of the website, the header bar contains links to the product list and shopping cart which are accessible on all pages. Furthermore, the header dynamically changes depending on the status of the user. If a user is not logged in, a "Login" button will appear that displays a drop down which allows users to log into their account. When logged in, the header will remove the "Login" button and replace it with a link to a page displaying the users personal information. A welcome message containing the logged in users name will also appear alongside a log out button. If the logged in user is also an admin, the previously mentioned "Admin" button will appear as well.

Although the current site functions on a basic level, many new features and security measures will need to be implemented before this site could go live. Features which will be implemented in the future are adding payment options, giving the customer the option to specify a billing address and a shipping address on checkout, updating a logged in user's cart in the database in real time (rather than upon logging out), and expanding admin options such as providing a toggle button on the "Active Users" page that would allow an admin (or perhaps only the site owner) to grant or revoke admin privileges from any user. Regarding security, implementing cryptographic hashing on a user's password using randomly generated hash salts unique to every user, and changing how form data is passed to the server to prevent script injections are top priority. Another way to improve security is to eliminate user ids and passwords and allow the user to login using either their Facebook or Google accounts.

Section 4: Walkthrough

To follow along, access the website at

https://cosc304.ok.ubc.ca/66122573/tomcat/final/index.jsp

Subsection 4.1: Administrator walkthrough



		9	2019-11-28	16:43:32.7	8	Jake Egarh	os	\$69,000,0	00.00
								Click for list of	products
							Product lo	d Quantity	Price
								1000000	\$69.00
4	The "Daily Totals" page shows the total sales per day		Daily	Totals					Γ
			Order Date				Total Or	der Amou	int
			2019-09-15				\$509.10		
			2019-09-16				\$106.75		
			2019-09-17				\$327.85		
			2019-10-28				\$69,000,0	069.00	
5	The "View User Accounts"	Activ	ve Users	User Id	amold	User Id		ghosseik	
	show all active users.	User Id	arnold	Click for user inform	ation	Click for	user informat	tion	
	Similar to the "Orders List"	Click fo	r user information	ld		Id			
	page, the buttons expand	User Id	bobby	First Name	Arnold	First Na	me K	arim	
	dropdowns showing the	Click fo	r user information	Last Name	Anderson	Last Nar	me G	ihossein	
	user's information, including	User Id	candace	Email	a.anderson@gmail.com	Email	k	arim.ghossein@	hotmail.com
	whether or not they have admin privileges	Click fo	user information	Phone	204-111-2222	Phone		802717761	
	aumin privileges	User Id	darren	Address	103 AnyWhere Street	Address		780 190th Street	t
				City	Winnipeg	City		dmoton	
		Click fo	r user information	State	МВ	State	A	lberta	
		User Id	beth	Postal Code	R3X 45T	Postal C	ode T	5T 5H8	
		Click fo	r user information	Country	Canada	Country	с	anada	
		User Id	badmin	User Id	arnold	User Id	g	hosseik	
		Click fo	ruser information	User Type	customer	User Typ	be a	dmin	

6	The "Add New Product" page does exactly what it says: allows an admin to add a product to the database. All fields are mandatory other than uploading a product image. Uploaded images are converted to byte streams and sent to the database	Add New Product Product Name: S Product Price: Product Description:	
		Category:	
		Upload Product Image	Browse
		Submit	
7	"Update Product" allows an admin to change any details from a product in the database. The fields are all optional, and only fields with entries will make changes to the product in the database. The id cannot be changed, and an error message pops up if an invalid product id is entered (note that the error message breaks the format on the image uploader. Still troubleshooting this)	ID of product to update: ID of product to New Product Name: New Product Name S New Product Price: Enter New Product Description: Enter New Product Change Category: Change Category:	me: t Price: ct Description:
		Submit	Submit
8	Finally, to logout, simply click "Logout" on the header navbar	Welcome Barret Jackson Logout Search	Search for Product

Subsection 4.2: Customer walkthrough

1	As with administrators, a customer can login	Product List Ty Your Shopping Cert O Login Search for Product Search for Product
	using the header navbar or by clicking on the homepage link to the "Login" page	Username: Password: Submit
2	Now that you've logged in, your name will show up in the right side of the navbar, and a welcome message will be displayed underneath the image carousel. Note that the admin portal is not available for customers	<page-header><page-header><page-header><image/><image/><image/></page-header></page-header></page-header>
3	Crafty users who think they can access the admin portal are redirected to "Login" with a message telling them that they do not have admin privileges	Please Login to System This account does not have admin privileges, try logging in with an admin account. Username: Password: Submit

4 The "Your Information" button on the navbar links to a page showing the customer information for the current user (note that although there is a button called "Edit your profile", this feature has not been implemented yet) and an option to view past orders (more on this later!)		Id First Name Last Name Email Phone Address City State Postal Code Country User Id Edit your profile	1 Arnold Anderson a.anderson 204-111-22 103 AnyWh Winnipeg MB R3X 45T Canada arnold		
 Let's start shopping! Click on either the "Product List" button in the navbar, or the link on the homepage. The "Product List" page has a list of all products organized by category. The user can either browse through the page or search by product name in the search form on the page or in the navbar 	Add to CartAdd to Cart	Moon Curser Tempranillo Summerhill Keter Blend Caduceus Nagual de la Naga Blend Kitsch Pinot Noir Rose Painted Rock Rose Roche Rose Poplar Grove Blanc de Noirs Söth Parallel Pinot Noir Rose The Hatch Dynasty White Blend Haywire Free Form Sauvignon Blanc The Hatch The Orange Order Kitsch Pinot Noir Spearhead Pinot Noir Curse Söth Parallel Pinot Noir Rose	e	Red Wine A A A A A A A A A A A A A A A A A A A	S32.94 S55.31 S65.46 S46.78 S25.00 S22.34 S24.98 S24.90 S22.47 S32.69 S28.72 S2

6	Clicking on the name of the product brings you to the "Product" page. On the left is an image of the wine from the database (if it exists), an image from a URL (if it exists), an option to "Add to Cart", an option to "Continue Shopping, the wine's name, id, and price, a short description, an option to add a review, then a list of reviews below organized by the user who left the review.	Fractional results of the results o
7	Let's order some wine! Clicking "Add to Cart" brings you to the shopping cart. Looks like Arnold is having a party! A user can change the quantity of items in their shopping cart by inputting a different value and clicking "Update Quantity." The subtotals and Order Total update automatically. Inputting a quantity of zero or clicking "Remove from cart"	Image: Product List Total Shopping Cat Total Marrieron State Control Your Information Velcome Annold Anderson Legout Search for Product Velcome Annold Anderson Legout Total Velcome Annold Anderson Legout Search for Product Velcome Annold Anderson Legout Product List Product Name Quantity Price Search Update Quantity 1 Moon Curseer Tempranillo 3 State 3 State 3 Search or cart Update Quantity 3 Cardisceus Nagual de la Naga Blend 15 S6546 State 30 Remove from cart Update Quantity 3 Cardisceus Nagual de la Naga Blend 15 S6546 State 30 Remove from cart Update Quantity 7 Rust Zinfandel 3 State 3 State 3 State 3 Geder Cont 2 State 3 State 3 State 3 State 3 Clear Cart Check Out Continue Shopping Check Out Continue Shopping

	removes the item from the user's cart.	
	Clicking "Clear Cart"	
	removes all the items	
	from the user's cart.	
	Finally, logging out of	
	your account	
	automatically saves	
	your cart to the	
	database so that it	
	can be retrieved the	
	next time you login	
	(remember to logout!)	
8	Let's put in Arnold's	
	order for his party.	
	Clicking on "Check	
	Out" sends us to the	
	order page. Just in case you leave a	
	large order in your	Login to complete the transaction:
	shopping cart and	Username
	leave your computer	
	alone for a few	
	minutes, the system	Password
	asks you to confirm	
	your login details	
	before checking out	Login
	(or to create a new	
	account if you don't	Or sign up for an account!
	have one already.	
	Don't worry, your	
	shopping cart will be	
	carried over when you	
	login).	

9	Party time! Arnold's order has gone	Your ord	ler:			
	through and will be	Product Id	Product Name	Quantity	Price	Subtotal
	shipped out soon.	11	Moon Curser Tempranillo	13	\$32.94	\$428.22
	He's given a reference number and	1	Kitsch Pinot Noir	24	\$69.00	\$1,656.00
	his name and	13	Caduceus Nagual de la Naga Blend	15	\$65.46	\$981.90
	customer number are	6	Le Vieux Pin Syrah		\$48.75	\$292.50
	displayed underneath	7	Rust Zinfandel	8	\$36.50	\$292.00
	a table of the products he's ordered				Order Total	\$3,650.62
			ompleted, will be r reference number is			
			to customer: 1			
			nold Anderson			
		Return to homepag	ge			
10	Let's take a look at		O	rder List		
	Arnold's past order in his "Customer Orders"		All of the orders tha	t Arnold Anderson has ever placed.		
	page. Similar to	Order Id	Order Date	Customer Id Customer Nam	e To	ital Amount
	"Order List" in admin,	12	2019-11-30 17:21:02.7	1 Arnold Andersc		\$3,650.62
	this page lists all past					list of products
	orders; however, since Arnold is a					antity Price
	customer, he only				24	\$69.00
	gets to see his orders.					\$48.75
	-					\$36.50
					11 13	\$32.94
						\$65.46



12 Here Sonny Croo has inputted his information. Let's create a new acc for him!	user S	Create a new account Sony Crockett jamesc@miamipd.us.gov S55-456-7890 27 Beach Road Miami FL 15976 USA Loafersnosocks
 13 Success! Sonny' account has bee created, and he i given a welcome message. Notice the navbar that u successful creati his account, Son logged in automatically. 14 Someone tried to 	n s in pon on of ny is	Int Word Shopping Cart Word Information Account Created Successfully! Welcome to the Cellar Door. First Name: Last Name: Frank: Prione Number: Chy: State/Province: Potal Code: Country: Username: Passoord: State
14 Someone tried to Sonny's usernam "loafersnosocks." system informs th that username is already taken	ne Use The ane	ername already taken, select other one! t Name: