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| RAZDA Co. | | |
| **Filename: [payment\_processing.py]** | | |
| **Summary***:*  The payment\_processing.py file handles secure payment transactions for Razda Market, integrating with SquareSpace’s API to process and verify payments. It receives payment information at checkout, initiates transactions, logs successful transactions to Razda Market’s database, and updates order statuses based on payment outcomes. This file is essential for ensuring that financial data is handled with security, consistency, and transparency. | | |
| ***Processes*** | | |
| * **Environment and Logging Setup** | **Loads environment variables and configures logging in payment\_processing.log to track each payment action, including successful transactions, failures, and errors for auditing and troubleshooting.** | |
| * **Database and API Configuration** | **Imports credentials from .env, configuring both MySQL database and SquareSpace API. Validates that SQUARESPACE\_API\_KEY and DB\_PASSWORD are set correctly, ensuring secure access for all operations.** | |
| * **Payment Data Retrieval** | **Retrieves payment details from the client, structuring the data for secure processing. This data includes sensitive fields like card number and billing address, which are securely managed before sending to SquareSpace** | |
| * **SquareSpace Payment Processing** | **Sends a structured request to SquareSpace API, using secure headers with authorization and content-type. Logs transaction details, including order ID and status, ensuring accurate payment records. Captures API responses and handles errors gracefully, logging issues if they arise.** | |
| **Files it Gets Information From:** | | **Files it Sends too:** |
| * **SquareSpaceAuth** (in .env): Manages SquareSpace API credentials, including SQUARESPACE\_API\_KEY and SQUARESPACE\_API\_URL. Ensures secure handling of sensitive information when processing payments. | * **Log file (payment\_processing.log)**: Logs each payment attempt, capturing order ID, user ID, amount, and transaction status. Helps monitor payment activity and provides an audit trail for troubleshooting. | |
| * **Database (connect\_db)**: Connects to razda\_market\_db for logging transaction details, capturing order ID, transaction ID, amount, and status. Logs failed transactions and records completed ones to support accurate financial record |  | |
| **Expected input into file:** | | **Expected output from file:** |
| |  | | --- | | **Environment Variables**: .env configuration for database access (DB\_HOST, DB\_USER, DB\_PASSWORD, DB\_NAME) and SquareSpace API (SQUARESPACE\_API\_KEY, SQUARESPACE\_API\_URL). **Payment Details**: JSON structured data, including card\_number, expiry, cvv, billing\_address, and order\_id. **Order ID**: Integer, uniquely identifying each order in Razda Market. | | **Example Input Code**: | | ```python | | order\_id = 1234 | | payment\_details = { | | "method": "CreditCard", | | "card\_number": "4111111111111111", | | "expiry": "12/25", | | "cvv": "123", | | "billing\_address": { | | "street": "123 Main St", | | ... | | } | | | |  | | --- | | **Transaction Log Entry**: Captures each transaction in transaction\_history, including order\_id, transaction\_id, amount, status, and timestamp for tracking. **SquareSpace API Response**: Confirms success or failure of payment processing, with error details if applicable. Logs include status messages for success and failure to aid in diagnostics. | | **Example Output Code**: | | ```python | | def process\_payment(order\_id, payment\_details) | | ... | | if response.status\_code == 201: | | payment\_info = response.json() | | log\_transaction(order\_id, payment\_info) | | logging.info(f"Payment for order ID") | | else: | | logging.error(...) | | return False | | ``` | |
| **Things that need to be taking place:** | | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  | | --- | | **1. Environment Variable Verification: Confirm .env has all required credentials, including DB\_HOST, DB\_USER, SQUARESPACE\_API\_KEY, and ensure they are correctly loaded. Test access tokens and API keys in staging to confirm they are correctly configured and functional.** |  |  | | --- | | **2. Logging Verification: Check payment\_processing.log to verify that each payment transaction attempt is recorded, including order ID, status, user information, and error details. Ensure logs are secure, capturing only non-sensitive details for monitoring without exposing financial data.** |  |  | | --- | | **3. Database Connection and Transaction Logging: Confirm that the database logs each successful transaction in transaction\_history, capturing required fields like order ID, transaction ID, amount, and timestamp. Ensure that failed transactions are also recorded in logs to diagnose and track payment failures.** |  |  | | --- | | **4. API Key and Authentication Security: Validate that SQUARESPACE\_API\_KEY is stored securely in .env and not hardcoded in code. Ensure that the API key is encrypted in storage and only accessible by authorized users.** |  |  | | --- | | **5. Payment Data Validation:** | | | | |
| Edit log (update each time you make changes to doc or file). | | |
| * Oliver Smith (Razda Admin) Nov 8, 2024: | | |