Programming Essentials: Introduction to Programming and Crash-Course on Python

Assignment

The reduction of cart abandonment rates is a critical goal for e-commerce platforms and is a key indicator of business success. The UN expects that by 2030, businesses can improve customer retention and reduce cart abandonment to at least as low as 10% of all initiated checkouts.

Parallel to the notion of cart abandonment is, of course, customer satisfaction, which is influenced by various factors such as website usability, payment options, and customer service. The vast majority of cart abandonments (70%) occur due to a lack of trust or transparency during the checkout process, and most could have been prevented with better user experience.

In light of what was mentioned above, customer feedback forms and user behavior analytics are simple and cost-accessible options to assess website usability, allowing e-commerce professionals to take action in order to improve customer satisfaction and reduce cart abandonment rates. The tools themselves work by collecting user feedback and tracking user actions, thus shedding light on pain points and areas for improvement in the checkout process.

Assume that you have access to the dataset of every transaction on your e-commerce platform. The transaction data includes the customer's name, date of purchase, cart items, total amount, and other baseline data you may want to choose, thus forming a transaction record.

Create nested dictionaries of at least 10 of these transactions containing the previously mentioned data, write seamless lines of code depicting how you would obtain information from the dictionary, and encrypt the transaction record that you have created.

Submission Format

- PDF of Jupyter notebook and / or
- .py file

You will be scored based on your logic, observation of PEP guidelines, use of conditional statements, and basic code handling.