University of British Columbia, Vancouver
Department of Computer Science

CPSC 304 Project Cover Page

Milestone #: **1**

Date: 29th September 2022

Group Number: 94

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By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above. (In the case of Project Milestone 0, the main purpose of this page is for you to let us know your e-mail address, and then let us assign you to a TA for your project supervisor.)

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by the Department of Computer Science and the University of British Columbia

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2. A brief project description answering these questions:

We are making an application for analyzing Amazon products. The domain of our application would be a review tracking system. Users will be able to login into their account. The user will then be able to make searches, receive summarized review information generated by an A.I. system about the product they search for, and manage a cart. Additionally, the website will also display advertisements to the users.

Our application will enable users to collect Amazon product information, add products to their cart, display a complete history of all searches made, and analyze reviews with the assistance of an A.I. system. The database will model the information provided by Amazon's API and users' login information. It will also model their interactions with the application, including a complete search history, cart management, related advertisements, and our AI-processed reviews and ratings.

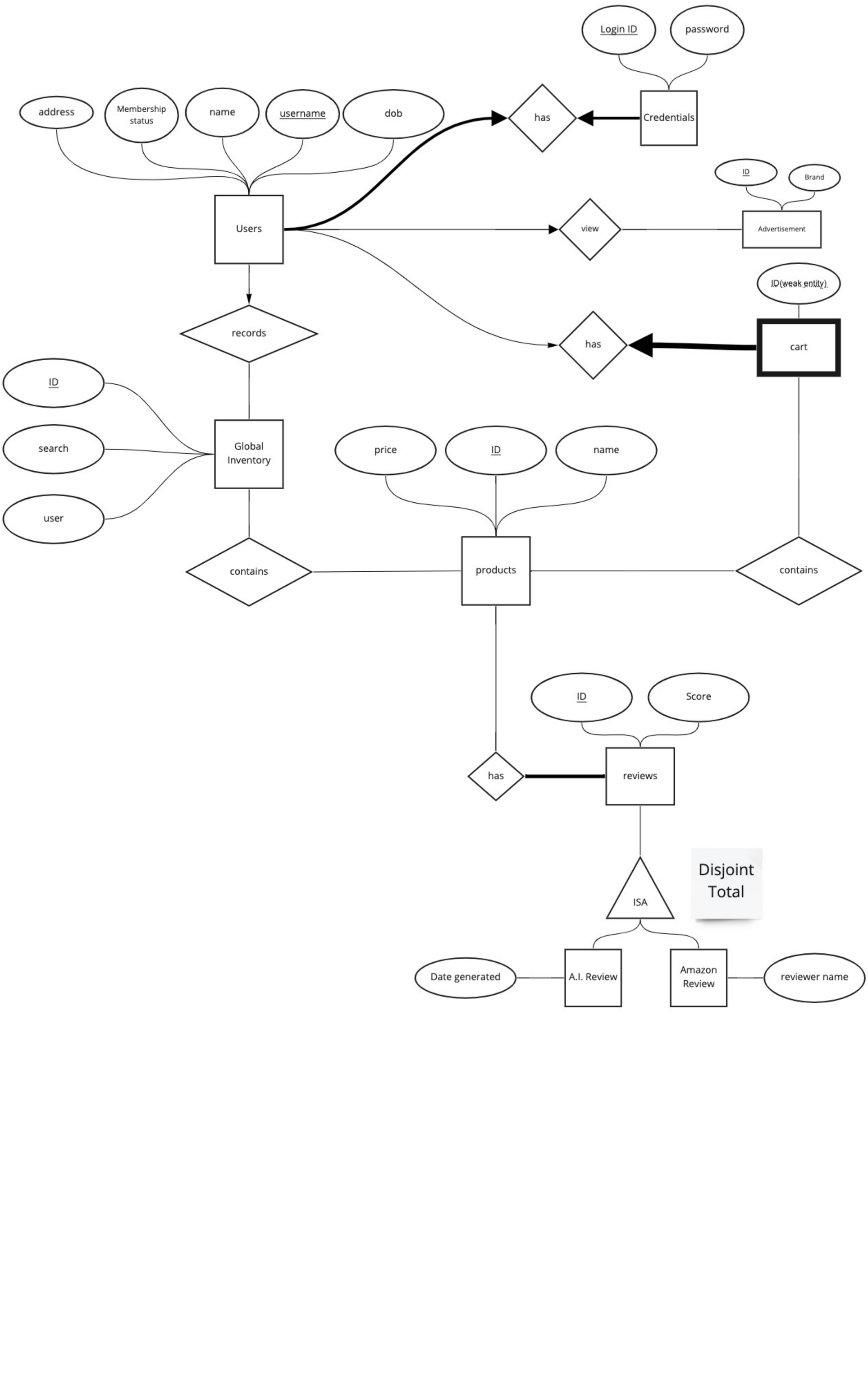
3. Database specifications: (3-5 sentences)

The database will allow the AI to process the amazon reviews and provide its rating for each product. The database will allow us to store and track user search history into a global inventory. The database will also allow us to handle users differently depending on their membership status. Users who don't pay their monthly fee will be displayed the same advertisements every time they log in because our database has a many-to-one relationship between the user and the advertisement entities.

4. Description of the application platform: (2-3 sentences)

We will use a SQLite database server (relational database) to manage our database and all related SQL scripts.

We will use a Flask server and a Natural Language Toolkit library to implement our machine learning model that rates products based on the tone and polarity of customer reviews. For the backend, authentication, and APIs, we will use a Node-express server. We will create our front end with React. We will get our customer review data using a Selenium and BeautifulSoup web scraper library and our product data by querying Amazon's Product API.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7. Other comments, as appropriate, to explain your project.

To satisfy the project requirement we artificially created the cart as a weak entity. We will also be generating unique IDs for the global inventory, product and review entities.