University of British Columbia, Vancouver
Department of Computer Science

CPSC 304 Project Cover Page

Milestone #: 1

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Group Number: 103

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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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Project Description

Application Domain

Our application domain falls within the Technology Inventory Management and Product Comparison domains. Technology Inventory Management focuses on tracking and managing information related to technology assets (in our case, computers) while Product Comparison enables users to compare two or more products based on their specifications directly.

Our application is distinct from Event Management (scheduling events, updating event information, exporting events to the calendar, etc.) and User Management (login mechanism, profile viewing, privacy settings, etc.); although it may build upon some of its schemes, our main application domain aims for a completely different functionality.

Domain Aspects

Technology Inventory Management:
Domain aspects include compiling and cataloging various computer models with detailed specifications such as CPU, RAM, storage, and graphics cards; providing filters based on these specifications; and assigning user reviews to corresponding computers.

Product Comparison:
Domain aspects include detailed product specifications, side-by-side comparisons, user reviews, and ratings.

Database Specification

Database Functionality

By storing data about computers and their specifications, our database will allow users to filter and search for computers that meet particular specifications and display them on the screen. Our database will also allow users to display specifications for two or more computers and allow for side-by-side comparison. Finally, our database will store customer reviews and ratings inputted in the UI of our application and enable them to be shown for specific computers.

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Application Platform

Database

Our project will use the department-provided Oracle database.

Tech Stack

Frontend: React with TypeScript, Redux, Tailwind CSS
Backend: FastAPI (Python) & Oracle DB
Version Control: Git/GitHub
Project Management: Notion, Google Drive
Deployment: GitHub Pages or Vercel, Cloud Virtual Machine (to host the backend; provider to be determined)

ER Diagram

See below.

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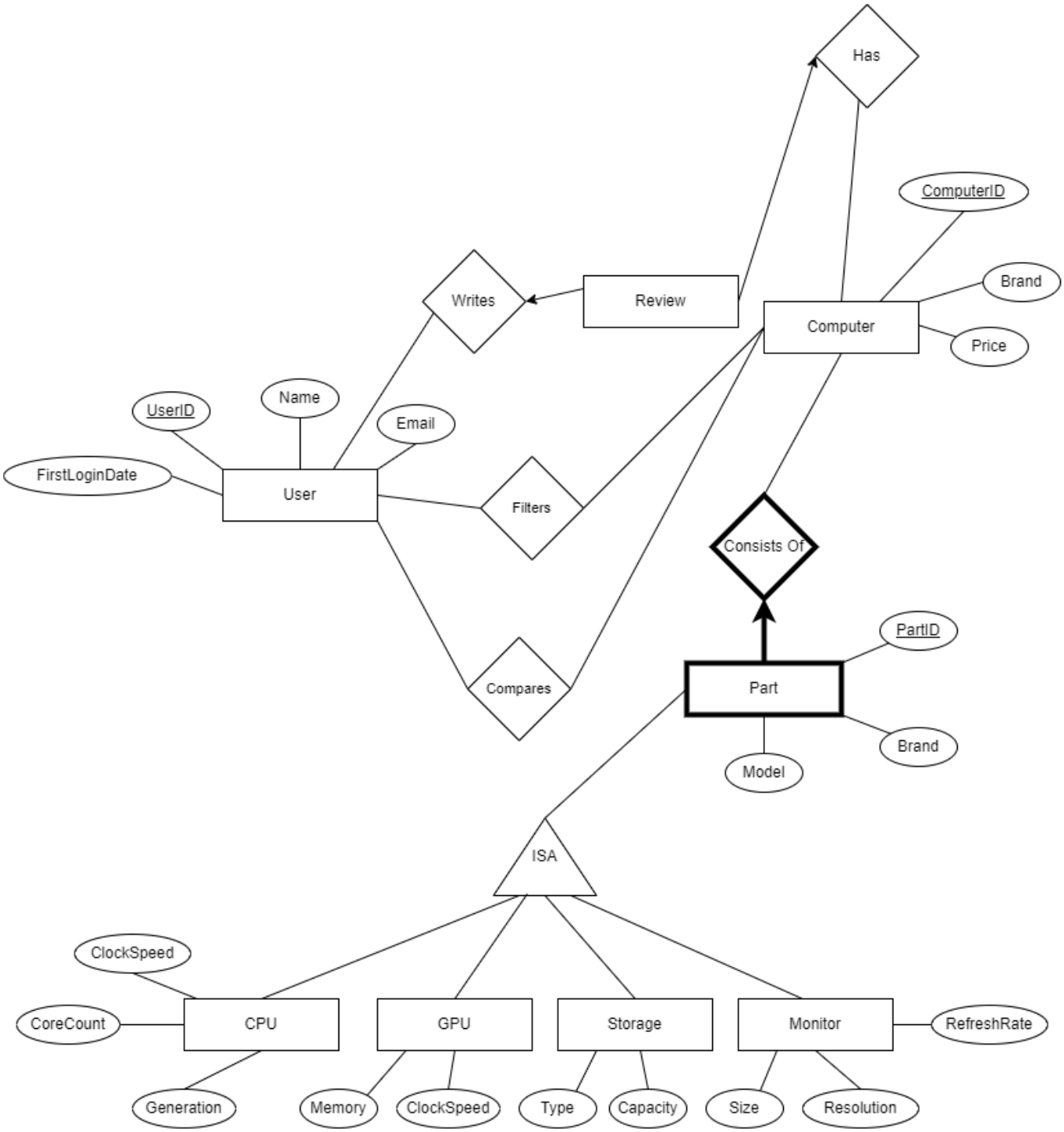

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Explanations and Comments

The Filters and Compares relationships will be uniquely identified through a composite key with the UserID and ComputerID.

A Review is written by a single user but a user can write multiple reviews.

A Review is about a single computer but a computer can have multiple reviews.

Part is a weak entity and is defined in terms of the computer to which it belongs.