University of British Columbia, Vancouver
Department of Computer Science

CPSC 304 Project Cover Page

Milestone #: ___1____

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Group Number: ____68_____

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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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What is the domain of the application? What aspects of the domain are modeled by the database?

a) The domain of our application is a smart gardening management system. In this domain, we focus on organizing and maintaining sections within our garden and tracking the plant care and allocation of resources with a smart monitoring system (which provides data for maintenance logs, resource usage, and environmental monitoring).

b) Our database models the structure of each smart garden, which is broken up into sections. Each section returns various environmental data points (such as temperature, moisture and pH with timestamps) that are useful for supporting the plants in that area. Each section also tracks the amount of resources being used in each section. These measurements are returned through the automatic smart monitoring system for easy access. Every garden tracks ownership with each garden having one owner, with the potential to grant access to others.

What functionality will the database provide?

The database connects users to a smart gardening system and functions by organizing gardens into sections and monitoring current plants, available utilities, environmental settings and resource usage. Users will be able to input their gardens into the database, and keep track of management logistics such as the location of plants and garden sections, ownership, garden access and available tools. To optimize care for individual plants, gardeners can look up the coordinates, plant status and retrieve information on growth requirements through the database. Gardeners can also stay updated on the usage of resources, categorized as water, nutrients or light, recorded in the database for each garden section. The database holds information on garden conditions through maintenance logs and environmental data such as temperature, pH and moisture in every garden section. This data will allow gardeners to easily and efficiently retrieve information on climatic status, resource consumption and maintenance of all garden sections, allowing them to make informed decisions to optimize plant growth and garden sustainability. Garden workers can use the database to look up ownership and individual access, locations of garden sections or specific plants, and the available tools. Easy access to this information will enable workers to quickly find and identify gardens and plants or prepare utilities. Together, this database will allow garden owners to streamline gardening surveillance, organize and manage smart garden logistics, and provide support to visitors or workers navigating the garden community.

Acknowledgement: AI tools were not used for this assignment.

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ER Diagram: