

CPSC 304 Project Cover Page

Milestone #: 1

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Group Number: 7

Name	Student Number	CS Alias (Userid)	Preferred E-mail Address
Linda Han	81054231	z7m9j	hanlinda0903@gmail.com
Yudan Chen	74330309	x6a2g	cydan199@student.ubc.ca
Mike Lu	72573983	e0s9m	mike020830@gmail.com

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

1. Domain of Application: Ski Resort Operation Insights

The domain of our application is a ski resort operation tracking system, overseeing all aspects related to running a ski resort. This domain encompasses various critical components, each tailored to address the unique challenges and requirements of ski resort operations. The primary goal within this domain is to ensure smooth, efficient, and safe operations that enhance guest experiences.

The database for this application models:

- skier profile (i.e. lesson bookings, ski passes, medical history and ski incidents)
- facilities (i.e. lift, ski slope) and the rescue team that's responsible for monitoring it
- environmental elements such as weather conditions and wildlife.

Applications to real-life situations

- **Guest Profiles:** The database keeps track of skier profiles, including their lesson bookings, ski pass, and medical history. This allows the resort to manage traffic on ski slopes, attend to skier health emergencies and ensure a enjoyable experience on the slopes.
- **Facility Statuses:** The database keeps track of lift statuses, the information is then shown on the maps or display boards to inform skiers and help them decide which route to take.
- **Safety and Incident:** Our database records incidents including the involved slope and skier, as well as wildlife encounters, which helps the resort respond to emergencies and safety concerns promptly. The rescue team entity is central to this, allowing for efficient dispatching and coordination in rescue operations.
- **Ski Lessons Coordination:** This involves organizing and scheduling standard and VIP lessons.
- **Environmental Monitoring:** The database models weather conditions and ski slope statuses, providing essential data for daily operational decisions. It helps determine which slopes are safe for use, which lifts should be operational, and what advice should be given to skiers to ensure their safety based on real-time weather updates.

2. Database specifications

The database will serve as the backbone for tracking ski resort operations, offering functionalities such as scheduling and enrollment for ski lessons, and comprehensive skiers tracking including ski passes. It will also facilitate incident reporting and response coordination for the resort's safety team. Additionally, the database will enable staff to monitor and record weather conditions and ski slope/lift statuses, which are critical for daily operational decisions and ensuring guest safety. It also enables staff to keep track of wildlife encounters on the ski slope, allowing researchers to study how ski slope influences wildlife behavior and ensuring the safety of skiers.

3. Application platform

We are planning to use the department-provided Oracle RDBMS for our database. Our expected technology stack is PHP.

4. Other comments

Note: In this project, the entity Skier is used to refer to both skiers and snowboarders. Since they have the same attributes and relationships with the other entities, we don't see any reason to separate them into individual entities.

