Luke Beatty

Matt Thompson

**Description of Data: Ski Mountain**

Due to our common interest in skiing, we chose to model a ski mountain. Our classes include Mountain, Trail, Lift and Lodge. Each class has its own specific fields, as well as some lists that hold corresponding objects – for example, Mountain holds a list of trails that are located on the current mountain. Additionally, we are planning to implement a variety of class-specific functions that would be viable options for someone running the ski resort, such as OpenTrail(), which would set the isOpen flag of a trail to True.

The following is a more in-depth description of our anticipated implementation:

Class Mountain:

- Fields:

- Name (string)

- Location (string)

- List of trails

- List of lifts

- List of lodges

- Methods:

- (Getters for all fields)

- TrailStatus() returns a list of trails and whether they are open or not, as well as if they

are groomed or not

- LiftStatus() returns a list of lifts and whether they are running or not

- LodgeStatus() returns a list of lodges and whether they are open and/or running food

or not

Class Trail:

- Fields:

- Name (string)

- Difficulty (enum)

- isGroomed (bool)

- List of lifts that lead to this trail

- Methods:

- (Getters for all fields)

- GroomTrail(name) sets the groomed status of the given trail to true

Class Lift:

- Fields:

- Name (string)

- List of trails that this lift gives access to

- isRunning (bool)

- Methods:

- (Getters for all fields)

- RunLift(name) sets the isRunning field of the given lift to true

- StopLift(name) sets the isRunning field of the given lift to false

Class Lodge:

- Fields:

- Name (string)

- isOpen (bool)

- isServingFood (bool)

- Methods:

- (Getters for all fields)

- OpenLodge(name) sets the isOpen field of the given lodge to true

- CloseLodge(name) sets the isOpen field of the given lodge to false

- OpenFood(name) sets the isServingFood field of the given lodge to true

- CloseFood(name) sets the isServingFood field of the given lodge to false