**Requirements and Planning**

**Project Antarctica**

**Role:** Perform requirements and planning work for a software system to control key parts of the Antarctic base.

System should oversee as much of the operation of the base as possible.

Figure out the requirements.

* Base located in middle of continent on featureless ice sheet stretching from horizon to horizon
* Very inaccessible and inhospitable
* Temperatures – 60
* Blizzards
* In winter the sky is dark 24 hours for 7 months
* In summer the sun shines for 24 hours a day

More

* Base is a small town populated by scientists, engineers and service workers
* Their mission is data collection
* Side mission checking and maintenance of various structures and systems in the base + food preparation

More

* Base has solar panels
* Wind turbine which must be parked in the event of a blizzard to avoid damage
* Large battery
* Backup diesel generators
* Base has telecommunications equipment and other equipment to monitor the weather, ice, earth’s magnetic field.
* There are assorted vehicles that can be used to travel around and outside the base. MUST keep track of these vehicles in case a rescue is needed.

**Key Requirements**

* Temperature control, base always remains at room temperature with option to cool or heat up.
* Displays current temperature.
* Blizzard detection and alert system.
* Winter and summer adaptable light system (solar panels not needed in winter?)
* Automated wind-turbine shut-down system by feathering the blades when winds are above 70 km/hour
* Database for telecoms equipment and other monitoring equipment count
* GPS system in a database that displays where vehicles are. There is an emergency button that pings the nearest available vehicle.

**Version Control** for workers

* Git food log branch
* Git structure and systems maintenance branch
* Weekly commit for the results of checking various structures and systems in the base
* Weekly commit for food log

**Git Commands**

In desired directory