Adirondack 46er challenge Queries

**1. Number of Completed Peaks by Each Hiker**

**What it retrieves**: The total number of unique peaks (up to 46) each hiker has completed, sorted by the highest number of peaks.

**How it works**: Joins HIKER, HIKE\_LOG, and HIKE\_LOG\_MOUNTAIN tables using their IDs. Uses COUNT(DISTINCT HL\_M.MountainName) to count unique peaks for each hiker and groups results by the hiker’s ID and name.

**2. Park Rangers’ Earliest Patrol Date in 2023 Involving a Rescue**

**What it retrieves**: The first patrol date in 2023 for each ranger that involved a rescue as well as Notes, the exact date and Name of the ranger

**How it works**: Joins PARK\_RANGERS, RANGER\_PATROL\_LOG, and RESCUE\_DETAILS. Uses MIN(RPL.PatrolDate) to find the earliest patrol date. Filters results with HAVING to include only patrols in 2023.

**3. Trailheads Without “Hard” Trails**

**What it retrieves**: A list of trailheads that do not have any trails marked as “Hard” difficulty.

**How it works**: Uses NOT EXISTS with a subquery to exclude trailheads that are associated with any “Hard” difficulty trails via TRAIL\_HEAD\_ACCESSIBLE\_TRAILS and TRAIL.

**4. Names and Heights of “Hard” Mountains Hiked by Current Hikers**

**What it retrieves**: Names and heights of mountains with “Hard” difficulty that are over 4800ft and have been hiked by hikers, filtering for mountain names containing “S”.

**How it works**: Joins MOUNTAIN and HIKE\_LOG\_MOUNTAIN. Filters with WHERE conditions for “Hard” difficulty, height > 4800, and mountain names matching the pattern %S%.

**5. Gear Data Used by 46ers**

**What it retrieves**: A list of gear used by 46er hikers during their hikes, including type, weight, and description.

**How it works**: Joins GEAR, HIKER\_GEAR\_USE, and ADK46ER. Uses a subquery to filter hikes logged by 46ers based on HikerID.

**6. Tallest Mountain Summited by a Hiker**

**What it retrieves**: The tallest mountain summited a hiker, showing the hiker’s ID and the height/name of the tallest mountain.

**How it works**: Joins HIKER, HIKE\_LOG, HIKE\_LOG\_MOUNTAIN, and MOUNTAIN. Uses MAX(M.Height) to find the tallest mountain and groups results by H.HikerID.

**7. Average Height of Mountains Hiked by Each Hiker**

**What it retrieves**: The average height of mountains summited by each hiker.

**How it works**: Joins HIKER, HIKE\_LOG, HIKE\_LOG\_MOUNTAIN, and MOUNTAIN. Uses AVG(M.Height) to calculate the average height and groups results by H.HikerID.

**8. Hikers Who Have Been Rescued and Their Rescuers**

**What it retrieves**: The names of hikers who have been rescued(everytime) and the names of the rangers who rescued them.

**How it works**: Joins HIKER, RESCUE\_DETAILS, RANGER\_PATROL\_LOG, and PARK\_RANGERS based on respective IDs to link hikers and rescuers.

**9. Trailhead with the Most Trails**

**What it retrieves**: The trailhead with the largest number of accessible trails.

**How it works**: Joins TRAIL\_HEAD and TRAIL\_HEAD\_ACCESSIBLE\_TRAILS. Counts trails per trailhead using COUNT(\*), groups by trailhead name, sorts results in descending order, and limits output to one row.

**10. Popularity contest : Mountain Edition**

**What it retrieves**: The name of the mountain that has been hiked the most times.

**How it works**: Joins HIKE\_LOG, HIKE\_LOG\_MOUNTAIN, and MOUNTAIN. Counts how many times each mountain has been hiked using COUNT(\*), groups by mountain name, sorts by count in descending order, and limits output to one row.