

| Business Template  Climbs for a Mountaineering Club |
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# Business Description

## Business background

The business involves organizing and managing mountain climbing activities. It needs to track important information about climbers, climbs, routes, mountains, equipment, and guides. Having a database helps keep this information organized and easy to access.

## Problems. Current Situation

Currently, the business has trouble managing all this data. Information is scattered and hard to keep track of, leading to mistakes and wasted time. Organizing climbs, tracking equipment, and keeping climbers safe is difficult without a central system.

## the Benefits of implementing a database. Project Vision

A database will solve these problems by keeping all the information in one place. This will make organizing climbs easier, track the equipment better, and help ensure safety. The goal is to build a system where everything is stored and managed efficiently.

# Model description

## Definitions & Acronyms

**Climb**: A registered event where climbers ascend a mountain using a specific route.

**Climber**: An individual participating in a climb.

**Route**: The path that a climber takes to ascend a mountain.

**Guide**: An experienced individual leading or assisting with the climb.

**Equipment**: The gear used during the climb.

**Training**: A session attended by a climber for preparation before a climb.

**Area**: A geographical region where mountains are located.

**Weather**: Environmental conditions during a climb.

**Climber\_Training**: An association table linking climbers to the training sessions they attend.

**Climb\_Climber**: An association table linking climbers to specific climbs they participated in.

**Mountain**: A natural elevation represented in the model, which can include routes for climbs.

## Logical Scheme

(See the attached image for the logical structure)

Constraints:

(PK) - Primary Key

(FK) - Foreign Key

(NN) - NOT NULL

## Objects

These tables are linked to represent relationships between climbers, mountains, climbs, and safety measures like weather conditions and medical information.

| Table Name | Field name | Field Description | Data Type |
| --- | --- | --- | --- |
| climber | climber\_id | PK | INT |
| name | The climber’s name | VARCHAR(100) |
| address | The climber’s address | TEXT |
| birth\_date | The climber’s birth date | DATE |
| medical\_notes | Medical info | TEXT |
| equipment\_id | FK | INT |
| climber\_training | climber\_id | FK | INT |
| training\_id | FK | INT |
| climb\_climber | climber\_id | FK | INT |
| climb\_id | FK | INT |
| training | training\_id | PK | INT |
| training\_name | Training name | VARCHAR(100) |
| training\_date | Date of the training session | DATE |
| location | Location of the training session | VARCHAR(100) |
| duration | Duration of the training session | TIME |
| equipment | equipment\_id | PK | INT |
| climber\_id | FK | INT |
| e\_description | description about this equipment | TEXT |
| guide | guide\_id | PK | INT |
| name | The guide’s name | VARCHAR(100) |
| phone\_number | Contact number of the guide | VARCHAR(15) |
| climb | climb\_id | PK | INT |
| route\_id | FK | INT |
| guide\_id | FK | INT |
| weather\_id | FK | INT |
| start\_date | Start date of the climb | DATE |
| end\_date | End date of the climb | DATE |
| weather | weather\_id | PK | INT |
| temperature | Temperature level | DECIMAL(4,2) |
| humidity | Humidity level | DECIMAL(4,2) |
| wind\_speed | wind speed | DECIMAL(5,2) |
| conditions | Weather conditions (clear, cloudy) | VARCHAR(100) |
| mountain | mountain\_id | PK | INT |
| name | The name of the mountain | VARCHAR(100) |
| height | The height of the mountain | DECIMAL(6,2) |
| area\_id | FK | INT |
| area | area\_id | PK | INT |
| name | The name of the area | VARCHAR(100) |
| area\_info | Additional information about the area | INT |
| route | route\_id | PK | INT |
| name | The name of the route | VARCHAR(100) |
| mountain\_id | FK | INT |

Comments on table relationships

Example with data

| Climb ID | Climber Name | Mountain Name | Start Date |
| --- | --- | --- | --- |
| 1 | Andrzej Kowalski | Mount Everest | 12.10.2024 |