### Data Dictionary

Garden Table:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Field Name | Data Type | Data Format | Field Size | Description | Example |
| id | int | numeric | 4 | garden id | 1 |
| name | varchar | string | 20 | garden name | BC |
| phone\_number | varchar | string | 15 | garden’s phone number | 425-564-1000 |
| address\_line1 | varchar | string | 40 | garden’s address line1 | 3000 Landerholm Cir SE |
| address\_line2 | varchar | string | 40 | garden’s address line2 | North Shore |
| city | varchar | string | 20 | garden’s city | Bellevue |
| region | varchar | string | 20 | garden’s region | WA |
| postal\_code | varchar | string | 10 | garden’s postal code | 98007-0000 |
| country\_id | int | numeric | 4 | garden’s country id | 14 |

Gardener Table:

| Field Name | Data Type | Data Format | Field Size | Description | Example |
| --- | --- | --- | --- | --- | --- |
| id | int | numeric | 4 | gardener id | 1 |
| password | char | string | 15 | gardener password | Agm123! |
| garden\_id | int | numeric | 4 | garden id | 1 |
| first\_name | varchar | string | 20 | gardener's first name | Hyungmin |
| last\_name | varchar | string | 20 | gardener’s last name | Jeon |
| email | varchar | string | 30 | gardener’s email | hyungmin.jeon@bellevuecollege.edu |
| phone\_number | varchar | string | 15 | gardener’s phone number | 425-564-1000 |
| address\_line1 | varchar | string | 40 | gardener’s address line1 | 3000 Landerholm Cir SE |
| address\_line2 | varchar | string | 40 | gardener’s address line2 | North Shore |
| city | varchar | string | 20 | gardener’s city | Bellevue |
| region | varchar | string | 20 | gardener’s region | WA |
| postal\_code | varchar | string | 10 | gardener’s postal code | 98007-0000 |
| country\_id | int | numeric | 4 | gardener’s country id | 14 |
| allow\_notifications | bool | boolean | 2 | gardener’s notification setting | true |
| reminder\_time | time | hh:mm:ss[.nnnnnnn] | 5 | gardener’s reminder time  (if null: system reminder time) | 13:33:52 |
| timezone | varchar | string | 10 | Time Zone abbreviation <https://www.timeanddate.com/time/zones/> | GMT |
| org\_id | int | numeric | 4 | gardener’s organization id | 1 |
| org\_password | char | string | 15 | gardener’s organization password | Agm123! |
| org\_email | varchar | string | 30 | gardener’s organization email | hyungmin.jeon@bellevuecollege.edu |

Garden reminder time Table:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Field Name | Data Type | Data Format | Field Size | Description | Example |
| garden\_id | int | numeric | 4 | garden id | 1 |
| timezone | varchar | string | 10 | Time Zone abbreviation <https://www.timeanddate.com/time/zones/> | GMT |
| updated\_reminder\_time | time | hh:mm:ss[.nnnnnnn] | 5 | gardener’s reminder time  (if currently searching garden id is not found in ‘garden\_id’ field -> return system reminder time) | 13:33:52 |

Drone Data Table:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Field Name | Data Type | Data Format | Field Size | Description | Example |
| id | int | numeric | 4 | drone id | 1 |
| garden\_id | int | numeric | 4 | garden id | 1 |
| date\_time | datetime | 'YYYY-MM-DD hh:mm:ss ' | 8 | save date and time whenever drone is taking picture | 2022-11-06 13:33:52 |
| pad\_x\_coordinate | float | numeric | 8 | the “x” coordinate detected on the Mission Pad | 0(no mission pad detected) |
| pad\_y\_coordinate | float | numeric | 8 | the “y” coordinate detected on the Mission Pad | 0(no mission pad detected) |
| pad\_z\_coordinate | float | numeric | 8 | the “z” coordinate detected on the Mission Pad | 0(no mission pad detected) |
| vgx | float | numeric | 8 | the speed of “x” axis | 10~100 |
| vgy | float | numeric | 8 | the speed of “y” axis | 10~100 |
| vgz | float | numeric | 8 | the speed of “z” axis | 10~100 |
| agx | float | numeric | 8 | the acceleration of the “x” axis. | 0 |
| agy | float | numeric | 8 | the acceleration of the “y” axis. | 0 |
| agz | float | numeric | 8 | the acceleration of the “z” axis. | 0 |
| pitch | float | numeric | 8 | the degree of the attitude pitch | 0 |
| roll | float | numeric | 8 | the degree of the attitude roll | 0 |
| yaw | float | numeric | 8 | the degree of the attitude yaw | 0 |
| templ | float | numeric | 8 | the lowest temperature of drone in degree Celsius | 15 |
| temph | float | numeric | 8 | the highest temperature of drone in degree Celsius | 34 |
| tof | float | numeric | 8 | the time of flight distance in cm. | 0 |
| h | float | numeric | 8 | the height in cm | 0 |
| bat | float | numeric | 8 | the percentage of the current battery level | 0~100 |
| baro | float | numeric | 8 | the barometer measurement in cm | 1.4 |
| motor\_time | float | numeric | 8 | the amount of time the motor has been used. | 5.3 |
| image | blob | image | will be saved in AWS S3 | image from drone | plant1.img |
| video | blob | video | will be saved in AWS S3 | video from drone | day1.mp4 |

# Plant table will be updated with the data processed by AWS sagemaker

Plant Table:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Field Name | Data Type | Data Format | Field Size | Description | Example |
| plant\_id | int | numeric | 4 | plant id | 1 |
| garden\_id | int | numeric | 4 | drone id | 1 |
| drone\_id | int | numeric | 4 | drone id | 1 |
| date\_time | datetime | 'YYYY-MM-DD hh:mm:ss ' | 8 | date and time of the drone's taking picture | 2022-11-06 13:33:52 |
| plant\_image | blob | image | will be derived from AWS S3 | image from drone | plant1.img |
| plant\_type | varchar | string | 20 | type of the plant | corn |
| disease\_check | bool | boolean | 2 | whether plant image shows disease symptom | true |
| plant\_growth\_rate | float | numeric | 8 | growth rate of the plant | 1.3 |

Pad Table:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Field Name | Data Type | Data Format | Field Size | Description | Example |
| pad\_id | int | numeric | 4 | pad id | 1 |
| garden\_id | int | numeric | 4 | garden id | 1 |

WIFI Table:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Field Name | Data Type | Data Format | Field Size | Description | Example |
| WIFI\_id | int | numeric | 4 | garden id | 1 |
| garden\_id | int | numeric | 4 | garden id | 1 |
| ssid | varchar | string | 20 | updated Wi-Fi name | BC garden wifi |
| pass | char | string | 15 | updated Wi-Fi password | Agm123! |

\_\_ : PK

garden\_id is a FK references Garden (garden\_id)

drone\_id is a FK references Drone data (drone\_id)

date\_time is a FK references Drone data (date\_time)