Kyle Anderson
SWDV-691: Software Development Capstone
PoolPal Design: Service Layer(s)

User: all of the user-specific information

Verb	Route	Description
GET	/api/users	Returns a list of all users, their chemicals, and readings history

Example successful response:

```
{
    "_id": "5f9593a81acbe43fdbe6e4e9",
    "user_name": "kylekanderson",
    "email": "kanderson8@live.maryville.edu",
    "password": "q;ciermnwp$SJ3J2&#MI",
    "name": "Kyle Anderson",
    "pool_gallons": 10000,
    "pool_type": "Fiberglass",
    "chemicals": [
        {
            "_id": "5f9593a81acbe43fdbe6e4ea",
            "chlorine": "Tri-Chlor",
            "ph_up": "Soda Ash",
            "ph_down": "Dry Acid",
            "alkalinity_up": "Sodium Bicarbonate",
            "alkalinity_down": "Muriatic Acid",
            "calcium_up": "Calcium Chloride",
            "calcium_down": "Dry Acid"
        }
```

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```
    ],
    "readings": [
        {
            "_id": "5f94e21f6f9d7a3b8064aee3",
            "reading_date": 2020-10-27,
            "ph": 7.6,
            "free_chlorine": 2.9,
            "combined_chlorine": 3.1,
            "alkalinity": 120,
            "calcium_hardness": 100,
            "cyanuric_acid": 40
        }
    ]
}
```

Example error response:
Could not GET /users

POST	/api/users	Creates a new user object

Example request body:

```
{
    "user_name": "kylekanderson",
    "email": "kanderson8@live.maryville.edu",
    "password": "q;ciermnwp$SJ3J2&#MI",
    "name": "Kyle Anderson",
    "pool_gallons": 10000,
```

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```
    "pool_type": "Fiberglass"
}
```

Example successful response:
```
{
    "_id": "5f9593a81acbe43fdbe6e4e9"
}
```

Example error response:
Could not POST /users

PUT	/api/users	Updates a user object

Example request body:
```
{
    "_id": "5f9593a81acbe43fdbe6e4e9",
    "user_name": "kylekanderson",
    "email": "kanderson8@live.maryville.edu"
}
```

Example successful response:

```
"_id": "5f9593a81acbe43fdbe6e4e9" updated successfully
```

Example error response:

```
Could not update "_id": "5f9593a81acbe43fdbe6e4e9"
```

DELETE	/api/users	Deletes a user object

Example request body:

```
{
    "_id": "5f9593a81acbe43fdbe6e4e9"
}
```

Example successful response:

```
"_id": "5f9593a81acbe43fdbe6e4e9" deleted successfully
```

Example error response:

```
Could not delete "_id": "5f9593a81acbe43fdbe6e4e9"
```

Chemicals: chemical-specific information

Verb	Route	Description
GET	/api/chemicals	Returns a list of all chemicals and their effect on water chemistry

Example successful response:

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```
{
  "_id": "5f9593a81acbe43fdbe6e4e9",
  "name": "Tri-Chlor",
  "quantities": [
      "chemical": [
          "amount": 3.4,
          "units": oz
      ],
      "adjustment": [
          "amount": 1,
          "units": ppm
      ],
      "water_volume": 1000
  ]
}
```

Example error response:
Could not GET /chemicals

POST	/api/chemicals	Adds a chemical object

Example request body:

```
{
  "name": "Tri-Chlor",
  "quantities": [
      "chemical": [
          "amount": 3.4,
```

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```json
        "units": oz
    ],
    "adjustment": [
        "amount": 1,
        "units": ppm
    ],
    "water_volume": 1000
    ]
}
```

Example successful response:

```json
{
    "_id": "5f9593a81acbe43fdbe6e4e9"
}
```

Example error response:
Could not POST /chemicals

PUT	/api/chemicals	Updates a chemical object

Example request body:

```json
{
    "_id": "5f9593a81acbe43fdbe6e4e9",
  "name": "Di-Chlor"
}
```

Example successful response:

```
"_id": "5f9593a81acbe43fdbe6e4e9" updated successfully
```

Example error response:

```
Could not update "_id": "5f9593a81acbe43fdbe6e4e9"
```

DELETE	/api/chemicals	Deletes a chemical object

Example request body:
```
{
    "_id": "5f9593a81acbe43fdbe6e4e9"
}
```

Example successful response:

```
"_id": "5f9593a81acbe43fdbe6e4e9" deleted successfully
```

Example error response:

```
Could not delete "_id": "5f9593a81acbe43fdbe6e4e9"
```