



Business case:

Nutris is a health and nutrition API that would provide data of food (nutritional values and recommended daily intake values), recipes and exercises based on age, gender, etc. It will help users search for recipes and track their food intake. It will help users track their activity (fitness exercises, walking etc.) and will provide users with analysed information detected by sensors - heart rate, sleep stages, snoring and apnea.

11 main features:

1. *Nutrient data*: The API will provide access to data of various foods: calories, nutrients, macronutrients (carbohydrates, proteins, fats) and micronutrients (vitamins and minerals).
2. *Save and update nutrient data*: The API will allow nutritionists to update and add various food info.
3. *Nutritionists data*: The API will allow people to register as nutritionists in order to update food info.
4. *Recommended intake values*: The API will provide recommended daily intake values for various nutrients based on age, gender, and other factors.
5. *Food search*: The API will allow users to search for foods by name, ingredient, or nutrient content.
E.g. *Give me 4 base foods that have less than 100 kcal.*
6. *Recipe search*: The API will allow users to search for recipes based on various criteria, such as ingredient, cuisine, and dietary restrictions.
E.g. *Give me one dinner recipe with salmon for cardiacs.*
7. *Diet and nutrition tracking*: The API will allow users to make an account and track their food intake and nutrient intake over time, and to set and track nutrition goals.
8. *Exercise tracking*: The API will allow users to track their physical activity, including the type, duration, and intensity of the activity.

9. *Weight tracking*: The API will allow users to track their weight over time.
10. *Sleep tracking*: The API will allow users to track their sleep. With info from the sensors, the API will detect stages of sleep and sleep quality. Will determine and analyse snoring and apnea based on information received by sound sensors.
11. *Heart rate tracking*: Allows users to track their heart rate over time, including resting heart rate and heart rate during physical activity.

5 features that could be included in the minimum viable product (MVP):

Each feature contains a description, a reason for being included in MVP and some technical details.

1. *Nutrient data*: Providing access to data on the calories and nutrient content of various foods is a key feature for any nutrition tracking or management application.

Food entity:

Id: long

Name: Apple

Calories: 95

Carbohydrates (in grams): 25

Proteins (in grams): 1

Fats (in grams): 0

Sugar (in grams): 19

Fibre (in grams): 3

Water (percentage): 86

Cholesterol: 0

Potassium: 0

Vitamin C (percentage): 7

Calcium (percentage): 0

Iron (percentage): 0

Vitamin D (percentage): 0

Vitamin B6 (percentage): 0

Cobalamin (percentage): 0

Magnesium (percentage): 1

Good for: Cardiovascular disease, Type 2 diabetes, Weight management, Cancer

Bad for: digestive issues, sensitive teeth

2. *Save and update nutrient data*: Providing updated and plenty of data will help users to find what fits best their needs.

3. *Nutritionists users that update data*: Providing accurate data is a key feature of a nutrition tracking API.

A nutritionist should be able to search for food by id or name. Should be able to log in, in order to be able to post or update food data. For security reasons, nutritionist's accounts will only be created by programmers

Auth endpoint:

Login - unauthorised

Logout - authorization header needed

Food endpoint:

Get food by name/id - unauthorised

Post food - authorization needed - only users with a nutritionist role can add food in the database.

Update food by name/id - authorization header needed

User entity:

Id: long

First Name: Amalia

Last Name: Popovici

Nutritionist: True

4. *Food search*: A food search feature is important for users to be able to easily find, compare and decide on the foods they are consuming.

A user should be able to search for food by name. He/she should be able to search a food by calories, nutritional values, health particularities, etc. Should be able to limit results.

Food endpoint:

Get food by name/id - unauthorised

Search endpoint:

Get food by fats, water, sugar, etc - unauthorised.

5. *Diet and nutrition tracking*: A user should be able to keep his/hers nutrition information in a single place. The ability to track food and nutrient intake over time is a core feature of any nutrition or fitness application. A normal user can register by accessing the auth/register endpoint.

User endpoint:

Post new user (register) - unauthorised

Login - unauthorised

Logout - unauthorised

Diet endpoint:

Post new food eaten - authorization needed

Delete a food eaten -authorization needed

Get calories consumed on a date (automatically calculated) - authorization needed

Get food names consumed on a date - authorization header needed

Diet entity:

Id: long

User id: long

Food Id: long

Date: 10.12.2023

6. ***Exercise tracking:*** Tracking physical activity is important for fitness and health management, and can be used to set and track goals.

Activity endpoint:

Get activities from a period of time (start date - end date) / from a date - authorization needed

Delete an activity using activity id - authorization needed

Post a new activity with request body - authorization needed

Physical_activity entity:

Id: long

User id: long

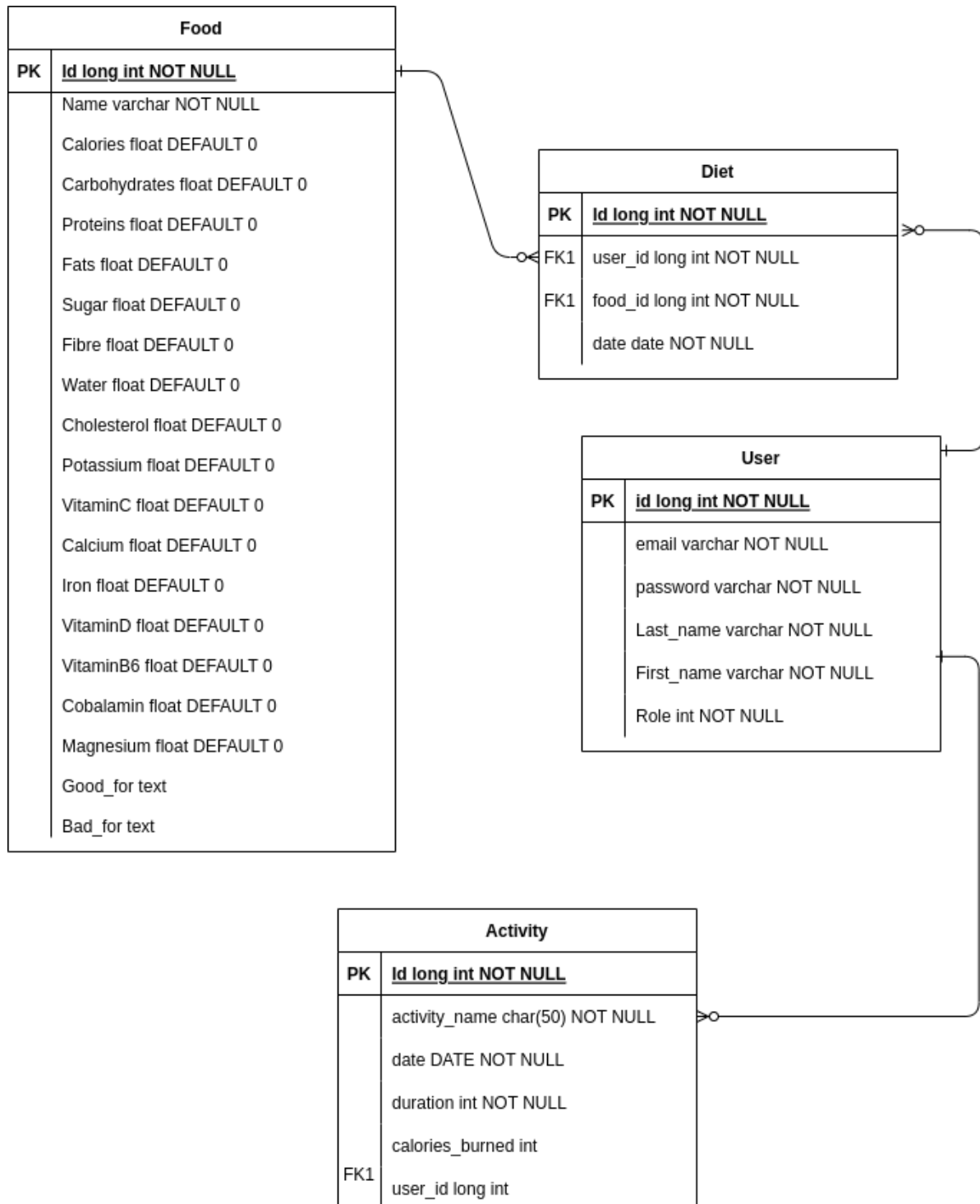
Name: fitness

Date: 10.20.2022

Duration (in minutes): 30 min

Calories burned: 50

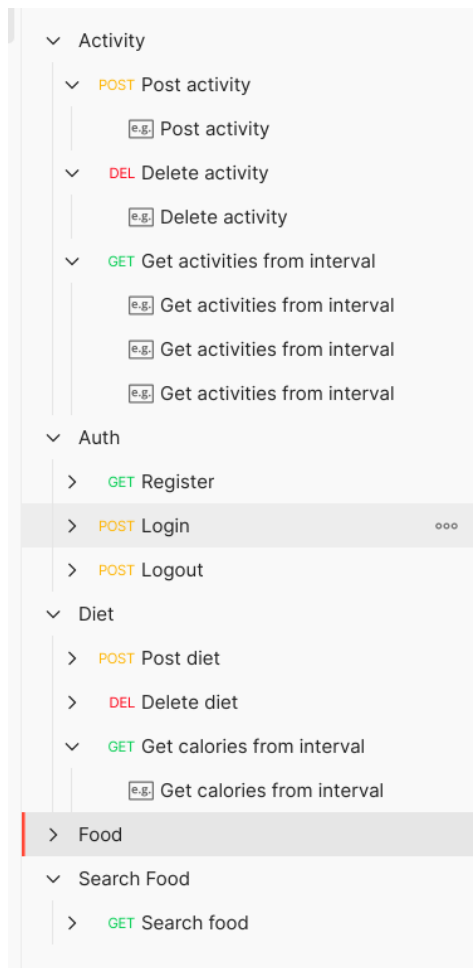
Database diagram



Postman collections

The Postman workspace includes 5 collections one for each endpoint:

- Auth
- Food
- Search Food
- Diet
- Activity



The following JSON snippet is the *food* collection exported from Postman:

```
{
  "info": {
    "_postman_id": "1655b10e-dda8-49ae-a19e-8031adee164d",
    "name": "Food",
    "schema": "https://schema.getpostman.com/json/collection/v2.1.0/collection.json",
    "_exporter_id": "16868793"
  },
  "item": [
    {

```

```
"name": "Get food by name or id",
"request": {
  "method": "GET",
  "header": [],
  "url": {
    "raw": "http://localhost:8081/api/v1/food?id=1",
    "protocol": "http",
    "host": [
      "localhost"
    ],
    "port": "8081",
    "path": [
      "api",
      "v1",
      "food"
    ],
    "query": [
      {
        "key": "id",
        "value": "1"
      }
    ]
  }
},
"response": [
  {
    "name": "Get food",
    "originalRequest": {
      "method": "GET",
      "header": [],
      "url": {
        "raw": "http://localhost:8081/api/v1/food",
        "protocol": "http",
        "host": [
          "localhost"
        ],
        "port": "8081",
        "path": [
          "api",
          "v1",
          "food"
        ]
      }
    }
  }
]
```

```

    },
    "status": "Bad Request",
    "code": 400,
    "_postman_previewlanguage": "json",
    "header": [
      {
        "key": "Content-Type",
        "value": "application/json"
      },
      {
        "key": "Content-Length",
        "value": "50"
      },
      {
        "key": "Date",
        "value": "Sat, 07 Jan 2023 10:49:15 GMT"
      },
      {
        "key": "Connection",
        "value": "close"
      }
    ],
    "cookie": [],
    "body": "{\n  \"message\": \"You should search\nfood by id of name\"\n}"
  },
  {
    "name": "Get food",
    "originalRequest": {
      "method": "GET",
      "header": [],
      "url": {
        "raw":
"http://localhost:8081/api/v1/food?id=10",
        "protocol": "http",
        "host": [
          "localhost"
        ],
        "port": "8081",
        "path": [
          "api",
          "v1",
          "food"
        ]
      }
    }
  }
}

```



```
        ],
        "query": [
            {
                "key": "id",
                "value": "10"
            }
        ]
    }
},
"status": "Not Found",
"code": 404,
"_postman_previewlanguage": "plain",
"header": [
    {
        "key": "Content-Length",
        "value": "0"
    },
    {
        "key": "Date",
        "value": "Sat, 07 Jan 2023 10:49:21 GMT"
    },
    {
        "key": "Keep-Alive",
        "value": "timeout=60"
    },
    {
        "key": "Connection",
        "value": "keep-alive"
    }
],
"cookie": [],
"body": null
},
{
    "name": "Get food",
    "originalRequest": {
        "method": "GET",
        "header": [],
        "url": {
            "raw":
"http://localhost:8081/api/v1/food?id=1",
            "protocol": "http",
            "host": [
```

```
        "localhost"
    ],
    "port": "8081",
    "path": [
        "api",
        "v1",
        "food"
    ],
    "query": [
        {
            "key": "id",
            "value": "1"
        }
    ]
},
"status": "OK",
"code": 200,
"_postman_previewlanguage": "json",
"header": [
    {
        "key": "Content-Type",
        "value": "application/json"
    },
    {
        "key": "Transfer-Encoding",
        "value": "chunked"
    },
    {
        "key": "Date",
        "value": "Sat, 07 Jan 2023 10:49:27 GMT"
    },
    {
        "key": "Keep-Alive",
        "value": "timeout=60"
    },
    {
        "key": "Connection",
        "value": "keep-alive"
    }
],
"cookie": [],
```

```

        "body": "{\n    \"id\": 1,\n    \"name\":\n    \"apple\", \n    \"calories\": 95,\n    \"carbohydrates\": 25,\n    \"proteins\": 1,\n    \"fats\": 0,\n    \"sugar\": 19,\n    \"fibre\":\n    3,\n    \"water\": 86,\n    \"cholesterol\": 0,\n    \"potassium\":\n    0,\n    \"vitaminC\": 7,\n    \"calcium\": 0,\n    \"iron\": 0,\n    \"vitaminD\": 0,\n    \"vitaminB6\": 0,\n    \"cobalamin\": 0,\n    \"magnesium\": 1,\n    \"goodFor\": \"Cardiovascular disease, Type 2\n    diabetes, Weight management, Cancer\", \n    \"badFor\": \"digestive\n    issues, sensitive teeth\"\n}"
    },
    {
        "name": "Get food",
        "originalRequest": {
            "method": "GET",
            "header": [],
            "url": {
                "raw":
"http://localhost:8081/api/v1/food?name=apple",
                "protocol": "http",
                "host": [
                    "localhost"
                ],
                "port": "8081",
                "path": [
                    "api",
                    "v1",
                    "food"
                ],
                "query": [
                    {
                        "key": "name",
                        "value": "apple"
                    }
                ]
            }
        },
        "status": "OK",
        "code": 200,
        "_postman_previewlanguage": "json",
        "header": [
            {
                "key": "Content-Type",
                "value": "application/json"
            }
        ]
    }
]

```

```

        },
        {
            "key": "Transfer-Encoding",
            "value": "chunked"
        },
        {
            "key": "Date",
            "value": "Sat, 07 Jan 2023 10:49:42 GMT"
        },
        {
            "key": "Keep-Alive",
            "value": "timeout=60"
        },
        {
            "key": "Connection",
            "value": "keep-alive"
        }
    ],
    "cookie": [],
    "body": "{\n    \"id\": 1,\n    \"name\":  
\"apple\", \n    \"calories\": 95,\n    \"carbohydrates\": 25,\n    \"proteins\": 1,\n    \"fats\": 0,\n    \"sugar\": 19,\n    \"fibre\":  
3,\n    \"water\": 86,\n    \"cholesterol\": 0,\n    \"potassium\":  
0,\n    \"vitaminC\": 7,\n    \"calcium\": 0,\n    \"iron\": 0,\n    \"vitaminD\": 0,\n    \"vitaminB6\": 0,\n    \"cobalamin\": 0,\n    \"magnesium\": 1,\n    \"goodFor\": \"Cardiovascular disease, Type 2  
diabetes, Weight management, Cancer\", \n    \"badFor\": \"digestive  
issues, sensitive teeth\"\n}"
    }
]
},
{
    "name": "AddFood",
    "request": {
        "method": "POST",
        "header": [
            {
                "key": "Content-Type",
                "value": "application/json",
                "type": "text"
            }
        ],
        "body": {

```

```
        "mode": "raw",
        "raw": "{\n      \"name\": \"pear\",\n    \n    \"calories\": 57,\n    \"carbohydrates\": 15,\n    \"proteins\": 0.4,\n    \"fats\": 0.1,\n    \"sugar\": 10,\n    \"fibre\": 3.1,\n    \"water\": 58,\n    \"cholesterol\": 0,\n    \"potassium\": 0.116,\n    \"vitaminC\": 7,\n    \"calcium\": 0,\n    \"iron\": 1,\n    \"vitaminD\": 0,\n    \"vitaminB6\": 0,\n    \"cobalamin\": 0,\n    \"magnesium\": 1,\n    \"goodFor\": \"cell reparation, diabetes, Risk of Stroke, Hangover Symptoms\",\n    \"badFor\": \"people with irritable bowel syndrome (IBS) and Crohn's disease\" }"
      },
      "url": {
        "raw": "http://localhost:8081/api/v1/food",
        "protocol": "http",
        "host": [
          "localhost"
        ],
        "port": "8081",
        "path": [
          "api",
          "v1",
          "food"
        ]
      }
    },
    "response": [
      {
        "name": "AddFood",
        "originalRequest": {
          "method": "POST",
          "header": [],
          "url": {
            "raw": "http://localhost:8081/api/v1/food",
            "protocol": "http",
            "host": [
              "localhost"
            ],
            "port": "8081",
            "path": [
              "api",
              "v1",
              "food"
            ]
          }
        }
      }
    ]
  }
}
```

```
    }  
  },  
  "status": "Forbidden",  
  "code": 403,  
  "_postman_previewlanguage": "json",  
  "header": [  
    {  
      "key": "Set-Cookie",  
      "value":  
"JSESSIONID=73BB8CD3874B7782A6832A67DDA83FA3; Path=/; HttpOnly"  
    },  
    {  
      "key": "X-Content-Type-Options",  
      "value": "nosniff"  
    },  
    {  
      "key": "X-XSS-Protection",  
      "value": "1; mode=block"  
    },  
    {  
      "key": "Cache-Control",  
      "value": "no-cache, no-store, max-age=0,  
must-revalidate"  
    },  
    {  
      "key": "Pragma",  
      "value": "no-cache"  
    },  
    {  
      "key": "Expires",  
      "value": "0"  
    },  
    {  
      "key": "X-Frame-Options",  
      "value": "DENY"  
    },  
    {  
      "key": "Content-Type",  
      "value": "application/json"  
    },  
    {  
      "key": "Transfer-Encoding",  
      "value": "chunked"  
    }  
  ]  
}
```

```

        },
        {
            "key": "Date",
            "value": "Sun, 08 Jan 2023 12:10:43 GMT"
        },
        {
            "key": "Keep-Alive",
            "value": "timeout=60"
        },
        {
            "key": "Connection",
            "value": "keep-alive"
        }
    ],
    "cookie": [],
    "body": "{\n    \"timestamp\":\n\"2023-01-08T12:10:43.413+00:00\", \n    \"status\": 403, \n    \"error\": \"Forbidden\", \n    \"path\": \"/api/v1/food\"\n}"
},
{
    "name": "AddFood",
    "originalRequest": {
        "method": "POST",
        "header": [],
        "url": {
            "raw": "http://localhost:8081/api/v1/food",
            "protocol": "http",
            "host": [
                "localhost"
            ],
            "port": "8081",
            "path": [
                "api",
                "v1",
                "food"
            ]
        }
    },
    "status": "Bad Request",
    "code": 400,
    "_postman_previewlanguage": "json",
    "header": [
        {

```

```
        "key": "X-Content-Type-Options",
        "value": "nosniff"
    },
    {
        "key": "X-XSS-Protection",
        "value": "1; mode=block"
    },
    {
        "key": "Cache-Control",
        "value": "no-cache, no-store, max-age=0,
must-revalidate"
    },
    {
        "key": "Pragma",
        "value": "no-cache"
    },
    {
        "key": "Expires",
        "value": "0"
    },
    {
        "key": "X-Frame-Options",
        "value": "DENY"
    },
    {
        "key": "Content-Type",
        "value": "application/json"
    },
    {
        "key": "Transfer-Encoding",
        "value": "chunked"
    },
    {
        "key": "Date",
        "value": "Sun, 08 Jan 2023 13:14:57 GMT"
    },
    {
        "key": "Connection",
        "value": "close"
    }
],
"cookie": [],
```



```
        "body": "{\n    \"timestamp\":\n\n\"2023-01-08T13:14:57.461+00:00\",\n    \"status\": 400,\n    \"error\": \"Bad Request\",\n    \"path\": \"/api/v1/food\"\n}"
    },
    {
        "name": "AddFood",
        "originalRequest": {
            "method": "POST",
            "header": [
                {
                    "key": "Content-Type",
                    "value": "application/json",
                    "type": "text"
                }
            ],
            "body": {
                "mode": "raw",
                "raw": "{\"name\": \"pear\"}"
            },
            "url": {
                "raw": "http://localhost:8081/api/v1/food",
                "protocol": "http",
                "host": [
                    "localhost"
                ],
                "port": "8081",
                "path": [
                    "api",
                    "v1",
                    "food"
                ]
            }
        },
        "status": "Bad Request",
        "code": 400,
        "_postman_previewlanguage": "json",
        "header": [
            {
                "key": "X-Content-Type-Options",
                "value": "nosniff"
            },
            {
                "key": "X-XSS-Protection",
```

```

        "value": "1; mode=block"
    },
    {
        "key": "Cache-Control",
        "value": "no-cache, no-store, max-age=0,
must-revalidate"
    },
    {
        "key": "Pragma",
        "value": "no-cache"
    },
    {
        "key": "Expires",
        "value": "0"
    },
    {
        "key": "X-Frame-Options",
        "value": "DENY"
    },
    {
        "key": "Content-Type",
        "value": "application/json"
    },
    {
        "key": "Content-Length",
        "value": "53"
    },
    {
        "key": "Date",
        "value": "Sun, 08 Jan 2023 13:51:55 GMT"
    },
    {
        "key": "Connection",
        "value": "close"
    }
],
"cookie": [],
"body": "{\n    \"message\": \"There is already an
item with that name\"\n}"
},
{
    "name": "AddFood",
    "originalRequest": {

```

```
    "method": "POST",
    "header": [
      {
        "key": "Content-Type",
        "value": "application/json",
        "type": "text"
      }
    ],
    "body": {
      "mode": "raw",
      "raw": "{\\"name\\": \\"pear\\",\\n\\"calories\\":
-100}"
    },
    "url": {
      "raw": "http://localhost:8081/api/v1/food",
      "protocol": "http",
      "host": [
        "localhost"
      ],
      "port": "8081",
      "path": [
        "api",
        "v1",
        "food"
      ]
    }
  },
  "status": "Bad Request",
  "code": 400,
  "_postman_previewlanguage": "json",
  "header": [
    {
      "key": "X-Content-Type-Options",
      "value": "nosniff"
    },
    {
      "key": "X-XSS-Protection",
      "value": "1; mode=block"
    },
    {
      "key": "Cache-Control",
      "value": "no-cache, no-store, max-age=0,
must-revalidate"
```

```
    },
    {
      "key": "Pragma",
      "value": "no-cache"
    },
    {
      "key": "Expires",
      "value": "0"
    },
    {
      "key": "X-Frame-Options",
      "value": "DENY"
    },
    {
      "key": "Content-Type",
      "value": "application/json"
    },
    {
      "key": "Transfer-Encoding",
      "value": "chunked"
    },
    {
      "key": "Date",
      "value": "Sun, 08 Jan 2023 13:56:35 GMT"
    },
    {
      "key": "Connection",
      "value": "close"
    }
  ],
  "cookie": [],
  "body": "{\n  \"timestamp\":\n\"2023-01-08T13:56:35.286+00:00\",\n  \"status\": 400,\n  \"error\": \"Bad Request\",\n  \"path\": \"/api/v1/food\"\n}"
},
{
  "name": "AddFood",
  "originalRequest": {
    "method": "POST",
    "header": [
      {
        "key": "Content-Type",
        "value": "application/json",
```

```
        "type": "text"
      },
    ],
    "body": {
      "mode": "raw",
      "raw": "{\n  \"name\": \"pear\",\n  \"calories\": 57,\n  \"carbohydrates\": 15,\n  \"proteins\": 0.4,\n  \"fats\": 0.1,\n  \"sugar\": 10,\n  \"fibre\": 3.1,\n  \"water\": 58,\n  \"cholesterol\": 0,\n  \"potassium\": 0.116,\n  \"vitaminC\": 7,\n  \"calcium\": 0,\n  \"iron\": 1,\n  \"vitaminD\": 0,\n  \"vitaminB6\": 0,\n  \"cobalamin\": 0,\n  \"magnesium\": 1,\n  \"goodFor\": \"cell reparation, diabetes, Risk of Stroke, Hangover Symptoms\",\n  \"badFor\": \"people with irritable bowel syndrome (IBS) and Crohn's disease\""
    },
    "url": {
      "raw": "http://localhost:8081/api/v1/food",
      "protocol": "http",
      "host": [
        "localhost"
      ],
      "port": "8081",
      "path": [
        "api",
        "v1",
        "food"
      ]
    }
  },
  "status": "OK",
  "code": 200,
  "_postman_previewlanguage": "json",
  "header": [
    {
      "key": "X-Content-Type-Options",
      "value": "nosniff"
    },
    {
      "key": "X-XSS-Protection",
      "value": "1; mode=block"
    },
    {
      "key": "Cache-Control",
```

```
        "value": "no-cache, no-store, max-age=0,
must-revalidate"
    },
    {
        "key": "Pragma",
        "value": "no-cache"
    },
    {
        "key": "Expires",
        "value": "0"
    },
    {
        "key": "X-Frame-Options",
        "value": "DENY"
    },
    {
        "key": "Content-Type",
        "value": "application/json"
    },
    {
        "key": "Transfer-Encoding",
        "value": "chunked"
    },
    {
        "key": "Date",
        "value": "Sun, 08 Jan 2023 14:20:02 GMT"
    },
    {
        "key": "Keep-Alive",
        "value": "timeout=60"
    },
    {
        "key": "Connection",
        "value": "keep-alive"
    }
],
"cookie": [],
"body": "{\n    \"name\": \"pear\", \n
\n    \"calories\": 57, \n    \"carbohydrates\": 15, \n    \"proteins\": 0.4, \n
\n    \"fats\": 0.1, \n    \"sugar\": 10, \n    \"fibre\": 3.1, \n    \"water\":
58, \n    \"cholesterol\": 0, \n    \"potassium\": 0.116, \n
\n    \"vitaminC\": 7, \n    \"calcium\": 0, \n    \"iron\": 1, \n
\n    \"vitaminD\": 0, \n    \"vitaminB6\": 0, \n    \"cobalamin\": 0, \n
```

```

    \ "magnesium\ ": 1,\n    \ "goodFor\ ": \ "cell reparation, diabetes, Risk
of Stroke, Hangover Symptoms\ ",\n    \ "badFor\ ": \ "people with
irritable bowel syndrome (IBS) and Crohn's disease\ "\n}"
    }
  ]
},
{
  "name": "Update food",
  "request": {
    "method": "PATCH",
    "header": [
      {
        "key": "Content-Type",
        "value": "application/json",
        "type": "text"
      }
    ],
    "body": {
      "mode": "raw",
      "raw": "{\n    \ "name\ ": \ "green apple\ ",\n
\ "calories\ ": 57,\n    \ "carbohydrates\ ": 15,\n    \ "proteins\ ": 0.4,\n
\ "fats\ ": 0.1,\n    \ "sugar\ ": 10,\n    \ "fibre\ ": 3.1,\n    \ "water\ ":
58,\n    \ "cholesterol\ ": 0,\n    \ "potassium\ ": 0.116,\n
\ "vitaminC\ ": 8,\n    \ "calcium\ ": 0,\n    \ "iron\ ": 1.1,\n
\ "vitaminD\ ": 0,\n    \ "vitaminB6\ ": 0,\n    \ "cobalamin\ ": 0,\n
\ "magnesium\ ": 1,\n    \ "goodFor\ ": \ "cell reparation, diabetes, Risk
of Stroke, Hangover Symptoms\ ",\n    \ "badFor\ ": \ "people with
irritable bowel syndrome (IBS) and Crohn's disease, source of
pesticides\ " }"
    },
    "url": {
      "raw": "http://localhost:8081/api/v1/food?id=1",
      "protocol": "http",
      "host": [
        "localhost"
      ],
      "port": "8081",
      "path": [
        "api",
        "v1",
        "food"
      ],
      "query": [

```

```
        {
            "key": "id",
            "value": "1"
        }
    ]
}
},
"response": [
    {
        "name": "Update food",
        "originalRequest": {
            "method": "PATCH",
            "header": [
                {
                    "key": "Content-Type",
                    "value": "application/json",
                    "type": "text"
                }
            ],
            "url": {
                "raw": "http://localhost:8081/api/v1/food",
                "protocol": "http",
                "host": [
                    "localhost"
                ],
                "port": "8081",
                "path": [
                    "api",
                    "v1",
                    "food"
                ]
            }
        },
        "status": "Bad Request",
        "code": 400,
        "_postman_previewlanguage": "json",
        "header": [
            {
                "key": "X-Content-Type-Options",
                "value": "nosniff"
            },
            {
                "key": "X-XSS-Protection",
```



```

        "value": "1; mode=block"
    },
    {
        "key": "Cache-Control",
        "value": "no-cache, no-store, max-age=0,
must-revalidate"
    },
    {
        "key": "Pragma",
        "value": "no-cache"
    },
    {
        "key": "Expires",
        "value": "0"
    },
    {
        "key": "X-Frame-Options",
        "value": "DENY"
    },
    {
        "key": "Content-Type",
        "value": "application/json"
    },
    {
        "key": "Transfer-Encoding",
        "value": "chunked"
    },
    {
        "key": "Date",
        "value": "Mon, 09 Jan 2023 08:57:44 GMT"
    },
    {
        "key": "Connection",
        "value": "close"
    }
],
"cookie": [],
"body": "{\n    \"timestamp\":
\\\"2023-01-09T08:57:44.026+00:00\\\", \n    \"status\": 400, \n
\\\"error\": \\\"Bad Request\\\", \n    \"path\": \\\"/api/v1/food\\\" \n}"
},
{
    "name": "Update food",

```

```
    "originalRequest": {
      "method": "PATCH",
      "header": [
        {
          "key": "Content-Type",
          "value": "application/json",
          "type": "text"
        }
      ],
      "url": {
        "raw":
"http://localhost:8081/api/v1/food?id=10",
        "protocol": "http",
        "host": [
          "localhost"
        ],
        "port": "8081",
        "path": [
          "api",
          "v1",
          "food"
        ],
        "query": [
          {
            "key": "id",
            "value": "10"
          }
        ]
      }
    },
    "status": "Bad Request",
    "code": 400,
    "_postman_previewlanguage": "json",
    "header": [
      {
        "key": "X-Content-Type-Options",
        "value": "nosniff"
      },
      {
        "key": "X-XSS-Protection",
        "value": "1; mode=block"
      }
    ]
  }
}
```

```

        "key": "Cache-Control",
        "value": "no-cache, no-store, max-age=0,
must-revalidate"
    },
    {
        "key": "Pragma",
        "value": "no-cache"
    },
    {
        "key": "Expires",
        "value": "0"
    },
    {
        "key": "X-Frame-Options",
        "value": "DENY"
    },
    {
        "key": "Content-Type",
        "value": "application/json"
    },
    {
        "key": "Transfer-Encoding",
        "value": "chunked"
    },
    {
        "key": "Date",
        "value": "Mon, 09 Jan 2023 08:57:52 GMT"
    },
    {
        "key": "Connection",
        "value": "close"
    }
],
"cookie": [],
"body": "{\n    \"timestamp\":
\\\"2023-01-09T08:57:52.397+00:00\\\", \n    \"status\": 400, \n
\\\"error\": \\\"Bad Request\\\", \n    \"path\": \\\"/api/v1/food\\\" \n}"
},
{
    "name": "Update food",
    "originalRequest": {
        "method": "PATCH",
        "header": [

```

```
{
  "key": "Content-Type",
  "value": "application/json",
  "type": "text"
},
"body": {
  "mode": "raw",
  "raw": "{\n  \"name\": \"green apple\",\n  \"calories\": 57,\n  \"carbohydrates\": 15,\n  \"proteins\": 0.4,\n  \"fats\": 0.1,\n  \"sugar\": 10,\n  \"fibre\": 3.1,\n  \"water\": 58,\n  \"cholesterol\": 0,\n  \"potassium\": 0.116,\n  \"vitaminC\": 8,\n  \"calcium\": 0,\n  \"iron\": 1.1,\n  \"vitaminD\": 0,\n  \"vitaminB6\": 0,\n  \"cobalamin\": 0,\n  \"magnesium\": 1,\n  \"goodFor\": \"cell reparation, diabetes, Risk of Stroke, Hangover Symptoms\",\n  \"badFor\": \"people with irritable bowel syndrome (IBS) and Crohn's disease, source of pesticides\" }"
},
"url": {
  "raw": "http://localhost:8081/api/v1/food?id=1",
  "protocol": "http",
  "host": [
    "localhost"
  ],
  "port": "8081",
  "path": [
    "api",
    "v1",
    "food"
  ],
  "query": [
    {
      "key": "id",
      "value": "1"
    }
  ]
},
"status": "OK",
"code": 200,
"_postman_previewlanguage": "json",
```

```
    "header": [  
      {  
        "key": "X-Content-Type-Options",  
        "value": "nosniff"  
      },  
      {  
        "key": "X-XSS-Protection",  
        "value": "1; mode=block"  
      },  
      {  
        "key": "Cache-Control",  
        "value": "no-cache, no-store, max-age=0,  
must-revalidate"  
      },  
      {  
        "key": "Pragma",  
        "value": "no-cache"  
      },  
      {  
        "key": "Expires",  
        "value": "0"  
      },  
      {  
        "key": "X-Frame-Options",  
        "value": "DENY"  
      },  
      {  
        "key": "Content-Type",  
        "value": "application/json"  
      },  
      {  
        "key": "Transfer-Encoding",  
        "value": "chunked"  
      },  
      {  
        "key": "Date",  
        "value": "Mon, 09 Jan 2023 09:01:46 GMT"  
      },  
      {  
        "key": "Keep-Alive",  
        "value": "timeout=60"  
      },  
      {  
        "key": "Server",  
        "value": "Apache/2.4.18 (Ubuntu)"  
      }  
    ]  
  }  
}
```

```

        "key": "Connection",
        "value": "keep-alive"
    }
],
"cookie": [],
"body": "{\n    \"id\": 1,\n    \"name\": \n\"apple\", \n    \"calories\": 57,\n    \"carbohydrates\": 15,\n    \"proteins\": 0.4,\n    \"fats\": 0.1,\n    \"sugar\": 10,\n    \"fibre\": 3.1,\n    \"water\": 58,\n    \"cholesterol\": 0,\n    \"potassium\": 0.116,\n    \"vitaminC\": 8,\n    \"calcium\": 0,\n    \"iron\": 1.1,\n    \"vitaminD\": 0,\n    \"vitaminB6\": 0,\n    \"cobalamin\": 0,\n    \"magnesium\": 1,\n    \"goodFor\": \"cell reparation, diabetes, Risk of Stroke, Hangover Symptoms\", \n    \"badFor\": \"people with irritable bowel syndrome (IBS) and Crohn's disease, source of pesticides\"\n}"
},
{
    "name": "Update food",
    "originalRequest": {
        "method": "PATCH",
        "header": [
            {
                "key": "Content-Type",
                "value": "application/json",
                "type": "text"
            }
        ],
        "body": {
            "mode": "raw",
            "raw": "{\n    \"name\": \"green apple\", \n    \"calories\": 57,\n    \"carbohydrates\": 15,\n    \"proteins\": 0.4,\n    \"fats\": 0.1,\n    \"sugar\": 10,\n    \"fibre\": 3.1,\n    \"water\": 58,\n    \"cholesterol\": 0,\n    \"potassium\": 0.116,\n    \"vitaminC\": 8,\n    \"calcium\": 0,\n    \"iron\": 1.1,\n    \"vitaminD\": 0,\n    \"vitaminB6\": 0,\n    \"cobalamin\": 0,\n    \"magnesium\": 1,\n    \"goodFor\": \"cell reparation, diabetes, Risk of Stroke, Hangover Symptoms\", \n    \"badFor\": \"people with irritable bowel syndrome (IBS) and Crohn's disease, source of pesticides\" }"
        },
        "url": {
            "raw":
"http://localhost:8081/api/v1/food?id=10",

```

```
        "protocol": "http",
        "host": [
            "localhost"
        ],
        "port": "8081",
        "path": [
            "api",
            "v1",
            "food"
        ],
        "query": [
            {
                "key": "id",
                "value": "10"
            }
        ]
    },
    "status": "Bad Request",
    "code": 400,
    "_postman_previewlanguage": "json",
    "header": [
        {
            "key": "X-Content-Type-Options",
            "value": "nosniff"
        },
        {
            "key": "X-XSS-Protection",
            "value": "1; mode=block"
        },
        {
            "key": "Cache-Control",
            "value": "no-cache, no-store, max-age=0,
must-revalidate"
        },
        {
            "key": "Pragma",
            "value": "no-cache"
        },
        {
            "key": "Expires",
            "value": "0"
        },
    ],
```

```

        {
            "key": "X-Frame-Options",
            "value": "DENY"
        },
        {
            "key": "Content-Type",
            "value": "application/json"
        },
        {
            "key": "Content-Length",
            "value": "47"
        },
        {
            "key": "Date",
            "value": "Mon, 09 Jan 2023 09:02:00 GMT"
        },
        {
            "key": "Connection",
            "value": "close"
        }
    ],
    "cookie": [],
    "body": "{\n    \"message\": \"There is no item with\nprovided id\"\n}"
}
    ]
}
]
}

```

Swagger documentation

I have exported the Postman collections and converted them to swagger using <https://metamug.com/article/api-integration/postman-to-swagger.html>. Then I have updated and edited them on swaggerHub. This is how the final swagger documentation looks like: [Swagger documentation link](#)

