Bazy danych 2 - Projekt

Temat: CRUD API sklepu internetowego

Technologie:

- **Node.js -> Express**
- **MongoDB -> MongoDB Atlas + MongoDB Charts**

oraz biblioteki:

- **bcrypt** - Biblioteka pomagająca w haszowaniu haseł.
- **jsonwebtoken** - biblioteka służąca do tworzenia i weryfikacji tokenów sieciowych JSON (JWT).
- **moongose** - to narzędzie do modelowania obiektów MongoDB zaprojektowane do pracy w środowisku asynchronicznym. Mongoose obsługuje Node.js i Deno (alfa).
- **mongodb-js/charts-embed-dom**
- **nodemailer** - biblioteka pomocna przy wysylaniu maili

- **mailgen** - biblioteka generujaca templatki do maili

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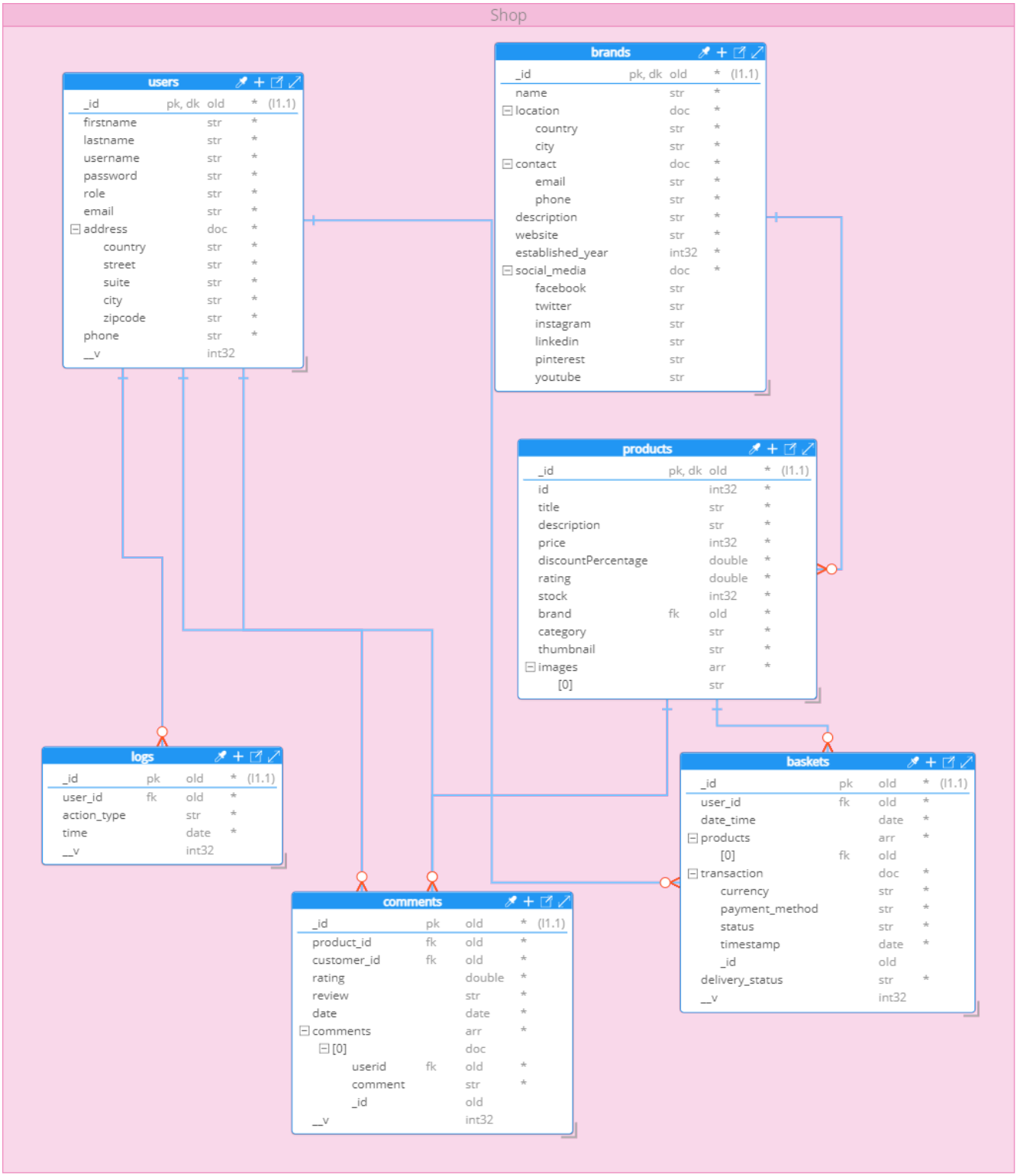
Diagram

diagram wygenerowany przy pomocy narzędzia Hackolade



Kolekcje

users

Zawiera inforamcje o użytkownikach sklepu internetowego

przykładowy dokument:


```
{
  "_id": {
    "$oid": "661ee379a881e0b8999aabee"
  },
  "firstname": "Ervin",
  "lastname": "Howell",
  "username": "Antonette",
  "password": "$2b$10$ARZw9AcYC0cat.csewnl/eNbRf/LKKkxTFRLi0dDSJ7PlIgWqP7oW",
  "role": "customer",
  "email": "Shanna@melissa.tv",
  "address": {
    "country": "France",
    "street": "Victor Plains",
    "suite": "Suite 879",
    "city": "Wisokyburgh",
    "zipcode": "90566-7771"
  },
  "phone": "010-692-6593 x09125"
}
```


- **_id (objectId)** - klucz głowny
- **firstname (string)** - imie użytkownika
- **lastname (string)** - nazwisko użytkownika
- **username (string)** - nick użytkownika
- **password (string)** - zahaszowane hasło użytkownika
- **role (string enum)** - jedna z dwóch ról obsługiwanych przez serwer (**customer** lub **admin**), ma pomóc przy chronieniu dostęppu do niektórych endpointów
- **address (object)** - obiekt który trzyma pola typu string takie jak (**country**, **street**, **suite**, **city**, **zipcode**)
- **phone** - numer telefonu uzytkownika

Validation rules - dla kolekcji users

```
{
  $jsonSchema: {
    additionalProperties: true,
    bsonType: 'object',
    required: [
      'firstname',
      'lastname',
      'username',
      'password',
      'email',
      'address',
      'phone'
    ],
    properties: {
      _id: {
        bsonType: 'objectId',
        description: 'must be an objectId and is required'
      },
      firstname: {
        bsonType: 'string',
        description: 'must be a string and is required'
      },
      lastname: {
        bsonType: 'string',
        description: 'must be a string and is required'
```

```
        },
        username: {
          bsonType: 'string',
          description: 'must be a string and is required'
        },
        email: {
          bsonType: 'string',
          description: 'must be a string and is required',
          pattern: '.*@.*'
        },
        password: {
          bsonType: 'string',
          description: 'must be a string and is required'
        },
        role: {
          'enum': [
            'user',
            'admin',
            'customer'
          ],
          description: 'it must be user or admin'
        },
        address: {
          bsonType: 'object',
          required: [
            'country',
            'street',
            'city',
            'zipcode'
          ],
          properties: {
            country: {
              'enum': [
                'France',
                'Germany',
                'Austria',
                'Sweden',
                'South Korea',
                'China',
                'Saudi Arabia',
                'United States',
                'Pakistan',
                'Spain',
                'Vietnam',
                'Poland'
              ],
              description: 'must be a string and is required'
            },
            street: {
              bsonType: 'string',
              description: 'must be a string and is required'
            },
            suite: {
              bsonType: [
                'string',
                'null'
              ],
              description: 'must be a string or null'
            },
            city: {
              bsonType: 'string',
              description: 'must be a string and is required'
            },
            zipcode: {
              bsonType: 'string',
              description: 'must be a string and is required'
            }
```

```
        },
        description: 'must be an object with country, street, city, and zipcode fields'
      },
      phone: {
        bsonType: 'string',
        description: 'must be a string and is required'
      }
    }
  }
}
```

products

Kolekcja zawiera wszsytkie produkty dostępne w sklepie

przykładowy dokument:

```
{
  "_id": {
    "$oid": "661edcb6a881e0b8999aabcc"
  },
  "id": 6,
  "title": "MacBook Pro",
  "description": "MacBook Pro 2021 with mini-LED display may launch between September, November",
  "price": 1749,
  "discountPercentage": 11.02,
  "rating": 4.57,
  "stock": 83,
  "brand": {
    "$oid": "664e5eec1322d1e99418db6d"
  },
  "category": "laptops",
  "thumbnail": "https://cdn.dummyjson.com/product-images/6/thumbnail.png",
  "images": [
    "https://cdn.dummyjson.com/product-images/6/1.png",
    "https://cdn.dummyjson.com/product-images/6/2.jpg",
    "https://cdn.dummyjson.com/product-images/6/3.png",
    "https://cdn.dummyjson.com/product-images/6/4.jpg"
  ]
}
```

- **_id (objectId)** - klucz głowny
- **title (string)** - nazwa produktu
- **description (string)** - krótki opis produktu
- **price ([int, double])** - cena produktu
- **discountPercentage ([int, double])** - % o jaki produkt jest przeceniony
- **rating ([int, double])** - raing produktu
- **stock (int)** - ilość produktów na stanie magazynu
- **brand (objectId)** - klucz obcy marki (kolekcja brands)
- **category (enum string)** - jedna ze zdefiniowanych kategorii

pola nieobowiązkowe

- **thumbnail** oraz **images** - linki do zdjęć produktów

Validation rules - dla kolekcji products

```
{
  $jsonSchema: {
    additionalProperties: true,
```

```
      bsonType: 'object',
      required: [
        'title',
        'description',
        'price',
        'discountPercentage',
        'rating',
        'stock',
        'brand',
        'category'
      ],
      properties: {
        _id: {
          bsonType: 'objectId',
          description: 'must be an objectId and is required'
        },
        id: {
          bsonType: 'int',
          description: 'must be an integer and is optional'
        },
        title: {
          bsonType: 'string',
          description: 'must be a string and is required'
        },
        description: {
          bsonType: 'string',
          description: 'must be a string and is required'
        },
        price: {
          bsonType: [
            'int',
            'double'
          ],
          description: 'must be an integer or a double and is required'
        },
        discountPercentage: {
          bsonType: [
            'int',
            'double'
          ],
          description: 'must be an integer or a double and is required'
        },
        rating: {
          bsonType: [
            'int',
            'double'
          ],
          description: 'must be an integer or a double and is required'
        },
        stock: {
          bsonType: 'int',
          description: 'must be an integer and is required'
        },
        brand: {
          bsonType: 'objectId',
          description: 'must be a string and is required'
        },
        category: {
          'enum': [
            'smartphones',
            'food',
            'laptops',
            'fragrances',
            'skincare',
            'groceries',
            'home-decoration',
            'Example Category'
```

```
        ],
        description: 'must be one of the enum values and is required'
      },
      thumbnail: {
        bsonType: 'string',
        description: 'must be a string and is optional'
      },
      images: {
        bsonType: 'array',
        items: {
          bsonType: 'string',
          description: 'each image must be a string'
        },
        description: 'must be an array of strings and is optional'
      }
    }
  }
}
```

brands

Kolekcja zawiera wszystkie marki, których produkty są dostępne na stanie

przykładowy dokument:

```
{
  "_id": {
    "$oid": "664e5eec1322d1e99418db6d"
  },
  "name": "Apple",
  "location": {
    "country": "United States",
    "city": "Cupertino"
  },
  "contact": {
    "email": "contact@apple.com",
    "phone": "+1-800-275-2273"
  },
  "description": "Apple Inc. designs, manufactures, and markets mobile communication and media devices,
personal computers, and portable digital music players.",
  "website": "https://www.apple.com",
  "established_year": 1976,
  "social_media": {
    "facebook": "https://www.facebook.com/Apple",
    "twitter": "https://twitter.com/Apple"
  }
}
```

- **_id (objectId)** - klucz głowny
- **name (string)** - nazwa marki
- **location (object)** - obiekt, zawierający dokłady adres firmy
  - **country (string)** - kraj z jakiego pochodzi firma
  - **city (string)** - miasto, z którego pochodzi firma
- **contact (object)** - obiekt, zawierający kontakt do firmy
  - **email (string)** - email
  - **phone (string)** -numer telefonu
- **description (string)** - krótki opis marki

- **website (string)** - strona internetowa firmy
- **established_year (int)** - data powstania marki
- **social_media (object)** - media społecznościowe marki, gdzie mozna ją znaleźć
    - **facebook (string)**
    - **twitter (string)**
    - **linkedin (string)**
    - **youtube (string)**

Validation rules - dla kolekcji products

```
{
  $jsonSchema: {
    additionalProperties: true,
    bsonType: 'object',
    required: [
      'name',
      'location',
      'contact',
      'description',
      'established_year'
    ],
    properties: {
      _id: {
        bsonType: 'objectId',
        description: 'must be an objectId and is required'
      },
      name: {
        bsonType: 'string',
        description: 'must be a string and is required'
      },
      location: {
        bsonType: 'object',
        required: [
          'country',
          'city'
        ],
        properties: {
          country: {
            'enum': [
              'France',
              'Germany',
              'Austria',
              'Sweden',
              'South Korea',
              'China',
              'Saudi Arabia',
              'United States',
              'Pakistan',
              'Spain',
              'Vietnam',
              'Poland'
            ],
            description: 'country must exist'
          },
          city: {
            bsonType: 'string',
            description: 'must be a string and is required'
          }
        },
        description: 'must be an object with country and city fields'
      },
      contact: {
        bsonType: 'object',
```

```
        required: [
          'email',
          'phone'
        ],
        properties: {
          email: {
            bsonType: 'string',
            description: 'must be a string and is required'
          },
          phone: {
            bsonType: 'string',
            description: 'must be a string and is required'
          }
        },
        description: 'must be an object with email and phone fields'
      },
      description: {
        bsonType: 'string',
        description: 'must be a string and is required'
      },
      website: {
        bsonType: 'string',
        description: 'must be a string'
      },
      established_year: {
        bsonType: 'int',
        description: 'must be an integer and is required'
      },
      social_media: {
        bsonType: 'object',
        properties: {
          facebook: {
            bsonType: 'string',
            description: 'must be a string'
          },
          twitter: {
            bsonType: 'string',
            description: 'must be a string'
          }
        },
        description: 'must be an object with optional facebook and twitter fields'
      }
    }
  }
}
```

comments

Kolekcja zawiera komentarze i podkomentarze użytkoników do danych produktów

przykładowy dokument:

```
{
  "_id": {
    "$oid": "665cc9700263fbb3b2f79b38"
  },
  "product_id": {
    "$oid": "661edcb6a881e0b8999aabe2"
  },
  "customer_id": {
    "$oid": "661ee379a881e0b8999aabee"
  },
  "rating": 2.5,
  "review": "Kupilem go ponownie i jakość znacząco spadla względem wcześniejszego zakupu",
  "date": {
```

```
      "$date": "2024-06-02T19:35:12.954Z"
    },
    "comments": [
      {
        "userid": {
          "$oid": "661ee379a881e0b8999aabed"
        },
        "comment": "NIe zgadzam sie z ta opinia, u wszystko jest w porzadku!!!",
        "_id": {
          "$oid": "665ccd5c01b697f932e229e0"
        }
      },
      {
        "userid": {
          "$oid": "661ee379a881e0b8999aabed"
        },
        "comment": "Zmieniam zdanie! Miał pan racje, produkt nie spelnia wymagan",
        "_id": {
          "$oid": "665ccdc9b44a40a6224935af"
        }
      }
    ],
    "__v": 2
  }
```


- **_id (objectId)** - klucz głowny
- **product_id (objectId)**- id produktu do którego została wystawiona opinia
- **customer_id (objectId)**- id uzytkownika któy wystawił opinię główną
- **rating ([int, double])** - opinia w zakresie od 0 do 5 wystawiona produktowi
- **review (string)** - komentarz do opinii
- **date (date)** -data wystawienia opinii
- **comments (array)** - lista obiektów (komentarze do opinii) w ramach jednego obiekti listy:
  - **userid (objectId)** - id użytkownika, który skomentował OPINIĘ
  - **comment (string)** - komentarz tego użytkownika

Validation rules - dla kolekcji comments

```
{
  $jsonSchema: {
    additionalProperties: true,
    bsonType: 'object',
    required: [
      '_id',
      'product_id',
      'customer_id',
      'rating',
      'review',
      'date'
    ],
    properties: {
      _id: {
        bsonType: 'objectId',
        description: 'must be an objectId and is required'
      },
      product_id: {
        bsonType: 'objectId',
        description: 'must be an objectId and is required'
      },
      customer_id: {
        bsonType: 'objectId',
        description: 'must be an objectId and is required'
      },
      rating: {
```

```
        bsonType: [
          'int',
          'double'
        ],
        minimum: 1,
        maximum: 5,
        description: 'must be an integer between 1 and 5 and is required'
      },
      review: {
        bsonType: 'string',
        description: 'must be a string and is required'
      },
      date: {
        bsonType: 'date',
        description: 'must be a date and is required'
      },
      comments: {
        bsonType: 'array',
        items: {
          bsonType: 'object',
          required: [
            'userid',
            'comment'
          ],
          properties: {
            userid: {
              bsonType: 'objectId',
              description: 'must be an objectId and is required'
            },
            comment: {
              bsonType: 'string',
              description: 'must be a string and is required'
            }
          }
        },
        description: 'must be an array of objects containing userid and comment'
      }
    }
  }
}
```

baskets

Koszyki z produktami użytkowników

przykładowy dokument:

```
{
  "_id": {
    "$oid": "663fcf269d51de47edb6f0b5"
  },
  "user_id": {
    "$oid": "661ee379a881e0b8999aabee"
  },
  "date_time": {
    "$date": "2020-03-01T15:30:00.000Z"
  },
  "products": [
    {
      "$oid": "661edcb6a881e0b8999aabe4"
    },
    {
      "$oid": "661edcb6a881e0b8999aabd9"
    },
    {
```

```
      "$oid": "661edcb6a881e0b8999aabd5"
    }
  ],
  "transaction": {
    "currency": "PLN",
    "payment_method": "PayPal",
    "status": "in_progress",
    "timestamp": {
      "$date": "2023-05-01T15:30:00.000Z"
    }
  },
  "delivery_status": "order_placed"
}
```

- **_id (objectId)** - klucz głowny
- **user_id (objectId)**- id uzytkownika, który zamówił koszyk
- **date_time (date)** -data złożenia zamówienia
- **products (array of objectId's)** - lista z id'kami produktów, jakie zamówił klient
    - **product_id (objectId)**- id produktu (klucz obcy z kolekcji products)
- **transactiob (object)** - szczegóły transakcji
    - **currency (enum string)** - waluta w jakiej dokonał transakcji
    - **payment_method (enum string)** - sposób zapłacenia za zakupy
    - **status (enum string)** - status transakcji
    - **timestamp (date)** - data transakcji
- **delivery_status (enum string)** - status przesyłki

Validation rules - dla kolekcji comments

```
{
  $jsonSchema: {
    additionalProperties: true,
    bsonType: 'object',
    required: [
      '_id',
      'user_id',
      'date_time',
      'products',
      'transaction',
      'delivery_status'
    ],
    properties: {
      _id: {
        bsonType: 'objectId',
        description: 'must be an objectId and is required'
      },
      user_id: {
        bsonType: 'objectId',
        description: 'must be an objectId and is required'
      },
      date_time: {
        bsonType: 'date',
        description: 'must be a date and is required'
      },
      products: {
        bsonType: 'array',
        minItems: 1,
        items: {
```

```
            bsonType: 'objectId',
            description: 'each product must be an objectId'
          },
          description: 'must be an array of objectIds and is required'
        },
        transaction: {
          bsonType: 'object',
          required: [
            'currency',
            'payment_method',
            'status',
            'timestamp'
          ],
          properties: {
            currency: {
              'enum': [
                'PLN',
                'EUR',
                'USD'
              ],
              description: 'can only be one of the enum values and is required'
            },
            payment_method: {
              bsonType: 'string',
              description: 'must be a string and is required'
            },
            status: {
              'enum': [
                'rejected',
                'completed',
                'canceled',
                'in_progress'
              ],
              description: 'must be a string and is required'
            },
            timestamp: {
              bsonType: 'date',
              description: 'must be a date and is required'
            }
          },
          description: 'must be an object and is required'
        },
        delivery_status: {
          'enum': [
            'order_placed',
            'delivered',
            'on_the_way'
          ],
          description: 'must be \'order_placed\' and is required'
        }
      }
    }
  }
```

logs

kolekcja zawierająca proste informacje na temat logowania / wylogowywania się użytkowników ze strony sklepu

przykładowy dokument:

```
{
  "_id": {
    "$oid": "663fc5499d51de47edb6f022"
  },
  "user_id": {
```

```
    "$oid": "661ee379a881e0b8999aabed"
  },
  "action_type": "login",
  "time": {
    "$date": "2021-12-08T15:00:18.000Z"
  }
}
```

- **_id (objectId)** - klucz głowny
- **user_id (objectId)**- id uzytkownika, który zamówił koszyk
- **action_type (enum string)** - login / logout
- **time (date)** - czas i data akcji

Validation rules - dla kolekcji comments

```
{
  $jsonSchema: {
    additionalProperties: true,
    bsonType: 'object',
    required: [
      'user_id',
      'action_type',
      'time'
    ],
    properties: {
      user_id: {
        bsonType: 'objectId',
        description: 'must be an objectId and is required'
      },
      action_type: {
        bsonType: 'string',
        'enum': [
          'login',
          'logout'
        ],
        description: 'must be one of the enum values (login/logout) and is required'
      },
      time: {
        bsonType: 'date',
        description: 'must be a date and is required'
      }
    }
  }
}
```

Triggery

UpdateProductRating

- trigger aktualizuje rating produktu na podstawie wystawionych mu opinii. Odpala sie za każdym razem kiedy dodawany jest nowy dokument do kolekcji **comments**. Trigger zlicza średnia wartość ratingu w comments dla produktu, dla którego opinia została wytawiona i aktualizuję wartość w kolekcji products

```
exports = async function(changeEvent) {
  const serviceName = "Cluster0";
  const databaseName = "Shop";
  const productsCollectionName = "products";
  const commentsCollectionName = "comments";
```

```
  const database = context.services.get(serviceName).db(databaseName);;
  if (!database) {
    console.error(`Database ${databaseName} not found.`);
    return;
  }

  const productsCollection = database.collection(productsCollectionName);
  const commentsCollection = database.collection(commentsCollectionName);


  if (changeEvent.operationType === "insert") {
    const fullDocument = changeEvent.fullDocument;

    const productId = fullDocument.product_id;

    console.log('productId ' + productId)

    try {
      const productComments = await commentsCollection.find({ "product_id": productId }).toArray();
      const totalRating = productComments.reduce((sum, comment) => sum + parseFloat(comment.rating), 0);
      const averageRating = parseFloat((totalRating / productComments.length).toFixed(2));
      console.log('totalRating ' + totalRating)
      console.log('averageRating ' + averageRating)

      await productsCollection.updateOne(
        { "_id":  productId  },
        { "$set": { "rating": averageRating } }
      );

      console.log(`Updated rating for product ${productId} to ${averageRating}`);
    } catch (err) {
      console.error(`Error updating rating for product ${productId}: ${err.message}`);
    }
  }
};
```

MailSender

- niestandardowy trigger, który uruchamia się kiedy admin aktualizuje procentowa zniżke na produkt w bazie danych (discountPercentage) - pod warunkiem, że ta procentowa znizka jest więszka lub równa 20%, wtedy wysyłana jest infoamcja z promocyjną ofertą do wszyskich użytkowników w bazie danych droga mailową

Enpoint aktualizujący produkt:

```
productRoutes.post('/update-discount',authorization.authenticateToken,
authorization.authorizeRoles([ROLES.ADMIN]), async (req, res) => {
  const { productId, discountPercentage } = req.body;

  try {
    const updatedProduct = await Product.findByIdAndUpdate(
      productId,
      { $set: { discountPercentage } },
      { new: true }
    );

    if (!updatedProduct) {
      return res.status(404).json({ message: 'Produkt nie znaleziony' });
    }

    if (discountPercentage >= 20 && updatedProduct) {
        await sendingMail(updatedProduct);
      }
```

```
    res.json(updatedProduct);
  } catch (error) {
    console.error('Error updating product discount:', error);
    res.status(500).json({ message: 'Wystąpił błąd serwera podczas aktualizacji rabatu produktu' });
  }
});
```

Funcka wysyłająca maile do użytkowników:

```
async function mailSenderToAll(product) {
    try {
      let config = {
        service: 'gmail',
        auth: {
          user: process.env.EMAIL,
          pass: process.env.PASSWD
        }
      };

      let transporter = nodemailer.createTransport(config);
      let mailGenerator = new Mailgen({
        theme: "default",
        product: {
          name: "Mailgen",
          link: 'https://mailgen.js/'
        }
      });

      const users = await User.find({});
      console.log(users);

      const productImgHtml = (product.images && product.images.length > 0) ? `<br><img
src="${product.images[0]}" alt="${product.title}">` : ''
      console.log(productImgHtml)
      for (let user of users) {
        let response = {
          body: {
            name: `${user.firstname} ${user.lastname}`,
            intro: `We have a special offer for you on ${product.title}!`,
            table: {
              data: [
                {
                    item: product.title,
                    description: product.description,
                    price: product.price,
                    discount: `${product.discountPercentage} %`
                }
              ]
            },
            outro: `Looking forward to doing more business with you. ${productImgHtml}`,
          }
        };

        let mail = mailGenerator.generate(response);

        let message = {
          from: process.env.EMAIL,
          to: user.email,
          subject: "SPECIAL OFFER",
          html: mail
        };

        const res = await transporter.sendMail(message);
        console.log(`Email sent to ${user.email}: ` + res.response);
```

```
      }

    } catch (err) {
      console.log("Error performing email send: ", err.message);
    }
  }
```

LogsTrigger

Podczas logowania lub wylogowywania, dodajemy to kolekcji logs informacje o o akcji jaką podją użytkownik i o dokładnym czasie podjecia tej akcji

Endpoint wylogowywania w którym dodajemy

```
authenticationRoutes.get('/logout',authorization.authenticateToken, async (req, res) => {
        try {

                const denyToken =jwt.sign(
                { user : req.user.user },
                process.env.DENY_TOKEN_SECRET,
                { expiresIn: '2s' }
            );


            const newLog = new Logs({
                user_id: req.user.user._id,
                action_type: 'logout',
                time: new Date()
            });


            const savedLog = await newLog.save()

            const toSend = {
                logut : savedLog,
                deny: denyToken
            }

            res.status(201).send(toSend);
        } catch (error) {
            console.error("Error during logout:", error);
            res.status(500).send('An error occurred during logout');
        }
    });
```

Logowanie

Każdy użytkownik w tabeli users posiada email i zahaszowane hasło. Do każdego użytkownika jest także przypisana rola, jest ich dwie: admin i customer. Większość endpointów na serwerze jest chrononych (tylko niektóre są dostępne dla gości).

Logowanie odbywa się przez endpoint:

POST /login w body podajemy password

```
POST http://localhost:8000/login
Content-Type: application/json

{
  "email": "Julianne.OConner@kory.org",
  "password": "haslo123"
}
```

W odpowiedzi dostajemy token, którego używamy przy chronionych endpointach.

Logowanie jest realizowane przy pomocy jwt token'a, przy pomocy middleware.

```
function authenticateToken(req, res, next){
        const authHeader = req.headers['authorization']
        // we split because its: BEARER <token>
        const token = authHeader && authHeader.split(' ')[1]

        if(token == null){
                res.status(400)
        }
        jwt.verify(token, process.env.ACCESS_TOKEN_SECRET, (err, user) =>{
            if(err) return res.sendStatus(403)

            req.user = user;
            next()
        })
    }

    function authorizeRoles(allowedRoles) {
        return (req, res, next) => {
            if (!allowedRoles.includes(req.user.user.role)) {
                return res.status(403).send('Access forbidden: insufficient rights');
            }
            next();
        }
    }
```

Endpoint realizujacy logowanie:

```
authenticationRoutes.post('/login', async (req, res) => {
        try {
            const { email, password} = req.body;
            console.log(email)
            console.log(password)
            const user = await User.findOne({ email: email });
            if (user == null) {
                return res.status(400).send('Cannot find user with given email');
            }

            if (!await bcrypt.compare(password, user.password)) {
                return res.status(400).send('Wrong password');
            }

            const accessToken = jwt.sign(
                { user : user },
                process.env.ACCESS_TOKEN_SECRET,
                { expiresIn: '20m' }
            );

            console.log(new Date())

            const newLog = new Logs({
                user_id: user._id,
                action_type: 'login',
                time: new Date()
            });


            const savedLog = await newLog.save();
            console.log(savedLog)
```

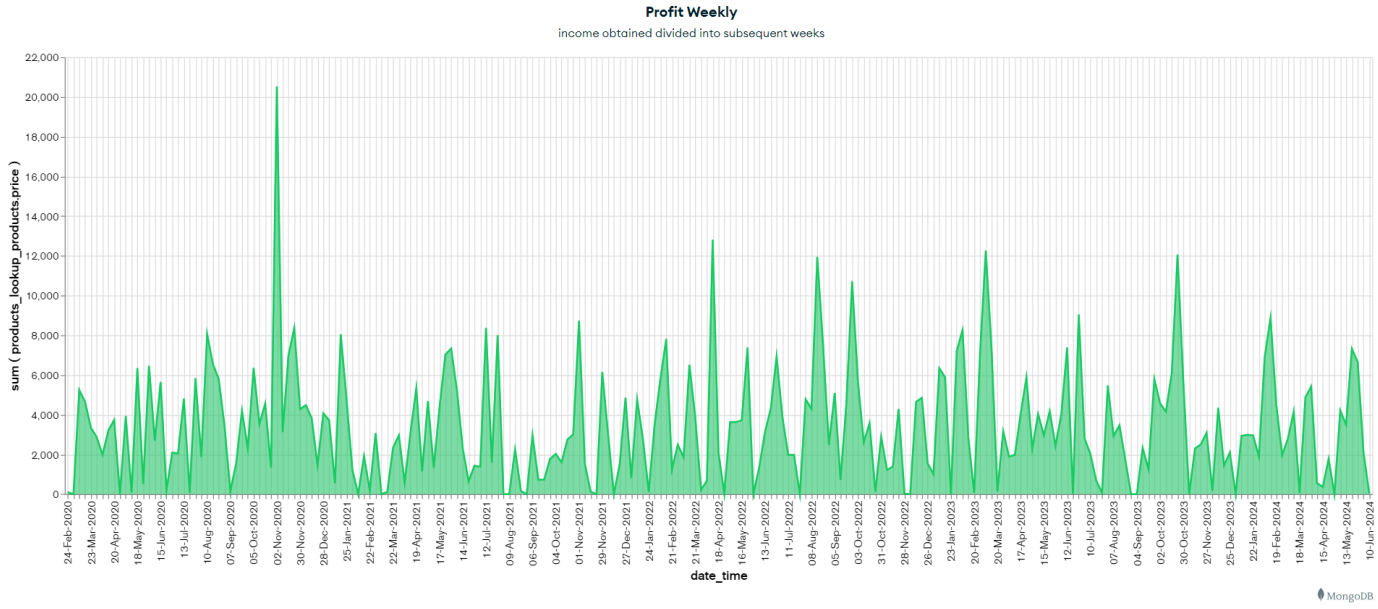
```
            res.status(201).json({ accessToken: accessToken });
        } catch (error) {
            console.error("Error during login:", error);
            res.status(500).send('An error occurred during login');
        }
    });
```

Admin

Endpointy do jakich ma dostęp Admin (dodatkowo ma dostęp do endpointów customera i guesta)

GET /profit-weekly

- zwraca listę dochodów z podziałem na tygodnie od początku działania sklepu internetowego z podziałem na tygodnie



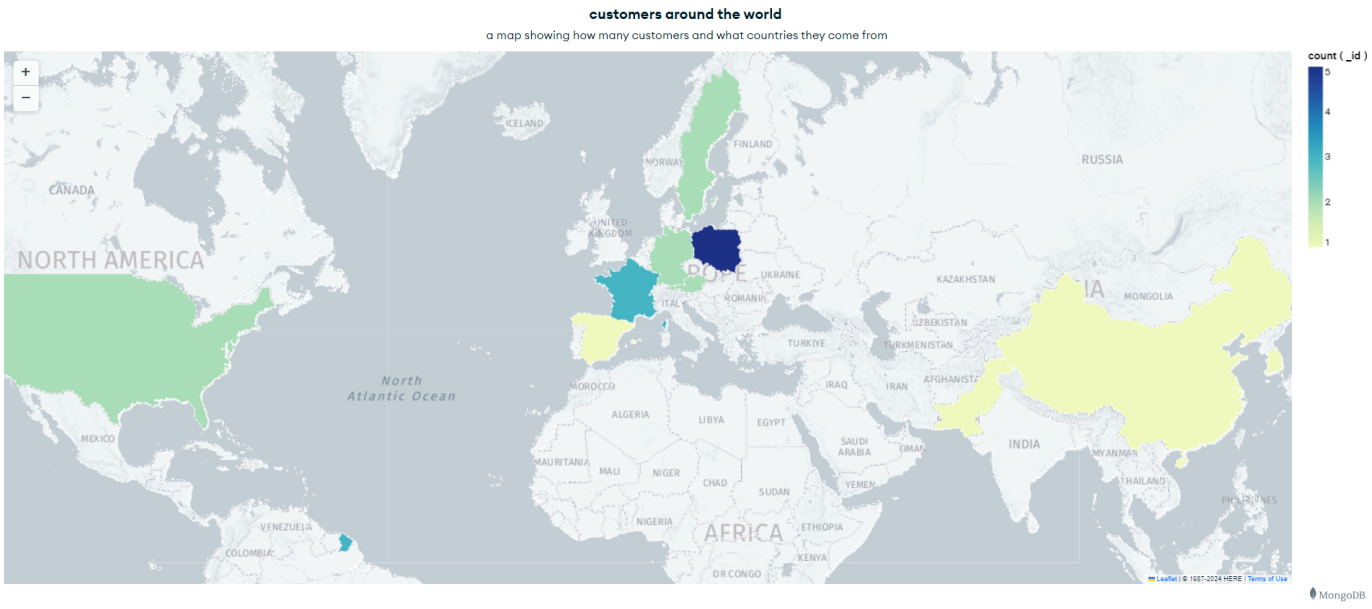
- aggregation pipe:

```
function profitWeekly(){
    return [
        {
          "$match": {
            "transaction.status": { "$in": ["completed", "in_progress"] }
          }
        },
        {
          "$unwind": "$products"
        },
        {
          "$lookup": {
            "from": "products",
            "localField": "products",
            "foreignField": "_id",
            "as": "productDetails"
          }
        },
        {
          "$unwind": "$productDetails"
        },
        {
          "$project": {
            "week": { "$week": "$date_time" },
```

```
            "year": { "$year": "$date_time" },
            "price": "$productDetails.price",
            "discountPercentage": "$productDetails.discountPercentage",
            "finalPrice": {
              "$multiply": [
                "$productDetails.price",
                {
                  "$subtract": [
                    1,
                    {
                      "$divide": [
                        "$productDetails.discountPercentage",
                        100
                      ]
                    }
                  ]
                }
              ]
            }
          }
        },
        {
          "$group": {
            "_id": { "year": "$year", "week": "$week" },
            "totalProfit": { "$sum": "$finalPrice" }
          }
        },
        {
          "$sort": { "_id.year": 1, "_id.week": 1 }
        },
        {
          "$project": {
            "_id": 0,
            "year": "$_id.year",
            "week": "$_id.week",
            "totalProfit": 1
          }
        }
      ]
}
```

GET /customers-around-world

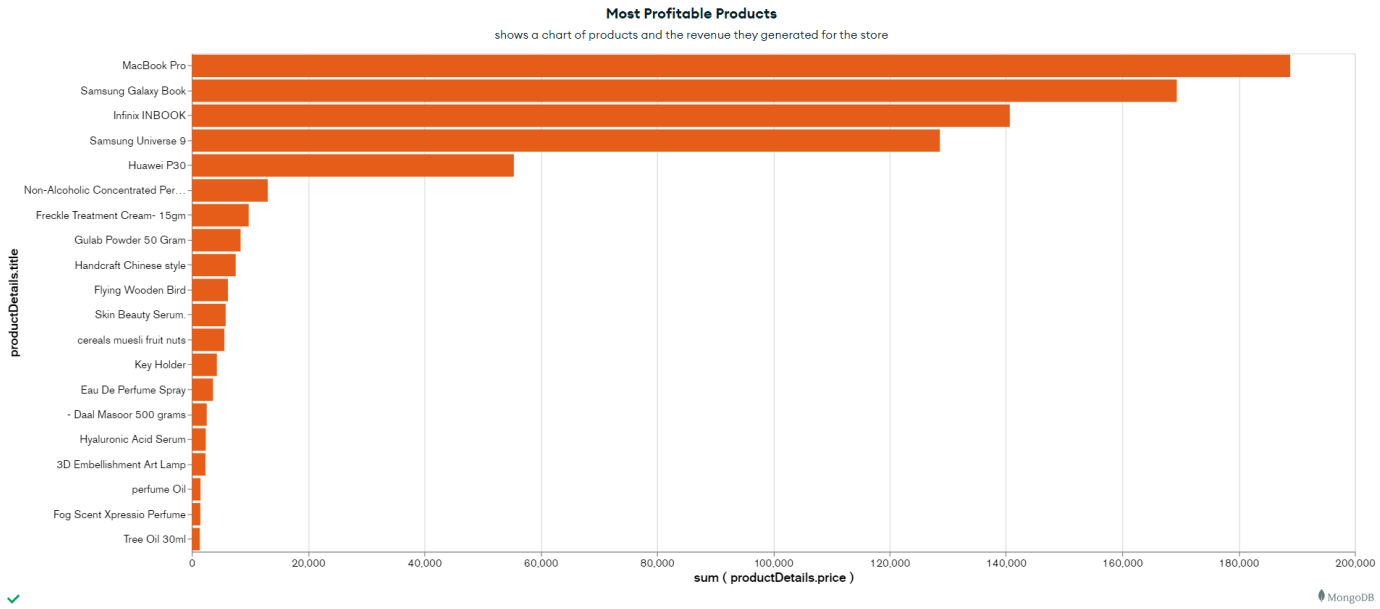
- zwraca zarejestrowanych użytkowników w danych krajach i interaktywna mapke, która mozna osadzić na forncie



```
function countCoustomersInCountries(){
    return [
        {
            $group: {
                _id: "$address.country",
                userCount: { $sum: 1 }
            }
        },
        {
            $sort: { userCount: -1 }
        },{
            $project:{
                country: "$_id",
                _id:0,
                userCount: "$userCount"
            }
        }
    ]
}
```

GET /most-profitable-products

- zwraca listę produktów i przychód jakie one wygenerowały dla sklepu, lista jest posortowana od produktów, które wygenerowały najwięcej przychodu to tych, które wygenreowały najmniej



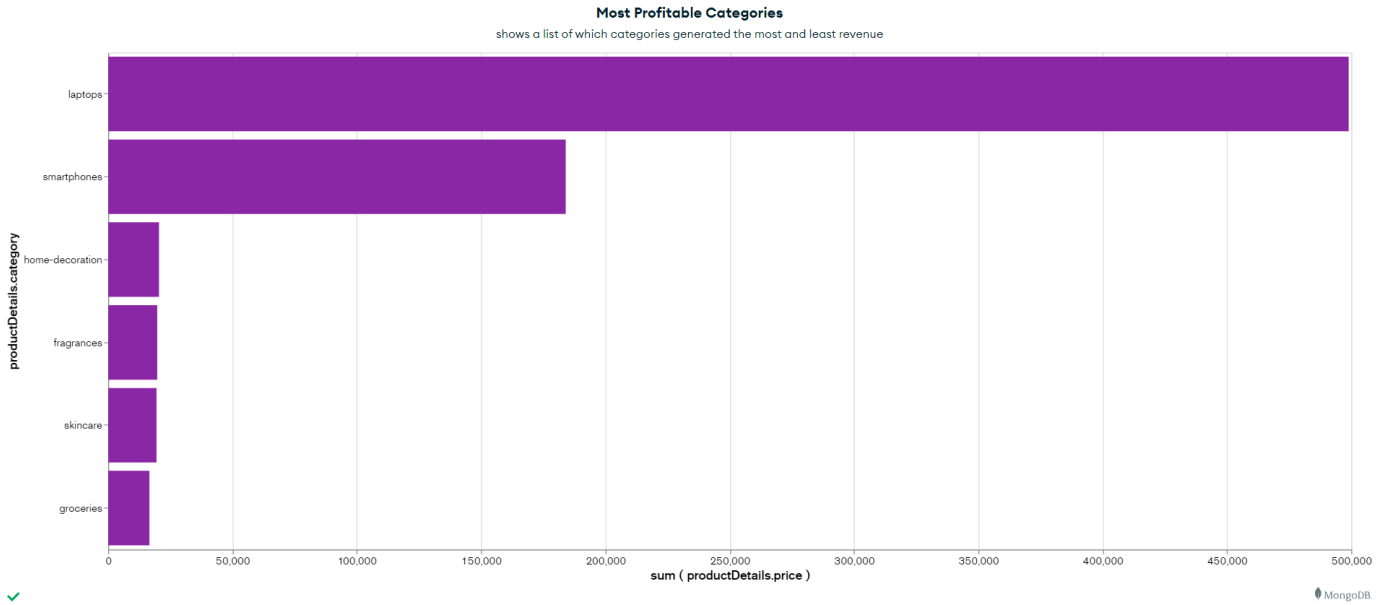
- aggregation pipe:

```
function mostProfitableProducts(){
    return [
        {
          "$lookup": {
            "from": "products",
            "localField": "products",
            "foreignField": "_id",
            "as": "productDetails"
          }
        },
        {
          "$unwind": "$productDetails"
        },
        {
```

```
            "$project": {
              "product_id": "$productDetails._id",
              "title": "$productDetails.title",
              "price": "$productDetails.price",
              "discountPercentage": "$productDetails.discountPercentage",
              "finalPrice": {
                "$multiply": [
                  "$productDetails.price",
                  {
                    "$subtract": [
                      1,
                      {
                        "$divide": [
                          "$productDetails.discountPercentage",
                          100
                        ]
                      }
                    ]
                  }
                ]
              }
            }
          },
          {
            "$group": {
              "_id": "$product_id",
              "title": { "$first": "$title" },
              "totalValue": { "$sum": "$finalPrice" }
            }
          },
          {
            "$sort": { "totalValue": -1 }
          },
          {
            "$project": {
              "_id": 0,
              "product_id": "$_id",
              "title": 1,
              "totalValue": 1
            }
          }
        ]

}
```

GET /most-profitable-categories

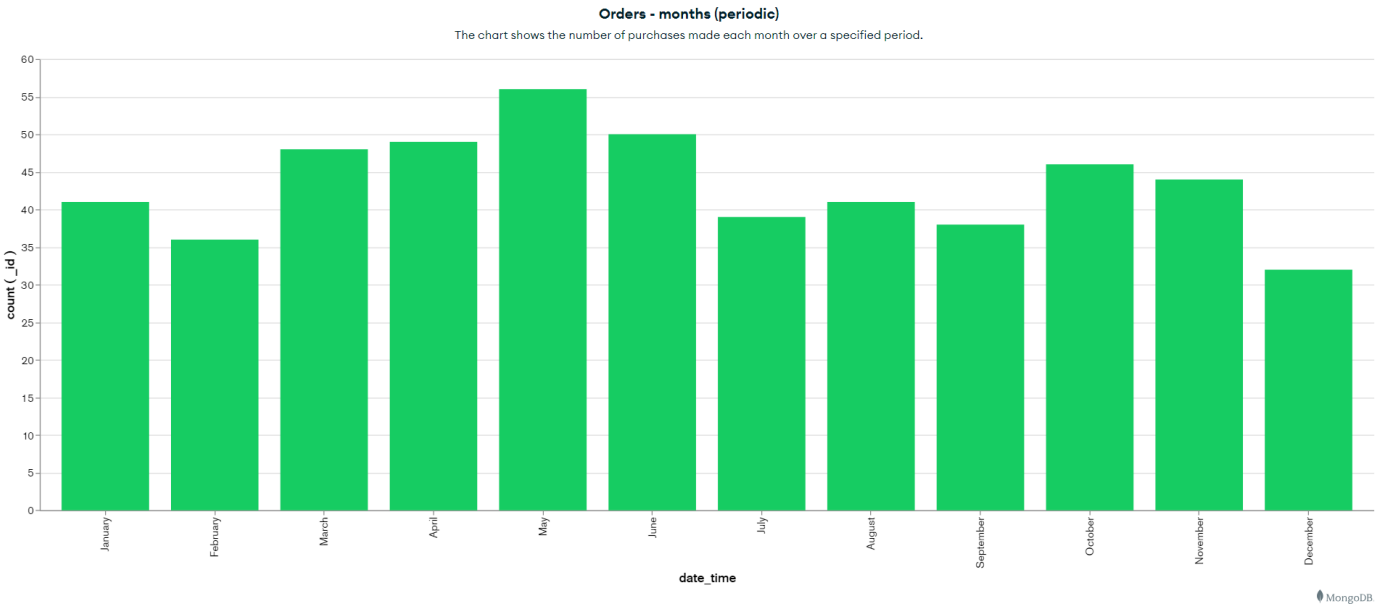
- zwraca listę kategorii i przychodów jakie one wygenerowały dla sklepu, pokazuję, posortowana liste, które kategorie wygenerowały najwięcej, a które najmniej przychodów.




```
[
        {
          "$lookup": {
            "from": "products",
            "localField": "products",
            "foreignField": "_id",
            "as": "productDetails"
          }
        },
        {
          "$unwind": "$productDetails"
        },
        {
          "$project": {
            "category": "$productDetails.category",
            "price": "$productDetails.price",
            "discountPercentage": "$productDetails.discountPercentage",
            "finalPrice": {
              "$multiply": [
                "$productDetails.price",
                {
                  "$subtract": [
                    1,
                    {
                      "$divide": [
                        "$productDetails.discountPercentage",
                        100
                      ]
                    }
                  ]
                }
              ]
            }
          }
        },
        {
          "$group": {
            "_id": "$category",
            "totalValue": { "$sum": "$finalPrice" }
          }
        },
        {
          "$sort": { "totalValue": -1 }
        },
        {
```

```
        "$project": {
          "_id": 0,
          "category": "$_id",
          "totalValue": 1
        }
      }
    ]
```

GET /orders-month-periodic -zwraca liczbe zamówien z podziałem na poszczególne miesiące + wykres kolumnowy




```
function ordersMonthlyPeriodic(){
    return [
        {
          "$addFields": {
            "date_time": {
              "$cond": {
                "if": {
                  "$eq": [
                    {
                      "$type": "$date_time"
                    },
                    "date"
                  ]
                },
                "then": "$date_time",
                "else": null
              }
            }
          }
        },
        {
          "$addFields": {
            "__alias_0": {
              "month": {
                "$subtract": [
                  {
                    "$month": "$date_time"
                  },
                  1
                ]
              }
            }
          }
```

```
        },
        {
          "$group": {
            "_id": {
              "__alias_0": "$__alias_0"
            },
            "__alias_1": {
              "$sum": 1
            }
          }
        },
        {
          "$project": {
            "_id": 0,
            "__alias_0": "$_id.__alias_0",
            "__alias_1": 1
          }
        },
        {
          "$project": {
            "x": "$__alias_0",
            "y": "$__alias_1",
            "_id": 0
          }
        },
        {
          "$sort": {
            "x.month": 1
          }
        },
        {
          "$limit": 5000
        },
        {
            $project:{
                "month": "$x.month",
                "quantity": "$y"
            }
        }
      ]
}
```

GET /financial-report-users

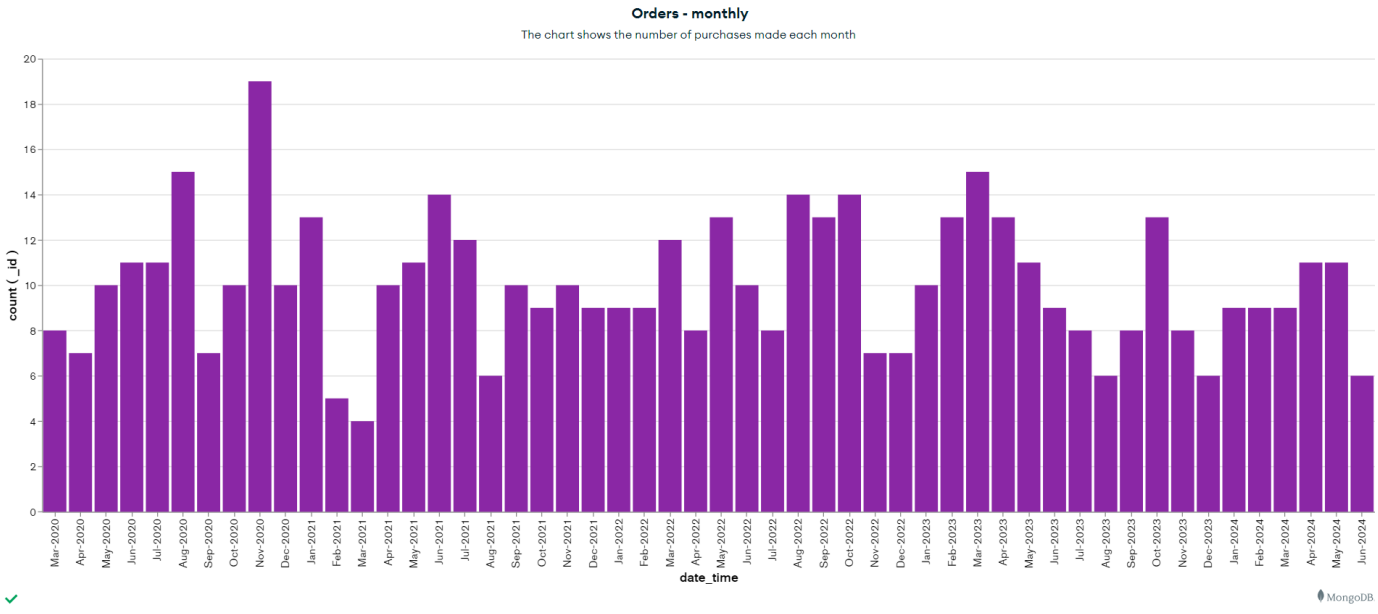
- pokazuje sprawozdanie finansowe dla kazdego uzytkownika (ile przychodu wygenerowal dla sklepu)

```
function financialReportUsers(){
    const pipeline = [

        { $unwind: "$products" },
        {
            $lookup: {
                from: "products",
                localField: "products",
                foreignField: "_id",
                as: "productInfo"
            }
        },

        { $unwind: "$productInfo" },

        {
            $group: {
                _id: "$user_id",
```

```
                totalAmount: { $sum: "$productInfo.price" }
            }
        },

        {
            $lookup: {
                from: "users",
                localField: "_id",
                foreignField: "_id",
                as: "userInfo"
            }
        },

        { $unwind: "$userInfo" },

        // prrojektowanie końcowego wyniku
        {
            $project: {
                _id: 0,
                userId: "$_id",
                firstname: "$userInfo.firstname",
                lastname: "$userInfo.lastname",
                totalAmount: "$totalAmount"
            }
        }
    ];

    return pipeline
}
```

GET /orders-month

- zwraca liczbe zamówien dla każdego miesiąca od początku działania sklepu internetowego + zwraca wykres kolumnowy

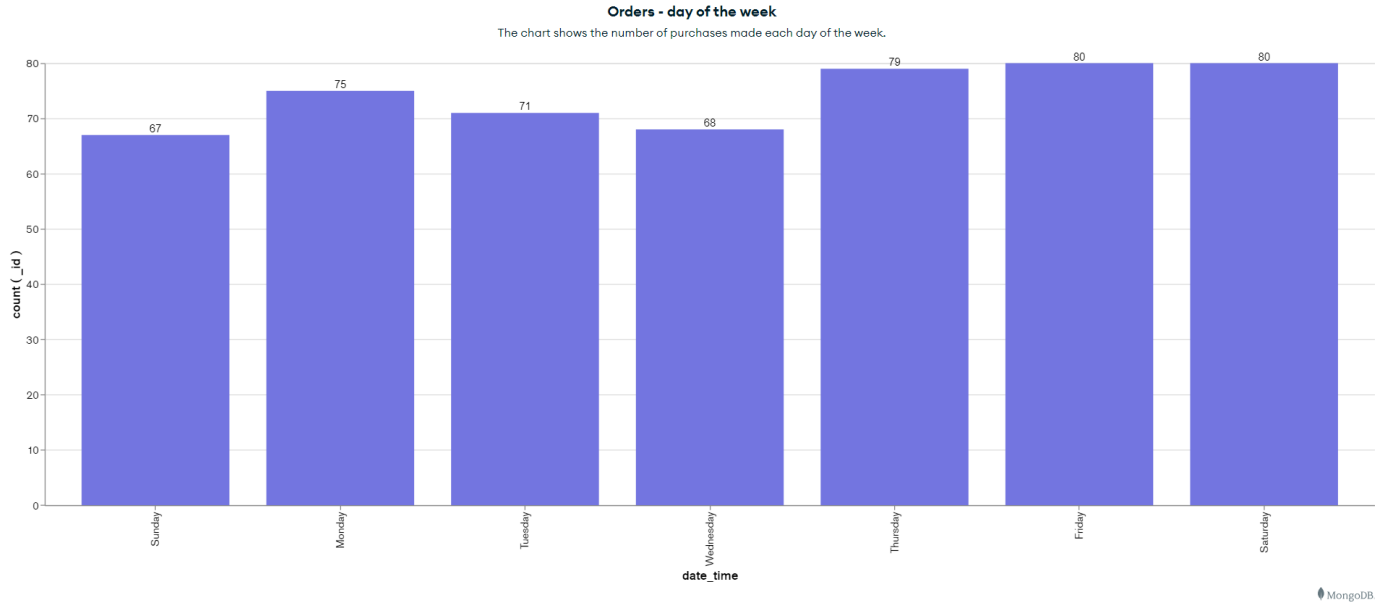



```
function ordersMonthly(){
    return [
        {
          "$addFields": {
            "date_time": {
              "$cond": {
                "if": {
                  "$eq": [
                    {
```

```
                      "$type": "$date_time"
                    },
                    "date"
                  ]
                },
                "then": "$date_time",
                "else": null
              }
            }
          }
        },
        {
          "$addFields": {
            "__alias_0": {
              "year": {
                "$year": "$date_time"
              },
              "month": {
                "$subtract": [
                  {
                    "$month": "$date_time"
                  },
                  1
                ]
              }
            }
          }
        },
        {
          "$group": {
            "_id": {
              "__alias_0": "$__alias_0"
            },
            "__alias_1": {
              "$sum": 1
            }
          }
        },
        {
          "$project": {
            "_id": 0,
            "__alias_0": "$_id.__alias_0",
            "__alias_1": 1
          }
        },
        {
          "$project": {
            "x": "$__alias_0",
            "y": "$__alias_1",
            "_id": 0
          }
        },
        {
          "$sort": {
            "x.year": 1,
            "x.month": 1
          }
        },
        {
          "$limit": 5000
        }
      ]
}
```

GET /orders-week

- zwraca liczbe zamówien dla danego dnia tygodnia i link do interaktywnego wykresu




```
function ordersWeekly(){
    return [
        {
            "$addFields": {
                "date_time": {
                    "$cond": {
                        "if": {
                            "$eq": [
                                {
                                    "$type": "$date_time"
                                },
                                "date"
                            ]
                        },
                        "then": "$date_time",
                        "else": null
                    }
                }
            }
        },
        {
            "$addFields": {
                "dayOfWeek": {
                    "$add": [
                        {
                            "$dayOfWeek": "$date_time"
                        },
                        -1
                    ]
                }
            }
        },
        {
            "$group": {
                "_id": "$dayOfWeek",
                "numberOfOrders": {
                    "$sum": 1
                }
            }
        },
        {
            "$sort": {
                "_id": 1
```

```
            }
        },
        {
            "$project": {
                "dayOfWeek": "$_id",
                "numberOfOrders": 1,
                "_id": 0
            }
        }
    ];
}
```

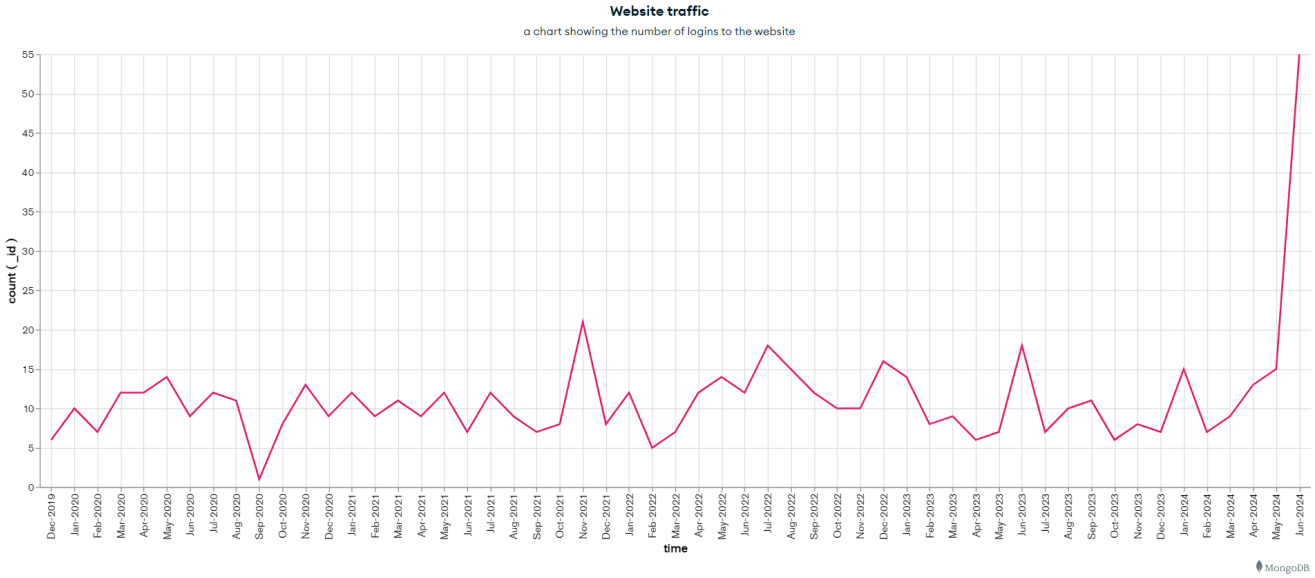
GET /users-number

- zwraca liczbe użytkowników w bazie danych

```
adminRoutes.get('/users-number', authorization.authenticateToken,
authorization.authorizeRoles([ROLES.ADMIN]), async (req, res)=>{
    try{
        const link = `https://charts.mongodb.com/charts-data-bases2-project-byelmxs/embed/charts?
id=6668c275-6ca1-4125-8fcf-c8c74c59a5b0&maxDataAge=300&theme=light&autoRefresh=true`

        const data = await User.aggregate([{$count: "totalUsers"}])
        data.push({chartLink: link})
        res.send(data)

    }catch{
        console.error('Failed to get data from chart:', error.message);
        console.error('Stack trace:', error.stack);
        res.status(500).send('Failed to get data from chart');
    }
})
```

GET /traffic

- zwraca informacje o liosci logowan na nasza strone internetowa, dodatkowo zwraca wykres logowan w czasie




```
function websiteTraffic(){
    return [
        {
          "$addFields": {
```

```
            "time": {
              "$cond": {
                "if": {
                  "$eq": [
                    {
                      "$type": "$time"
                    },
                    "date"
                  ]
                },
                "then": "$time",
                "else": null
              }
            }
          }
        },
        {
          "$addFields": {
            "__alias_0": {
              "year": {
                "$year": "$time"
              },
              "month": {
                "$subtract": [
                  {
                    "$month": "$time"
                  },
                  1
                ]
              }
            }
          }
        },
        {
          "$group": {
            "_id": {
              "__alias_0": "$__alias_0"
            },
            "__alias_1": {
              "$sum": 1
            }
          }
        },
        {
          "$project": {
            "_id": 0,
            "__alias_0": "$_id.__alias_0",
            "__alias_1": 1
          }
        },
        {
          "$project": {
            "amount": "$__alias_1",
            "date": "$__alias_0",
            "_id": 0
          }
        },
        {
          "$sort": {
            "x.year": 1,
            "x.month": 1
          }
        },
        {
          "$limit": 5000
        }
```

```
        ]
}
```

GET /dashboard

- zwraca panel z wszystkimi wykresami

GET /user-comments/:userId"

- zwraca wytawione opinie danego użytkownika o podanym id

```
commentRoutes.get("/user-comments/:userId", authorization.authenticateToken,
authorization.authorizeRoles([ROLES.ADMIN]), async (req, res) =>{
        const { userId } = req.params;

        const aggregationPipeline = aggregationPipelines.searchAllUserComments(userId)
        try{
                const answ = await Comments.aggregate(aggregationPipeline)

                res.json(answ)
        }catch(error){
                console.error(error);
                res.status(500).json({ message: "Wystąpił błąd serwera" });
        }
})
```

GET /searchuser

- endpoint pozwalazacy wyszukac usera o podanych kryteriach

```
userRoutes.get("/searchuser", authorization.authenticateToken,
authorization.authorizeRoles([ROLES.ADMIN]),(req, res) => {
    const { firstname, lastname, username, email, city, zipcode, country } = req.query;

    const searchCriteria = {};

    if (firstname) searchCriteria.firstname = firstname;
    if (lastname) searchCriteria.lastname = lastname;
    if (username) searchCriteria.username = username;
    if (email) searchCriteria.email = email;
    if (city) searchCriteria["address.city"] = city;
    if (zipcode) searchCriteria["address.zipcode"] = zipcode;
    if (country) searchCriteria["address.country"] = country;

    User.find(searchCriteria)
        .then((users) => {
            res.send(users);
        })
        .catch((error) => {
            console.log(error);
            res.status(500).send("Wystąpił błąd podczas wyszukiwania użytkowników.");
        });
});
```

POST /add-product

- endpoint dodaje nowy produkt do bazy danych

```
productRoutes.post("/add-product", authorization.authenticateToken,
authorization.authorizeRoles([ROLES.ADMIN]), async (req, res) => {
    try {
        const productData = req.body;
        const newProduct = new Product(productData);
        const savedProduct = await newProduct.save();

        if(savedProduct.discountPercentage >= 20){
            const answ = sendingMail.mailSenderToAll()
        }

        res.status(201).json(savedProduct);
    } catch (error) {
        console.error("Error creating product:", error);
        res
            .status(500)
            .json({ message: "Wystąpił błąd serwera podczas tworzenia produktu" });
    }
});
```

POST /update-discount

- aktualizuje żniżke dla porduktu, jeśli zniżka będzie mniejsza od 20%, wyzwalany jest trigger który wysyła maile do użytkowników

```
productRoutes.post('/update-discount',authorization.authenticateToken,
authorization.authorizeRoles([ROLES.ADMIN]), async (req, res) => {
  const { productId, discountPercentage } = req.body;

  try {
    const updatedProduct = await Product.findByIdAndUpdate(
      productId,
      { $set: { discountPercentage } },
      { new: true }
    );

    if (!updatedProduct) {
      return res.status(404).json({ message: 'Produkt nie znaleziony' });
    }

    if (discountPercentage >= 20 && updatedProduct) {
        await sendingMail(updatedProduct);
      }

    res.json(updatedProduct);
  } catch (error) {
    console.error('Error updating product discount:', error);
    res.status(500).json({ message: 'Wystąpił błąd serwera podczas aktualizacji rabatu produktu' });
  }
});
```

POST /change-user-password

- zmieniamy haslo użytkownika o podanym Id

```
userRoutes.post('/change-user-password', authorization.authenticateToken,
authorization.authorizeRoles([ROLES.ADMIN]), async (req, res) =>{
    try{
        const { email, newPassword } = req.body;
```

```
        if (!email || !newPassword) {
            return res.status(400).send('Email and password are required');
        }

        const user = await User.findOne({email: email})

        if (!user) {
            return res.status(404).send('User not found');
        }

        const salt = await bcrypt.genSalt()
        const hashedPassword = await bcrypt.hash(newPassword, salt)

        user.password = hashedPassword;
        await user.save();
        res.status(200).send('Password updated successfully');
    }
    catch(error){
        console.error("Error updating password:", error);
        res.status(500).send('An error occurred while updating the password');
    }
})
```

POST /register-admin

- rejestruje nowego admina w bazie danych

```
userRoutes.post('/register-admin',authorization.authenticateToken,
authorization.authorizeRoles([ROLES.ADMIN]), async (req, res) => {
    try {
        const {
            firstname,
            lastname,
            username,
            email,
            password,
            country, street, suite, city, zipcode,
            phone
        } = req.body;
        const role = ROLES.ADMIN
        if (!firstname || !lastname || !username || !email || !password || !country || !street || !city
|| !zipcode || !phone) {
            return res.status(400).send('All required fields must be provided');
        }

        const existingUser = await User.findOne({ email: email });
        const existingUserUsername = await User.findOne({username: username})
        if (existingUser || existingUserUsername) {
            return res.status(409).send('User with this email already exists');
        }


        const salt = await bcrypt.genSalt();
        const hashedPassword = await bcrypt.hash(password, salt);

        const newUser = new User({
            firstname,
            lastname,
            username,
            email,
            password: hashedPassword,
            role: role,
            address: {
```

```
                country,
                street,
                suite,
                city,
                zipcode
            },
            phone
        });
        await newUser.save();

        res.status(201).send('User created successfully');
    } catch (error) {
        console.error("Error creating user:", error);
        res.status(500).send('An error occurred while creating the user');
    }
});
```

Customer

Enpointy do jakich ma dostęp customer (dodatkowo ma dostęp do endpointów guesta):

POST /create-basket

- pozwala na stworzenie koszyka z produktami

```
userRoutes.post("/create-basket", authorization.authenticateToken,
authorization.authorizeRoles([ROLES.ADMIN, ROLES.CUSTOMER]) ,async (req, res) => {
    // format for sending products is: products:id_1;id_2;id_2
    // as you see we are using const productIds = products.split(';');
    console.log("------------------")
    const userId = req.user.user._id
    const {products, currency, payment_method } = req.body;
    const delivery_status = "order_placed";
    const status = "completed"

    if(!products){
        res.status(500).json({ message: "You must provide products" });
    }

    const productsArr = products.split(';');
    try {

        const productsAvailbility = await helperFunctions.checkWhetherProductsAreAvailable(productsArr)
        if(!productsAvailbility){
            res.status(500).json({ message: "One of the products is not available" });
        }

        const decreasingResult = await helperFunctions.decreaseProductQuantity(productsArr)

        if(!decreasingResult){
            res.status(500).json({ message: "Cant decrese products quantity" });
        }

        const newBasket = new Basket({
            user_id: new mongoose.Types.ObjectId(userId),
            date_time: new Date(),
            products: productsArr.map(productId => new mongoose.Types.ObjectId(productId)),
            transaction: {
                currency,
                payment_method,
                status,
                timestamp: new Date(),
            },
```

```
            delivery_status,
        });


        const savedBasket = await newBasket.save();

        res.status(201).json(savedBasket);
    } catch (error) {
        console.error(error);
        res.status(500).json({ message: "Server error" });
    }
});
```

POST /my-shopping

- sprawdzenie jakie swoich zakupów i podliczenie ile się za to zapłaciło

```
userRoutes.post("/my-shopping", authorization.authenticateToken,
authorization.authorizeRoles([ROLES.ADMIN, ROLES.CUSTOMER]),async (req, res) => {
    const {
        minTotalValue,
        maxTotalValue,
        numberOfProducts,
        deliveryStatus,
        status,
        timestamp,
        title,
        category
    } = req.body;

    const userId = req.user.user._id;

    let pipeline = aggregationPipelines.matchAllBasketsDetailed(userId, title, category);

    // Additional filters
    if (minTotalValue) {
        pipeline.push({
            $match: {
                totalValue: {
                    $gte: parseFloat(minTotalValue)
                }
            }
        });
    }

    if (maxTotalValue) {
        pipeline.push({
            $match: {
                totalValue: {
                    $lte: parseFloat(maxTotalValue)
                }
            }
        });
    }


    if (numberOfProducts) {
        pipeline.push({
            $match: {
                'baskets.products': {
                    $size: parseInt(numberOfProducts, 10)
                }
            }
        });
```

```
    }

    if (deliveryStatus) {
        pipeline.push({
            $match: {
                'baskets.delivery_status': deliveryStatus
            }
        });
    }

    if (status) {
        pipeline.push({
            $match: {
                'baskets.transaction.status': status
            }
        });
    }

    if (timestamp) {
        const date = new Date(timestamp);
        pipeline.push({
            $match: {
                'transaction.timestamp': { $gte: date }
            }
        });
    }

    try {
        const result = await Basket.aggregate(pipeline);
        res.json(result);
    } catch (err) {
        res.status(500).json({ message: err.message });
    }
});
```

GET /search-products (GUEST ma także dostęp)

- mozemy wyszukiwać produktów użytwając do tego róznych filtrów

```
productRoutes.post("/search-products", async (req, res) => {
    try {
        console.log(req.body)
        const {
            title,
            //brand,
            category,
            minPrice,
            maxPrice,
            minRating,
            maxRating,
            minDiscountPercentage,
            maxDiscountPercentage,
            minStock,
            maxStock,
        } = req.body;

        const searchCriteria = {};

        if (title) searchCriteria.title = { $regex: title, $options: "i" };
        //if (brand) searchCriteria.brand = { $regex: brand, $options: "i" };
        if (category) searchCriteria.category = { $regex: category, $options: "i" };
        if (minPrice && maxPrice) {
```

```
            searchCriteria.price = { $gte: minPrice, $lte: maxPrice };
        } else if (minPrice) {
            searchCriteria.price = { $gte: minPrice };
        } else if (maxPrice) {
            searchCriteria.price = { $lte: maxPrice };
        }
        if (minRating) searchCriteria.rating = { $gte: minRating };
        if (maxRating) searchCriteria.rating = { $lte: maxRating };
        if (minDiscountPercentage)
            searchCriteria.discountPercentage = { $gte: minDiscountPercentage };
        if (maxDiscountPercentage)
            searchCriteria.discountPercentage = { $lte: maxDiscountPercentage };
        if (minStock) searchCriteria.stock = { $gte: minStock };
        if (maxStock) searchCriteria.stock = { $lte: maxStock };

        const products = await Product.find(searchCriteria);

        res.json(products);
    } catch (error) {
        console.error(error);
        res.status(500).json({ message: "Wystąpił błąd serwera" });
    }
});
```

GET /products/:productId/all-reviews (GUEST ma także dostęp)

- listuje wszystkie opinie o danym produkcie

```
productRoutes.get("/products/:productId/all-reviews", async (req, res) => {
    const { productId } = req.params;

    const objectProductId = new mongoose.Types.ObjectId(productId)

    try {
        const aggregationPipeline =
            aggregationPipelines.matchAllProductsWithGivenID(objectProductId);

        console.log(aggregationPipeline);
        const result = await Comments.aggregate(aggregationPipeline);
        res.json(result);
    } catch (error) {
        console.error(error);
        res.status(500).json({ message: "Wystąpił błąd serwera" });
    }
});
```

GET /all-products (GUEST ma także dostęp)

- listuje wszustkie produkty

```
productRoutes.get("/all-products", (req, res) => {
    Product.find()
        .then((result) => {
            res.send(result);
        })
        .catch((err) => {
            console.log(err);
        });
});
```

POST /add-review

- możemy dodać opinie do jakiegos produktu

```
commentRoutes.post('/add-review',authorization.authenticateToken,
authorization.authorizeRoles([ROLES.ADMIN, ROLES.CUSTOMER]), async (req, res) => {
        const { product_id, rating, review } = req.body;
        const  customer_id = req.user.user._id

        try {
            const newReview = new Comments({
                product_id: new mongoose.Types.ObjectId(product_id),
                customer_id: new mongoose.Types.ObjectId(customer_id),
                rating,
                review,
                date: new Date(),
                comments: [],
            });

            const savedReview = await newReview.save();
            res.status(201).json(savedReview);
        } catch (error) {
            console.error(error);
            res.status(500).json({ message: "Wystąpił błąd serwera" });
        }
    });
```

GET /all-brands (GUEST ma także dostęp)

- listuje wszyskie marki

```
brandRoutes.get("/all-brands", (req, res) => {
    Brand.find()
        .then((result) => {
            res.send(result);
        })
        .catch((err) => {
            console.log(err);
        });
});
```

GET /search-brands (GUEST ma także dostęp)

- listuje marki wedlug podanych kryteriów

```
brandRoutes.post("/search-brands", async (req, res) => {
    try {
        console.log(req.body);
        const {
            name,
            country,
            city,
            email,
            phone,
            website,
            establishedYearMin,
            establishedYearMax,
        } = req.body;
```

```
        // $options: "i" means that regex is case insensitive
        const searchCriteria = {};
        if (name) searchCriteria.name = { $regex: name, $options: "i" };
        if (country) searchCriteria["location.country"] = { $regex: country, $options: "i" };
        if (city) searchCriteria["location.city"] = { $regex: city, $options: "i" };
        if (email) searchCriteria["contact.email"] = { $regex: email, $options: "i" };
        if (phone) searchCriteria["contact.phone"] = { $regex: phone, $options: "i" };
        if (website) searchCriteria.website = { $regex: website, $options: "i" };
        if (establishedYearMin !== null && establishedYearMax !== null) {
            searchCriteria.established_year = { $gte: establishedYearMin, $lte: establishedYearMax };
        } else if (establishedYearMin !== null) {
            searchCriteria.established_year = { $gte: establishedYearMin };
        } else if (establishedYearMax !== null) {
            searchCriteria.established_year = { $lte: establishedYearMax };
        }

        console.log(searchCriteria);
        const companies = await Brand.find(searchCriteria);
        res.json(companies);
    } catch (error) {
        console.error(error);
        res.status(500).json({ message: "Wystąpił błąd serwera" });
    }
});
```

GET /my-reviews

- zwraca wszystkie opinie wystawione przez zalogowanego uzytkownika

```
commentRoutes.get("/my-reviews", authorization.authenticateToken,
authorization.authorizeRoles([ROLES.ADMIN, ROLES.CUSTOMER]), async (req, res) =>{

    const userId = req.user.user._id;
    const aggregationPipeline = aggregationPipelines.searchAllUserComments(userId)
    try{
            const answ = await Comments.aggregate(aggregationPipeline)

            res.json(answ)
    }catch(error){
            console.error(error);
            res.status(500).json({ message: "Wystąpił błąd serwera" });
    }
})
```

GET /my-logs

- zwraca logi zalogowanego uzytkownika

```
logsRoutes.get('/my-logs',authorization.authenticateToken, authorization.authorizeRoles([ROLES.ADMIN,
ROLES.CUSTOMER]), async (req, res)=>{

    const userId = req.user.user._id;
    const aggregationPipeline = aggregationPipelines.getLogsForUser(userId)
    try{
            const answ = await Logs.aggregate(aggregationPipeline)
            res.json(answ)
    }catch(error){
            console.error(error);
            res.status(500).json({ message: "Wystąpił błąd serwera" });
    }
```

```
})
```

POST /add-comment/:reviewId

- dodaje komentarz do opinii wystawionej przez kogos na tematu produktu

```
commentRoutes.post('/add-comment/:reviewId', authorization.authenticateToken,
authorization.authorizeRoles([ROLES.ADMIN, ROLES.CUSTOMER]), async (req, res) => {
        const { reviewId } =req.params;
        const objectReviewId =  new mongoose.Types.ObjectId(reviewId)
        const { comment } = req.body
        const userid = req.user.user._id
        try {
            const review = await Comments.findById(objectReviewId);
            if (!review) {
                return res.status(404).json({ message: "Recenzja nie została znaleziona" });
            }

            review.comments.push({
                userid,
                comment
            });

            const updatedReview = await review.save();
            res.status(201).json(updatedReview);
        } catch (error) {
            console.error(error);
            res.status(500).json({ message: "Wystąpił błąd serwera" });
        }
    });
```

POST /register-user

```
userRoutes.post('/register-user', async (req, res) => {
    try {
        const {
            firstname,
            lastname,
            username,
            email,
            password,
            country, street, suite, city, zipcode,
            phone
        } = req.body;
        const role = ROLES.CUSTOMER
        if (!firstname || !lastname || !username || !email || !password || !country || !street || !city
|| !zipcode || !phone) {
            return res.status(400).send('All required fields must be provided');
        }

        const existingUser = await User.findOne({ email: email });
        const existingUserUsername = await User.findOne({username: username})
        if (existingUser || existingUserUsername) {
            return res.status(409).send('User with this email already exists');
        }


        const salt = await bcrypt.genSalt();
```

```
        const hashedPassword = await bcrypt.hash(password, salt);

        const newUser = new User({
            firstname,
            lastname,
            username,
            email,
            password: hashedPassword,
            role: role,
            address: {
                country,
                street,
                suite,
                city,
                zipcode
            },
            phone
        });
        await newUser.save();

        res.status(201).send('User created successfully');
    } catch (error) {
        console.error("Error creating user:", error);
        res.status(500).send('An error occurred while creating the user');
    }
});
```