

Authentication Token



Ajouter le models user

```
const mongoose = require('mongoose')

const userSchema = new mongoose.Schema({

  email: {
    type: String,
    required: true,
    unique: true
  },

  password: {
    type: String,
    required: true,
  },

  firstname: {
    type: String,
    required: true,
  },
})
```

```

    lastname: {
      type: String,
      required: true,
    },

    role: {
      type: String,
      enum: ["user", "admin"],
      default: "user"
    },
    isActive: {
      type: Boolean,
      default: true,
      required: false
    },

    avatar :{

      type: String,

      required: false

    } ,

  },
  {
    timestamps: true,
  },
)

module.exports = mongoose.model('User', userSchema)

```

Créer le fichier user.route.js

Ajouter la méthode de création d'un utilisateur

```

const express = require('express');
const router = express.Router();
const User=require("../models/user")

```

```
// créer un nouvel utilisateur

router.post('/register', async (req, res) => {
  try {

    let { email, password, firstname, lastname } = req.body
    const user = await User.findOne({ email })
    if (user) return res.status(404).send({ success: false, message:
    "User already exists" })

    const newUser = new User({ email, password, firstname, lastname })

    const createdUser = await newUser.save()

    return res.status(201).send({ success: true, message: "Account
    created successfully", user: createdUser })

  } catch (err) {
    console.log(err)
    res.status(404).send({ success: false, message: err })
  }

});
module.exports = router;
```

Ajouter la méthode de cryptage de mot de passe avant enregistrement (save)

```
const mongoose = require('mongoose')

const bcrypt = require('bcrypt')

const userSchema = new mongoose.Schema({

  email: {
    type: String,
    required: true,
    unique: true
  },

  password: {
    type: String,
    required: true,
  },

  firstname: {
    type: String,
    required: true,
```

```

    },
    lastname: {
      type: String,
      required: true,
    },
    role: {
      type: String,
      enum: ["user", "admin"],
      default: "user"
    },
  },
  {
    timestamps: true,
  },
)
userSchema.pre('save', async function(next) {

  if (!this.isModified('password')) return next()
  const salt = await bcrypt.genSalt(10)
  const hashedPassword = await bcrypt.hash(this.password, salt)
  this.password = hashedPassword
  next()

})
module.exports = mongoose.model('User', userSchema)

```

créer la méthode qui affiche la liste des utilisateurs

```

// afficher la liste des utilisateurs.
router.get('/', async (req, res, )=> {
  try {
    const users = await User.find().select("-password");
    res.status(200).json(users);
  } catch (error) {
    res.status(404).json({ message: error.message });
  }
});

```

Ajouter la méthode qui modifie l'état du champ isActive

```
/**
 * as an admin i can disable or enable an account
 */
router.get('/status/edit/', async (req, res) => {
  try {
    let email = req.query.email
    let user = await User.findOne({email})
    user.isActive = !user.isActive
    user.save()
    res.status(200).send({ success: true, user })
  } catch (err) {
    return res.status(404).send({ success: false, message: err })
  }
})
```

Installer jsonwebtoken et bcrypt

```
npm i jsonwebtoken bcrypt
```

ajouter les imports suivants dans le fichier routes/user.route.js

```
const bcrypt = require('bcrypt')
const jwt = require('jsonwebtoken')
```

Ajouter le code de connexion suivant

```
// se connecter
router.post('/login', async (req, res) => {
  try {
    let { email, password } = req.body

    if (!email || !password) {
      return res.status(404).send({ success: false, message: "All
fields are required" })
    }
  }
})
```

```

    }

    let user = await User.findOne({ email
}).select('+password').select('+isActive')

    if (!user) {

        return res.status(404).send({ success: false, message: "Account
doesn't exists" })

    } else {

        let isCorrectPassword = await bcrypt.compare(password, user.password)
        if (isCorrectPassword) {

            delete user._doc.password
            if (!user.isActive) return res.status(200).send({ success:
false, message: 'Your account is inactive, Please contact your
administrator' })

            const token = jwt.sign ({ iduser:
user._id,name:user.firstname, role: user.role }, process.env.SECRET, {
expiresIn: "1h", })

            return res.status(200).send({ success: true, user, token })

        } else {

            return res.status(404).send({ success: false, message:
"Pplease verify your credentials" })

        }
    }
}

```

```

    }

    } catch (err) {
        return res.status(404).send({ success: false, message: err.message
    })
    }

    });

```

Ajouter dans le fichier .env le mot secret

```

ENV=DEVELOPMENT

DATABASE=mongodb://127.0.0.1:27017/DatabaseCommerce

DATABASECLOUD=mongodb+srv://user:password@cluster0.yfhhu.mongodb.net/Databas
eCommerce?retryWrites=true&w=majority

PORT=3001

SECRET = 328393161742435634

```

Ajouter les routes de user dans le fichier app.js

```

app.use('/api/users', userRouter);
const userRouter =require("./routes/user.route")

```

Test : register :

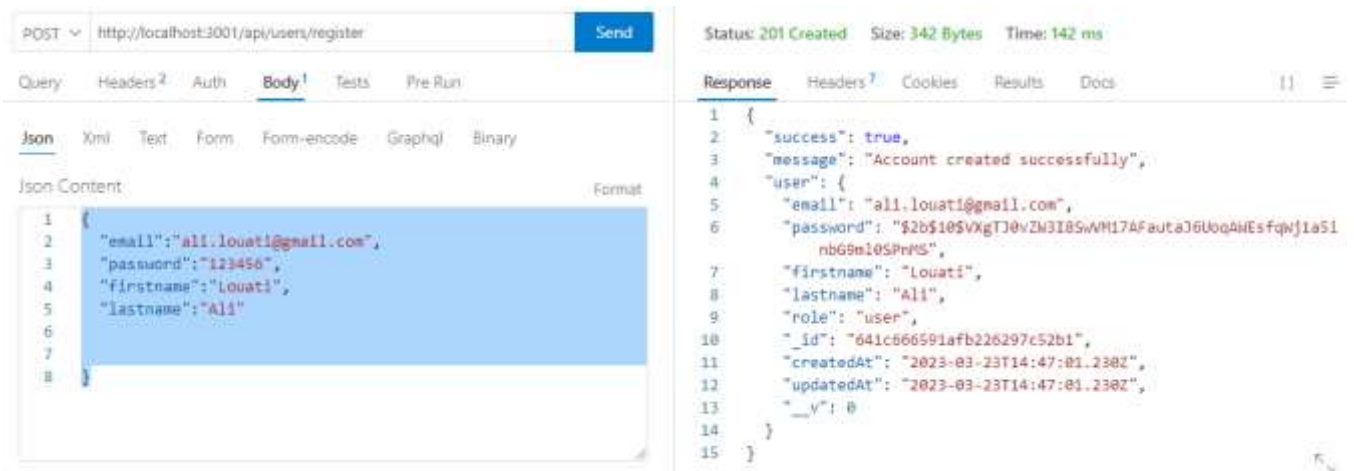
Post : <http://localhost:3001/api/users/register>

```
{
```

```

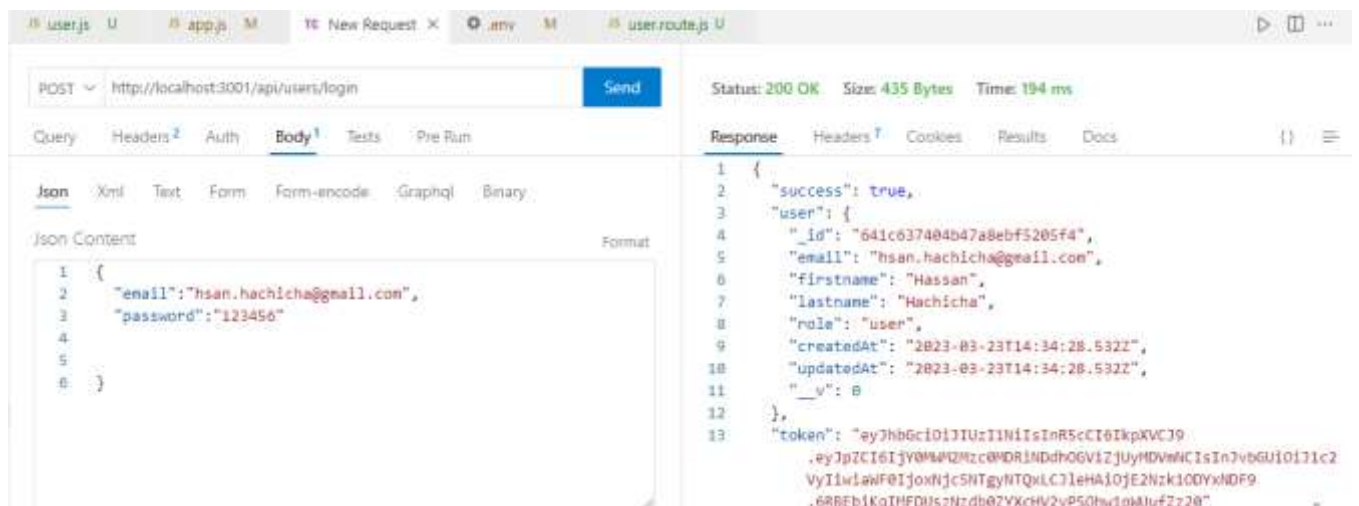
"email":"ali.louati@gmail.com",
"password":"123456",
"firstname":"Louati",
"lastname":"Ali"
}

```



Test : login

Post : http://localhost:3001/api/users/login



git add .

git commit -m "feat:login user:login"

git push

git status

Middleware

Ajouter les middleware

verify-token : jsonwebtoken

verify-role : pour verifier le role user ou Admin

upload-file(multer)

1- Verif-token

Créer le dossier middleware

Céer le fichier verify-token.js

```
const jwt = require('jsonwebtoken');
require('dotenv').config()

/**
 *
 * Middleware function that check if user has token and can access or not
 *
 * @param {string} token - Authorization token provided by request sender
 *
 * @return
 * @status 403 No token provided
 * @Status 403 Invalid token
 *
 */

const verifyToken = (req, res, next) => {

    const header = req.headers['authorization'];
    const token = header && header.split('Bearer ')[1];
```

```

    if (!token) return res.status(403).send({ success: false, message: 'No
token provided' });

    jwt.verify(token, process.env.SECRET, (err, decoded) => {

        if (err) return res.status(403).send({ success: false, message:
'Invalid token' });
        req.user = {}
        req.user.id = decoded.iduser
        req.user.role = decoded.role
        next()
    })
}

module.exports = { verifyToken }

```

Dans le fichier article.route.js utiliser la fonction callback verifToken()

```

const {verifyToken} =require("../middleware/verifToken")
// afficher la liste des articles.
router.get('/', verifyToken, async (req, res )=> {
    try {
        const articles = await Article.find();
        res.status(200).json(articles);
    } catch (error) {
        res.status(404).json({ message: error.message });
    }
});

```

Test

Afficher la liste des articles sans avoir le token (No token provided)

GET

Query Headers **Auth** Body Tests Pre Run

None Basic **Bearer** OAuth 2 Ntlm Aws

Bearer Token

Status: **403 Forbidden** Size: 47 Bytes Time: 5 ms

Response Headers Cookies Results Docs

```

1 {
2   "success": false,
3   "message": "No token provided"
4 }

```

Il faut donc faire un login avant (se connecter)

login pour se connecter et avoir le token

post : <http://localhost:3001/api/users/login>

POST

Query Headers Auth **Body** Tests Pre Run

Json Xml Text Form Form-encode GraphQL Binary

Json Content

```

1 {
2   "email": "ali.louati@gmail.com",
3   "password": "123456"
4 }

```

Status: **200 OK** Size: 427 Bytes Time: 160 ms

Response Headers Cookies Results Docs

```

4 {
5   "_id": "641c666591afb226297c52b1",
6   "email": "ali.louati@gmail.com",
7   "firstname": "Louati",
8   "lastname": "Ali",
9   "role": "user",
10  "createdAt": "2023-03-23T14:47:01.230Z",
11  "updatedAt": "2023-03-23T14:47:01.230Z",
12  "_v": 0
13 }
14 {
15   "token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJpZCI6IjY0MWM2NjY1OTFhZmlyMjYyOTdjNTIiMSIsInVjbGU0Ij1c2VylwlaWFOIjoxNjc5NjA0MzA1LCJleHAiOiJlZnNkZmDc5MDV9.GlreyOvS_pm83tnPLZyywo3V0DAKVJfIWxWCCQhKXcA"
16 }

```

Copier le token dans la clause Headers

GET

Query Headers **Auth** Body Tests Pre Run

None Basic **Bearer** OAuth 2 Ntlm Aws

Bearer Token

Status: **200 OK** Size: 12.42 KB Time: 24 ms

Response Headers Cookies Results Docs

```

1 [
2   {
3     "_id": "63d56460e227dfb414b62085",
4     "designation": "Al Jazira Huile de grignons d'olive",
5     "imageart": "http://res.cloudinary.com/iset-sfax/image/upload/v1658751537/images/huilealjazeera.jpg.jpg",
6     "marque": "Al Jazira",
7     "prix": 23.5,
8     "qtestock": 120,
9     "reference": "Huilejs",
10    "categorieID": "61f06deb3d65ee46baf10303"
11  },
12  {
13    "_id": "63d56460e227dfb414b62088",
14    "designation": "Sanabel Carthage Farine Paquet De 1Kg",
15    "imageart": "http://res.cloudinary.com/iset-sfax/image/upload/v1658754214/images/farine.jpg.jpg",

```

2- Multer

créer dans le dossier middleware le fichier uploadfile.js

Installer multer

```
npm install multer
```

```
const multer = require( "multer")
const fs = require( "fs")

var DIR = './images/';
if (!fs.existsSync(DIR)) {  // CREATE DIRECTORY IF NOT FOUND
  fs.mkdirSync(DIR, { recursive: true });
}

const storage = multer.diskStorage({
  destination: (req, file, callback) => {

    callback(null, DIR);
  },
  filename: (req, file, callback) => {
    const name = file.originalname.split(' ').join('_');
    callback(null, name);
  }
});

const uploadFile = multer({
  storage: storage
});

module.exports={uploadFile};
```

Ajouter dans le fichier app.js

```
app.use(express.static(__dirname + '/'));
```

Dans le fichier article.route.js

```
const { uploadFile } = require('../middleware/upload-file')

router.post('/', uploadFile.single("imageart"), async (req, res) => {
  const {reference, designation, prix, marque, qtestock, scategorieID} =
  req.body
  const imageart = req.file.filename
  const nouvarticle = new
  Article({reference:reference, designation:designation, prix:prix, marque:marque
  ,qtestock:qtestock, scategorieID:scategorieID, imageart:imageart})

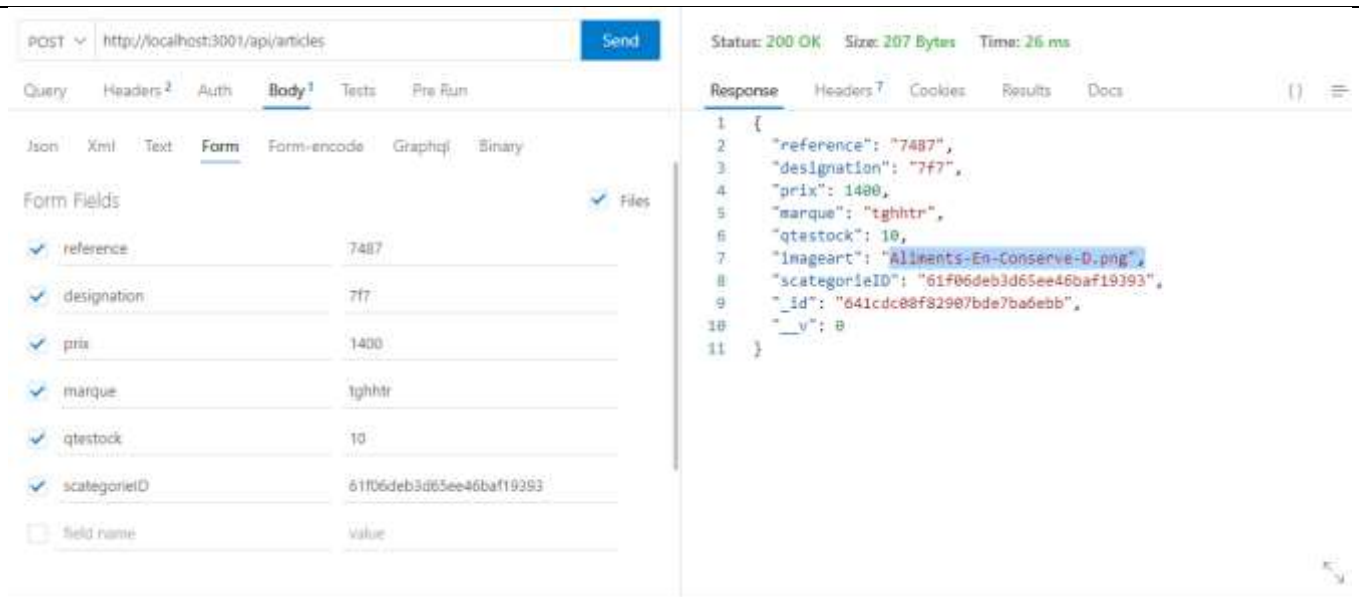
  try {
    await nouvarticle.save();

    res.status(200).json(nouvarticle );
  } catch (error) {
    res.status(404).json({ message: error.message });
  }

});
// chercher un article
router.get('/:articleId', async(req, res)=>{
  try {
    const art = await Article.findById(req.params.articleId);

    res.status(200).json(art);
  } catch (error) {
    res.status(404).json({ message: error.message });
  }
}
```

```
});
```



On peut dans une route faire appel a plusieurs middlewares

```
router.post('/', verifyToken, uploadFile.single("imageart"), async (req, res) => {
```

Activer compte user

On va utiliser nodemailer

npm install nodemailer

fichier backend user.route.js

```
const express = require('express');
const router = express.Router();
const User = require('../models/user.js');
const jwt = require('jsonwebtoken');
const bcrypt = require('bcrypt');
const nodemailer = require('nodemailer');
const { uploadFile } = require('../middleware/uploadfile');
var transporter = nodemailer.createTransport({
  service: 'gmail',

  auth: {
    user: 'esps421@gmail.com',
    pass: 'XXX'
  },
  tls: {
    rejectUnauthorized: false
  }
});
```

```

})
require('dotenv').config()
//Register

router.post('/register', uploadFile.single("avatar"), async (req, res) => {
  try {

    let { email, password, firstname, lastname } = req.body
    const avatar=req.file.filename
    const user = await User.findOne({ email })
    if (user) return res.status(404).send({ success: false, message: "User already exists" })

    const newUser = new User({ email, password, firstname, lastname,avatar })

    const createdUser = await newUser.save()

    // Envoyer l'e-mail de confirmation de l'inscription
    var mailOption ={
      from: '"verify your email " <esps421@gmail.com>',
      to: newUser.email,
      subject: 'vérification your email ',
      html:<h2>${newUser.firstname}</h2>
      <h4>please verify your email to procced.. </h4>
      <a
href="http://${req.headers.host}/api/users/status/edit?email=${newUser.email}">click
here</a>`
    }
    transporter.sendMail(mailOption,function(error,info){
      if(error){
        console.log(error)
      }
      else{
        console.log('verification email sent to your gmail account ')
      }
    })

    return res.status(201).send({ success: true, message: "Account created successfully",
    user: createdUser })

    } catch (err) {
      console.log(err)
      res.status(404).send({ success: false, message: err })
    }

  });

```

```

* as an admin i can disable or enable an account
*/
router.get('/status/edit/', async (req, res) => {
  try {
    let email = req.query.email
    console.log(email)
    let user = await User.findOne({email})
    user.isActive = !user.isActive
    user.save()
    res.status(200).send({ success: true, user })
  } catch (err) {
    return res.status(404).send({ success: false, message: err })
  }
})

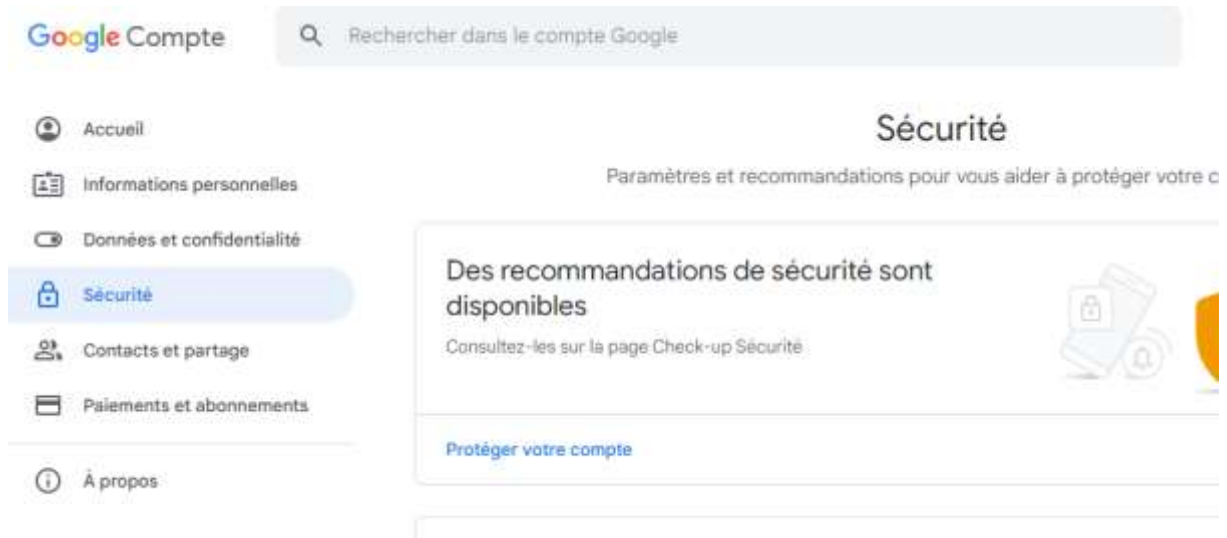
module.exports = router;

```

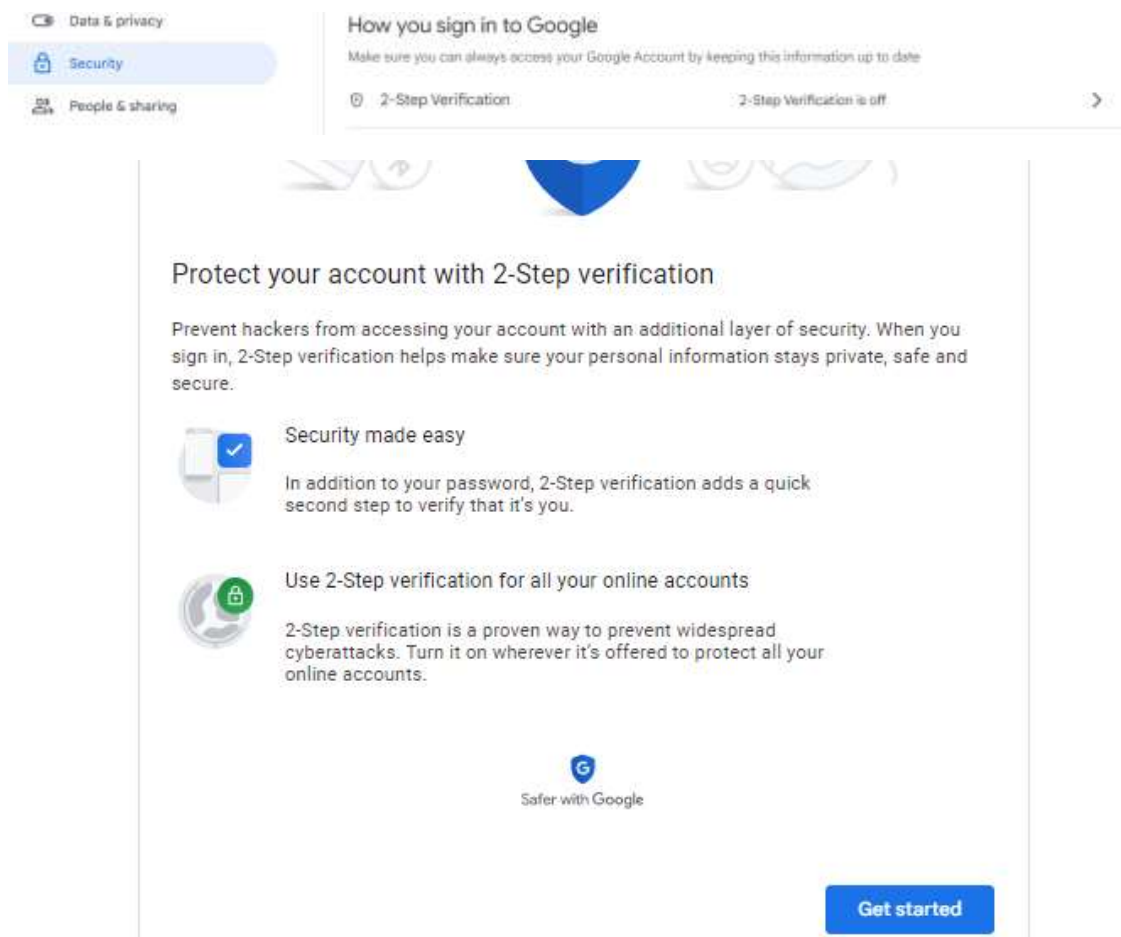
pour avoir le mot de passe



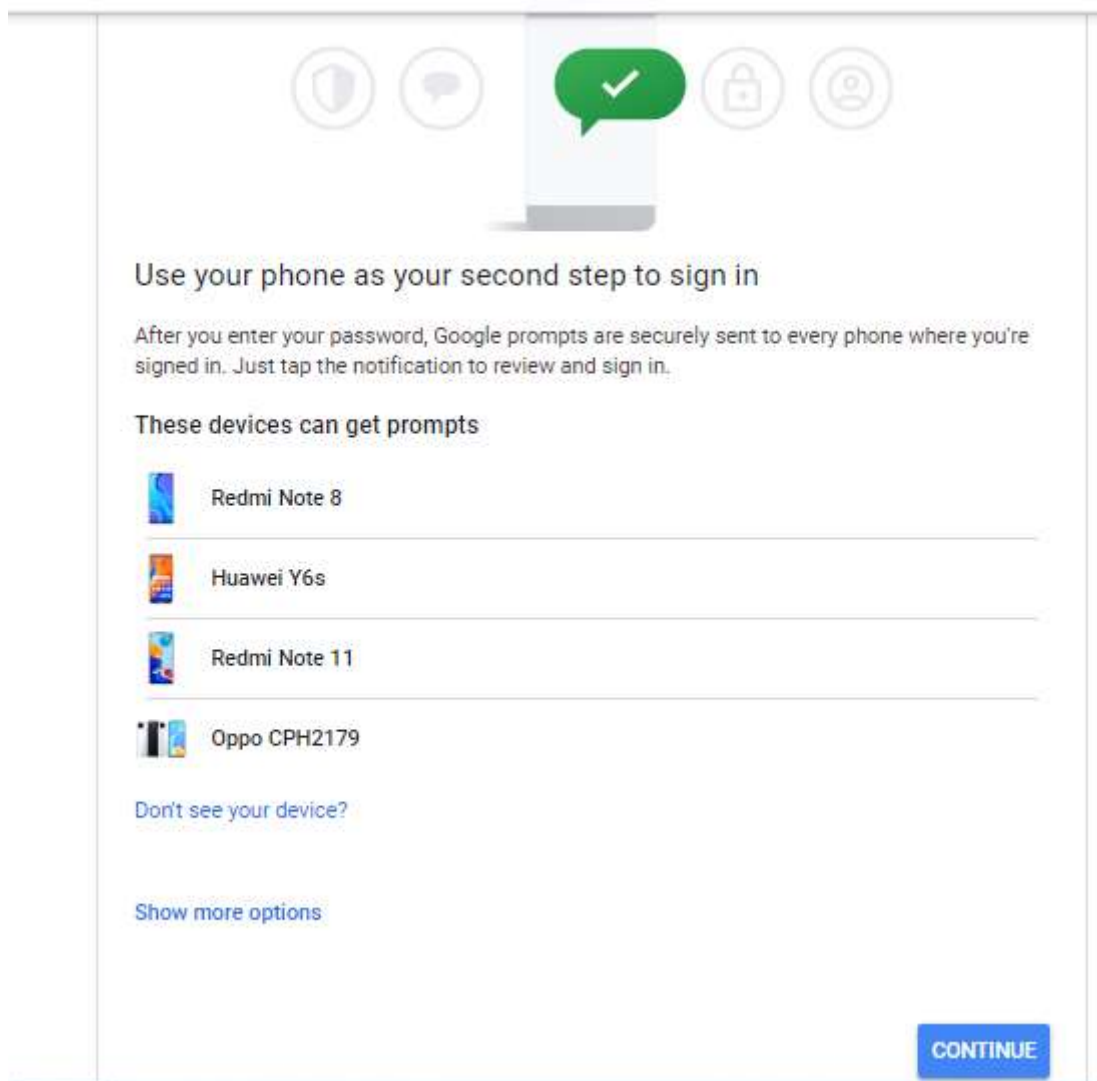
Choisir sécurité



Choisir l'option 2-step verification

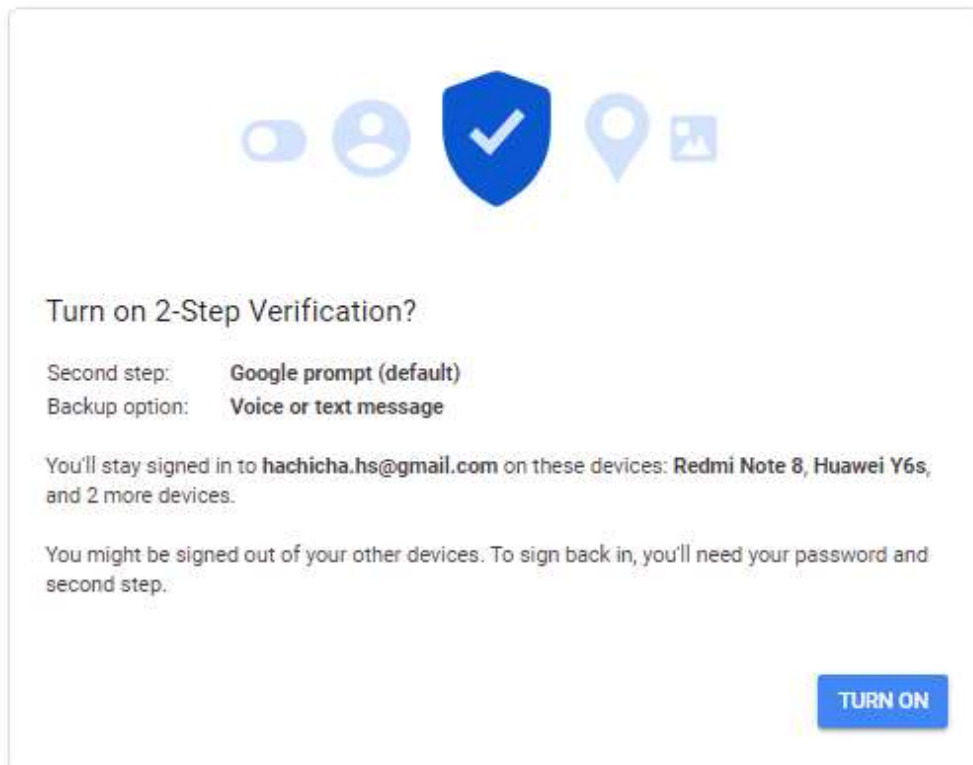


Choisir get Started



Appuyer sur continue

← 2-Step Verification



Appuyer sur turn ON

Choisir App password

App passwords

App Passwords aren't recommended and are unnecessary in most cases. To help keep your account secure, use "Sign in with Google" to connect apps to your Google Account.



← App passwords

App passwords let you sign in to your Google Account from apps on devices that don't support 2-Step Verification. You'll only need to enter it once so you don't need to remember it. [Learn more](#)

You don't have any app passwords.

Select the app and device you want to generate the app password for.

Select app ▾

Select device ▾

GENERATE

Selectionner select app

Choisir web

← App passwords

App passwords let you sign in to your Google Account from apps on devices that don't support 2-Step Verification. You'll only need to enter it once so you don't need to remember it. [Learn more](#)

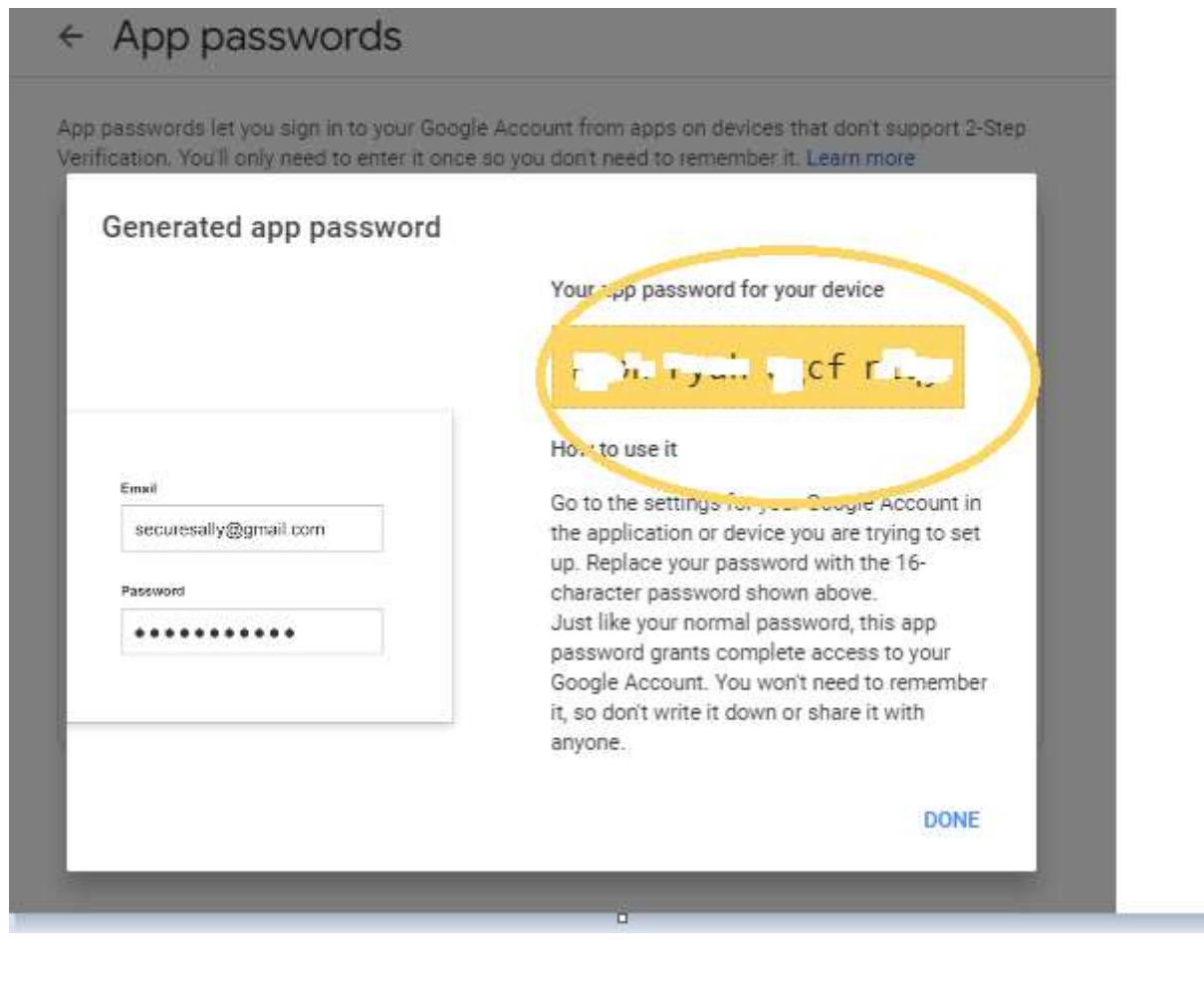
You don't have any app passwords.

Select the app and device you want to generate the app password for.

web ×

GENERATE

Appuyer sur generate



Copier le code your app password for your device

Appuyer sur done

Copier le code

```
var transporter = nodemailer.createTransport({  
  service: 'gmail',  
  
  auth: {  
    user: 'esps421@gmail.com',  
    pass: 'XXXX'  
  },  
  tls: {  
    rejectUnauthorized: false  
  }  
})
```

Messagerie

```
var sid = "AC8485cd06c5ba2894a6446b60599e9021"
```

```
var auth_token = "87f4f60114312c52a3156671932c3c9c"
```

```
var twilio = require("twilio")(sid,auth_token)
```

```
exports.acceptAppointments = async(req,res) =>{
```

```
  try {
```

```
    console.log(req.params.id)
```

```
    const updateBook = await
```

```
book.findOneAndUpdate({Patient:req.params.id},{appointmentStatus:"accepted"},{new:true}).exec()
```

```
    res.json(updateBook)
```

```
    twilio.messages.create({
```

```
      from:"+19893598756",
```

```
      to: "+21629802545",
```

```
      body:"your appointment has benn accepted "
```

```
    }).then((res)=> console.log('message sent ')).catch((err)=>{console.log(err)})
```

```
  } catch (error) {
```

```
    console.log("zeae")
```

```
    console.log(error)
```

```
  }
```

```
}
```

3- authorizeRoles

autoriser l'accès a une route selon le role affecté a l'utilisateur

créer le fichier middleware/ authorizeRoles.js

```
const authorizeRoles = (...roles) => {  
  return (req, res, next) => {
```

```

    const roleArray=[...roles]
    console.log(roleArray)
    console.log(req.user)
    if(!roles.includes(req.user.role)) {
    return res.status(401).send({ success: false, message: 'non autorisé' });
    }
    next()
  }
}
module.exports = { authorizeRoles }

```

appel au middleware authorizeRoles dans le fichier articles.route.js dans la méthode router.get

```


const express = require('express');
const router = express.Router();
const Article=require("../models/article")
const {verifyToken}=require("../middleware/verifToken")
const {authorizeRoles} = require("../middleware/authorizeRole")
// afficher la liste des articles.

router.get('/',verifyToken,authorizeRoles("user","admin","visiteur"),async (req, res
)=> {
  try {
    const articles = await Article.find().populate("scategorieID").exec();


    res.status(200).json(articles);
  } catch (error) {
    res.status(404).json({ message: error.message });
  }
});

```

Refresh Token

 .env

```
REFRESH_TOKEN_SECRET=qwerty
```

 user.route.js

Backend

```
const express = require('express');
const router = express.Router();
const User = require('../models/user.js');
const jwt = require('jsonwebtoken');
const bcrypt = require('bcrypt');
const nodemailer=require('nodemailer');
const { uploadFile } = require('../middleware/uploadfile')
var transporter =nodemailer.createTransport({
  service:'gmail',

  auth:{
    user:'esps421@gmail.com',
    pass:'lnrqjuzysshlpem'
  },
  tls:{
    rejectUnauthorized:false
  }
})
require('dotenv').config()
//Register

router.post('/register', uploadFile.single("avatar"),async (req, res) => {
  try {

    let { email, password, firstname, lastname } = req.body
    const avatar=req.file.filename
    const user = await User.findOne({ email })
    if (user) return res.status(404).send({ success: false, message: "User already exists" })

    const newUser = new User({ email, password, firstname, lastname,avatar })

    const createdUser = await newUser.save()

    // Envoyer l'e-mail de confirmation de l'inscription
    var mailOption ={
      from: '"verify your email " <esps421@gmail.com>',
      to: newUser.email,
      subject: 'vérification your email ',
      html:`<h2>${newUser.firstname}! thank you for registreting on our website</h2>
<h4>please verify your email to procced.. </h4>
<a
href="http://${req.headers.host}/api/users/status/edit?email=${newUser.email}">click here</a>`
    }
  }
}
```



```

transporter.sendMail(mailOption,function(error,info){
  if(error){
    console.log(error)
  }
  else{
    console.log('verification email sent to your gmail account ')
  }
})
//const url =`http://localhost:3000/activate/${token}`;

    return res.status(201).send({ success: true, message: "Account created
successfully", user: createdUser })

    } catch (err) {
      console.log(err)
      res.status(404).send({ success: false, message: err })
    }
  });

// afficher la liste des utilisateurs.
router.get('/', async (req, res, )=> {
  try {
    const users = await User.find().select("-password");
    res.status(200).json(users);
  } catch (error) {
    res.status(404).json({ message: error.message });
  }
});

// se connecter
router.post('/login', async (req, res) => {
  try {
    let { email, password } = req.body

    if (!email || !password) {
      return res.status(404).send({ success: false, message: "All fields are
required" })
    }

    let user = await User.findOne({ email }).select('+password').select('+isActive')

    if (!user) {

```

```

        return res.status(404).send({ success: false, message: "Account doesn't
exists" })

    } else {

let isCorrectPassword = await bcrypt.compare(password, user.password)
    if (isCorrectPassword) {

        delete user._doc.password
        if (!user.isActive) return res.status(200).send({ success: false,
message: 'Your account is inactive, Please contact your administrator' })

        const token = generateAccessToken(user);

        const refreshToken = generateRefreshToken(user);

        return res.status(200).send({ success: true, user,token,refreshToken })

    } else {

        return res.status(404).send({ success: false, message: "Please verify
your credentials" })

    }

    }

} catch (err) {
    return res.status(404).send({ success: false, message: err.message })
}

});

//Access Token
const generateAccessToken=(user) =>{
    return jwt.sign ({ iduser: user._id, role: user.role }, process.env.SECRET, {
expiresIn: '60s'})
}

// Refresh
function generateRefreshToken(user) {
    return jwt.sign ({ iduser: user._id, role: user.role },
process.env.REFRESH_TOKEN_SECRET, { expiresIn: '1y'})
}

//Refresh Route

router.post('/refreshToken', async (req, res, )=> {
console.log(req.body.refreshToken)

```

```

const refreshToken = req.body.refreshToken;
if (!refreshToken) {
  return res.status(404).send({success: false, message: 'Token Not Found' });
}
else {
  jwt.verify(refreshtoken, process.env.REFRESH_TOKEN_SECRET, (err, user) => {
    if (err) { console.log(err)
      return res.status(406).send({ success: false,message: 'Unauthorized' });
    }
    else {
      const token = generateAccessToken(user);

      const refreshToken = generateRefreshToken(user);
      console.log("token-----",token);
      res.status(200).send({success: true,
        token,
        refreshToken
      })
    }
  });
}

});

```

```

/**
 * as an admin i can disable or enable an account
 */
router.get('/status/edit/', async (req, res) => {
  try {

    let email = req.query.email
    console.log(email)
    let user = await User.findOne({email})
    user.isActive = !user.isActive
    user.save()
    res.status(200).send({ success: true, user })
  } catch (err) {
    return res.status(404).send({ success: false, message: err })
  }
})

module.exports = router;

```

Faire un commit

Déterminer l'URL du git repository

```
git config --get remote.origin.url
```

update git :

```
git add .
```

```
git commit -a -m "Commit new version"
```

```
git push --set-upstream origin main
```