المدرسة العليا للتكنولوجيا- الصويرة

L'ÉCOLE SUPÉRIEURE DE TECHNOLOGIE – ESSAOUIRA

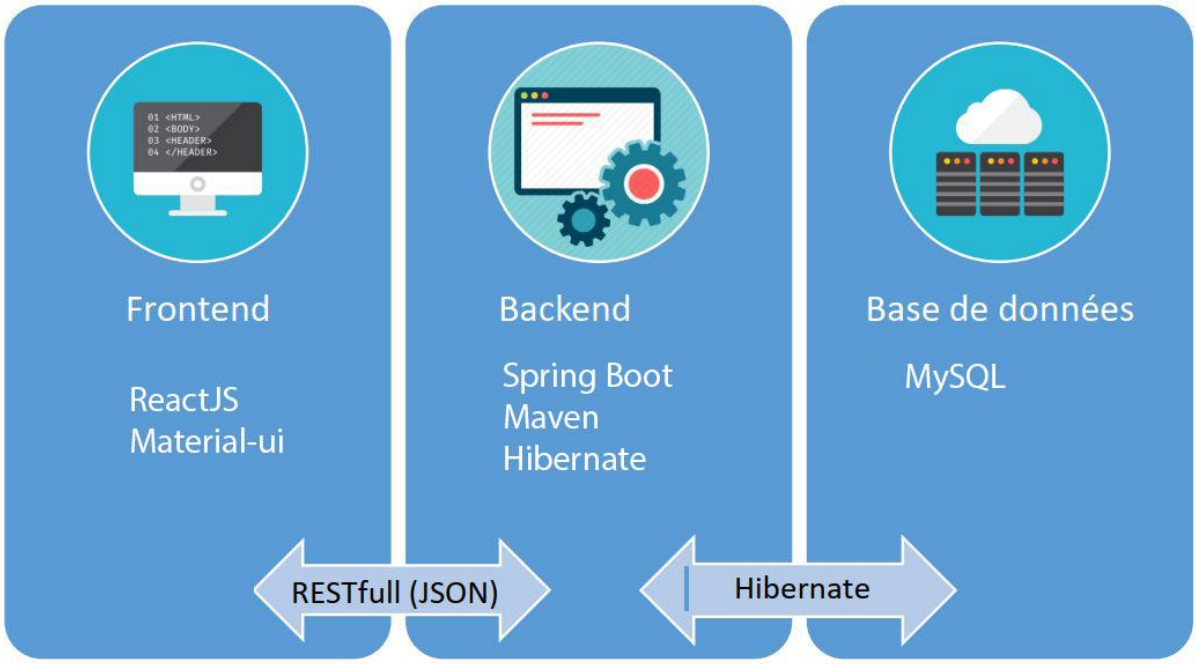
Micro Projet

Réalisation d'un site web pour l'achat de la musique avec Spring Boot , Maven ,ReactJs ,Material-UI et MySQL .

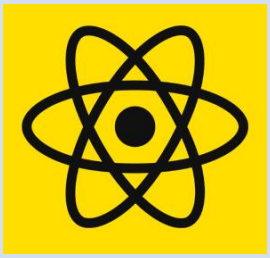
2020/2021

Objectif :

Réalisation d'un site web pour l’achat de la musique l'architecture utilise tout au long du developpement est divise en trois parties.

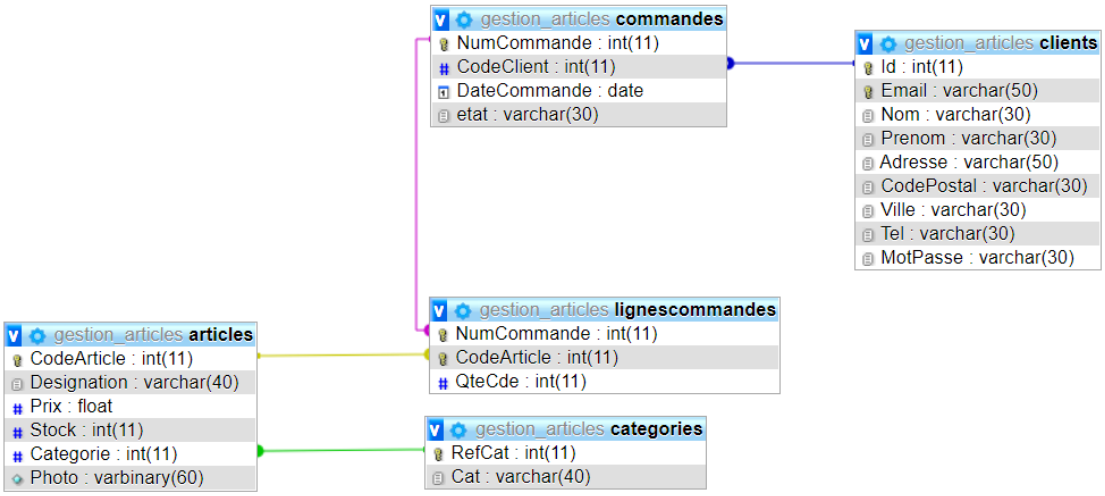


Les outils de développement utilisés :

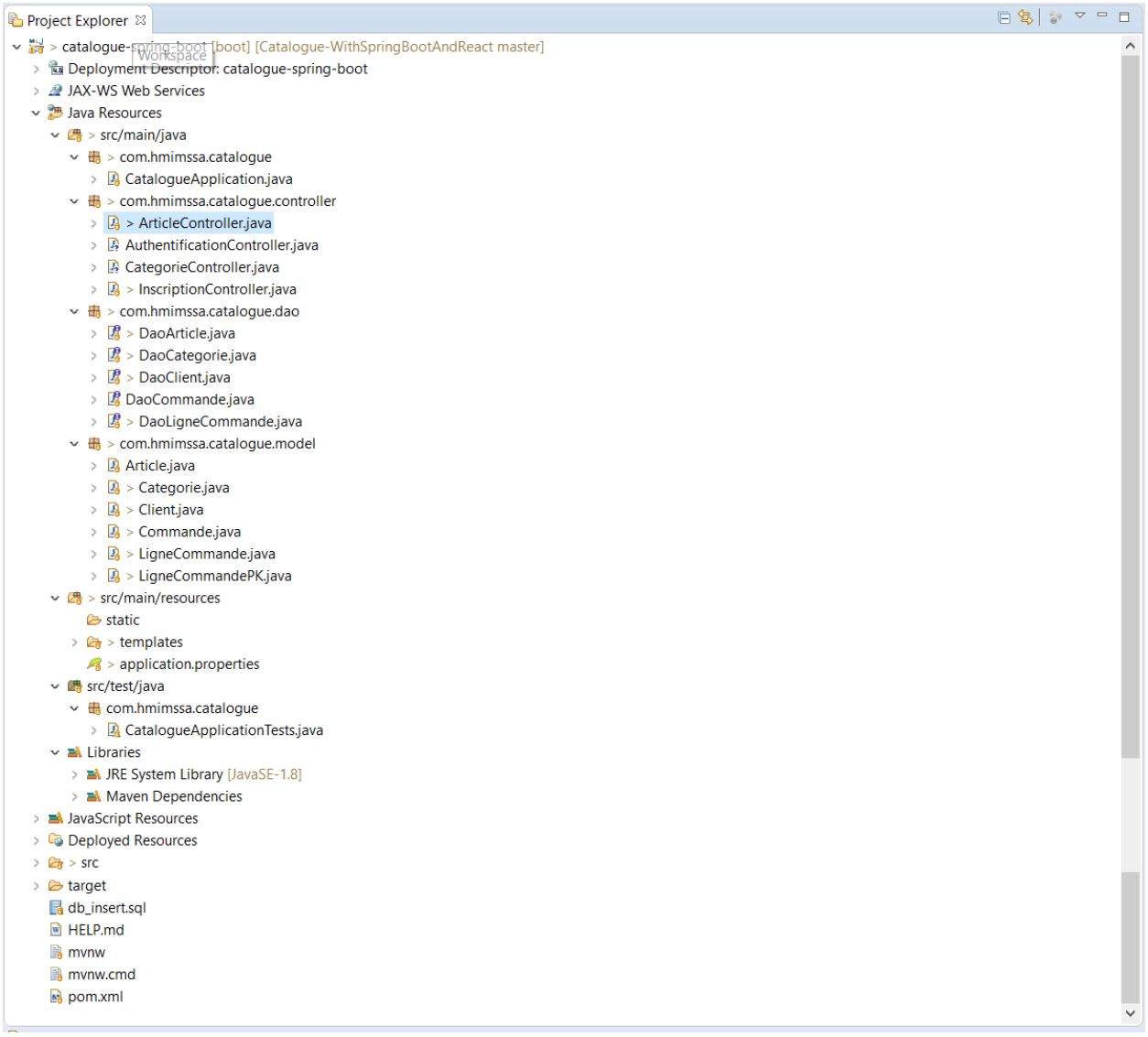
➢ Material UI :	➢ Spring Boot :
➢ ReactJS : 	➢ MySql :
➢ Hibernate :	➢ Maven:

Notre base de données

Cette base de donne a été générer par **Hibernate**



Structure de Projet Back-end



Configuration du fichier POM.XML

catalogue-spring-boot/pom.xml

```xml
<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://maven.apache.org/POM/4.0.0"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 https://maven.apache.org/xsd/maven-4.0.0.xsd">
    <modelVersion>4.0.0</modelVersion>
    <parent>
        <groupId>org.springframework.boot</groupId>
        <artifactId>spring-boot-starter-parent</artifactId>
        <version>2.2.5.RELEASE</version>
        <relativePath /> <!-- lookup parent from repository -->
    </parent>
    <groupId>com.hmimssa</groupId>
    <artifactId>catalogue</artifactId>
    <version>0.0.1-SNAPSHOT</version>
    <name>catalogue</name>
    <description>catalogue project for Spring Boot</description>
    <properties>
        <java.version>1.8</java.version>
    </properties>
    <dependencies>
        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-web</artifactId>
        </dependency>
        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-thymeleaf</artifactId>
        </dependency>
        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-data-jpa</artifactId>
        </dependency>
        <!-- Use MySQL Connector-J -->
        <dependency>
            <groupId>mysql</groupId>
            <artifactId>mysql-connector-java</artifactId>
        </dependency>
        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-test</artifactId>
            <scope>test</scope>
            <exclusions>
                <exclusion>
                    <groupId>org.junit.vintage</groupId>
                    <artifactId>junit-vintage-engine</artifactId>
                </exclusion>
            </exclusions>
        </dependency>
    </dependencies>
    <build>
        <plugins>
            <plugin>
                <groupId>org.springframework.boot</groupId>
                <artifactId>spring-boot-maven-plugin</artifactId>
            </plugin>
        </plugins>
    </build>

</project>

```

Overview | Dependencies | Dependency Hierarchy | Effective POM | pom.xml

Configuration du fichier application.properties

catalogue-spring-boot/pom.xml | application.properties

```
spring.jpa.hibernate.ddl-auto=none
spring.datasource.url=jdbc:mysql://${MYSQL_HOST:localhost}:3306/gestion_articles?serverTimezone=UTC
spring.datasource.username=root
spring.datasource.password=
#show sql statement
logging.level.org.hibernate.SQL=debug
#show sql values
logging.level.org.hibernate.type.descriptor.sql=trace
spring.jpa.hibernate.naming.physical-strategy=org.hibernate.boot.model.naming.PhysicalNamingStrategyStandardImpl


## Hibernate Properties
# The SQL dialect makes Hibernate generate better SQL for the chosen database
# Hibernate database Dialect
spring.jpa.properties.hibernate.dialect = org.hibernate.dialect.MySQL5Dialect

```

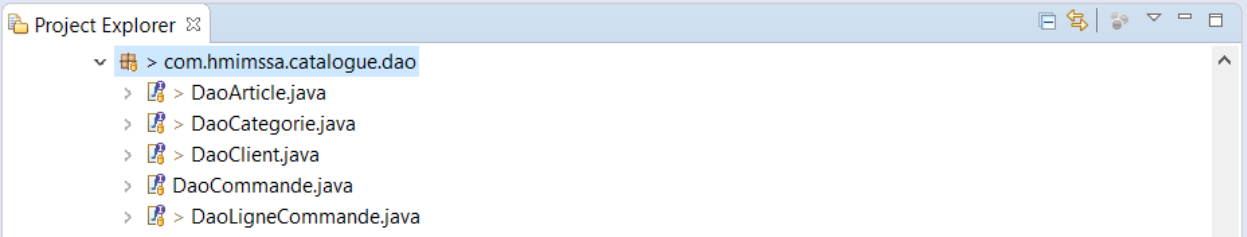
Couche Controller

Exemple contrôleur d'Article :

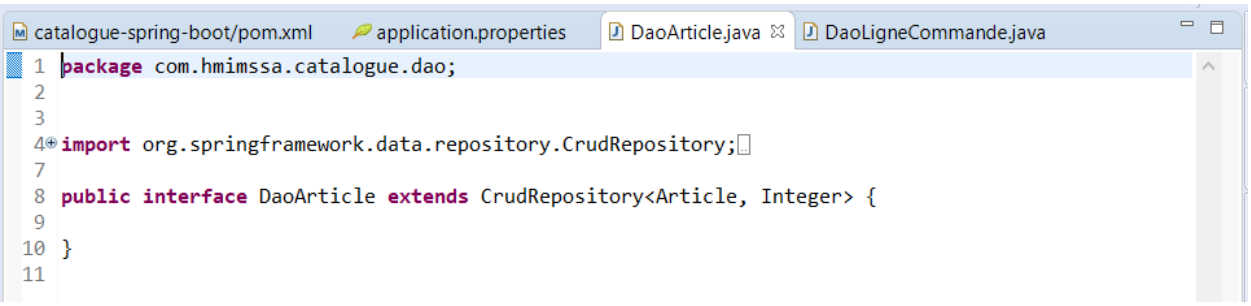
*ArticleController.java InscriptionController.java

```java
import java.util.Optional;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.web.bind.annotation.CrossOrigin;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.PostMapping;
import org.springframework.web.bind.annotation.RequestBody;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.ResponseBody;
import org.springframework.web.bind.annotation.RestController;
import com.hmimssa.catalogue.dao.DaoArticle;
import com.hmimssa.catalogue.model.Article;

@CrossOrigin(origins = "*", maxAge = 3600)
@RestController
@RequestMapping("/API/Article")
public class ArticleController {

    @Autowired
    DaoArticle daoArticle;
    @GetMapping(path="/Articles")
    public @ResponseBody Iterable<Article> getArticles() {
        return daoArticle.findAll();
    }

    @PostMapping(path="/AddArticle") // Map ONLY POST Requests
    public @ResponseBody String addNewUser(@RequestBody Article article) {

        // @ResponseBody means the returned String is the response, not a view name
        // @RequestParam means it is a parameter from the GET or POST request

        if (article != null) {
            daoArticle.save(article);
            return "Saved";
        }
        return "Errur";
    }
     @GetMapping(path="/AddArticle/{id}")
     public @ResponseBody Optional<Article> getArticle(@PathVariable int id) {
        return daoArticle.findById(id);
    }

```

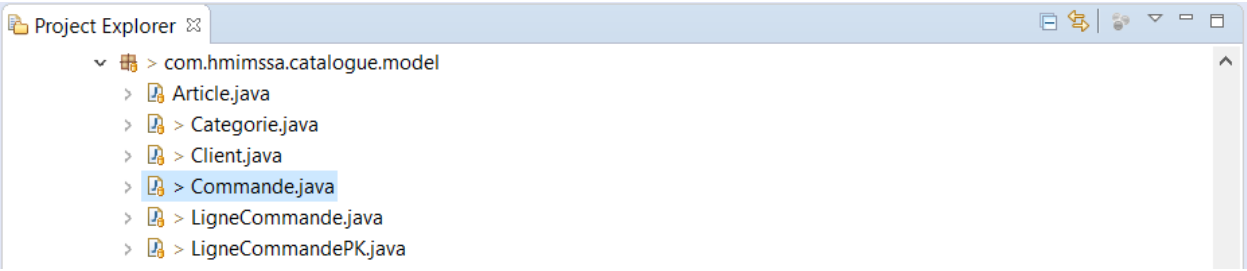
Couche Dao



Exemple :



Couche Métier

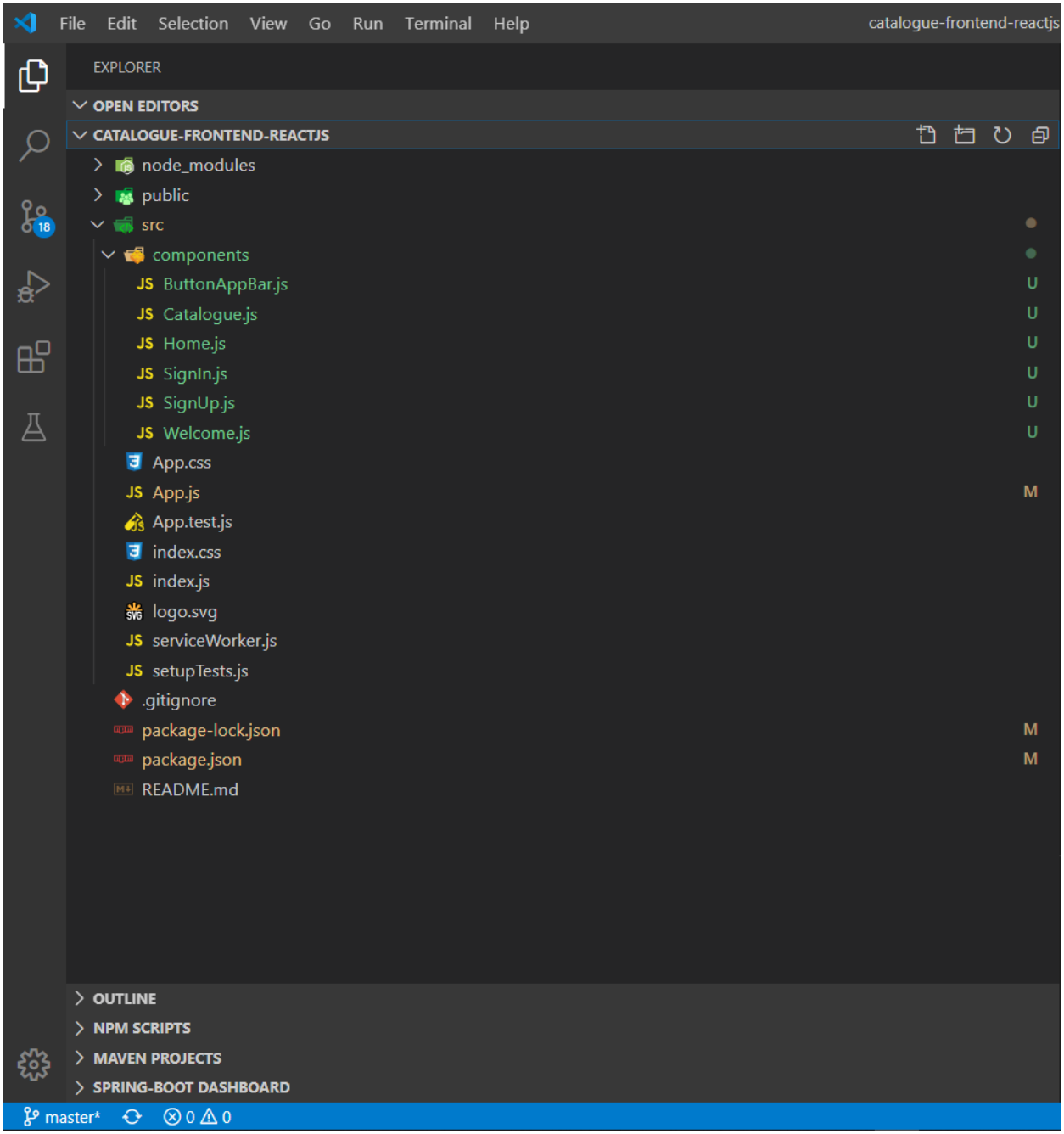


Exemple de class commande de couche metier

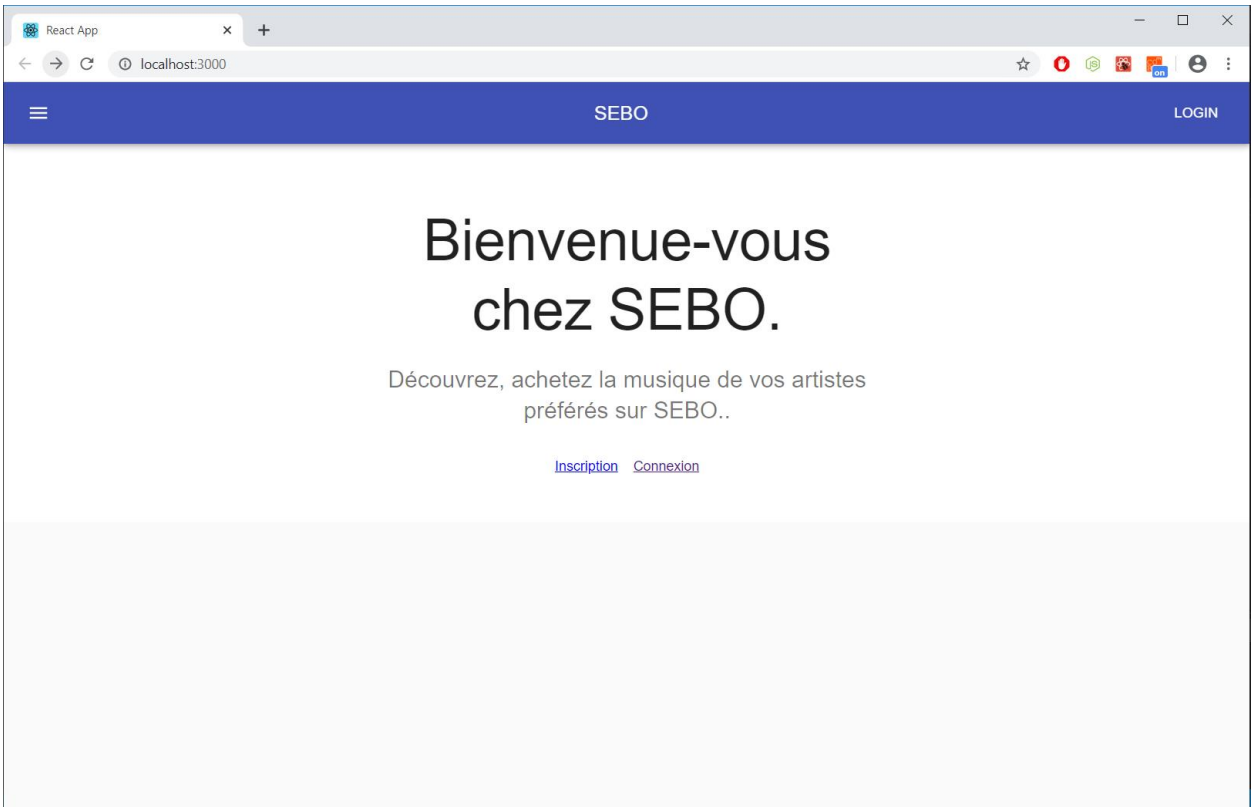
catalogue-spring-b... | application.proper... | DaoArticle.java | DaoLigneCommande.j... | Commande.java

```java
package com.hmimssa.catalogue.model;

import java.util.Date;

@Entity
public class Commande {
    @Id
    @GeneratedValue(strategy = GenerationType.IDENTITY)
    private int numCommande;
    private Date dateCommande;
    private String etat;

    @ManyToOne
    @Cascade(value = { CascadeType.SAVE_UPDATE })
    @JoinColumn(name="codeClient")
    private Client client;
    @OneToMany(mappedBy = "commande")
    @Cascade(value = { CascadeType.ALL })
    @SortNatural
    @MapKey(name = "article")
    private SortedMap<Article, LigneCommande> detailsCommandes = new TreeMap<>();

    public Commande() {
        super();
    }

    public Commande(int numCommande, Client client, Date dateCommande, String etat) {
        super();
        this.numCommande = numCommande;
        this.client = client;
        this.dateCommande = dateCommande;
        this.etat = etat;
    }

    public int getNumCommande() {
        return numCommande;
    }

    public void setNumCommande(int numCommande) {
        this.numCommande = numCommande;
    }

    public Client getClient() {
        return client;
    }

    public void setClient(Client client) {
        this.client = client;
    }

    public Date getDateCommande() {
        return dateCommande;
    }

    public void setDateCommande(Date dateCommande) {
        this.dateCommande = dateCommande;
    }

    public String getEtat() {
        return etat;
    }

    public void setEtat(String etat) {
        this.etat = etat;
    }

}
```

Structure de Projet Front-end



Partie User Interface :
une page simple de présentation



Code :

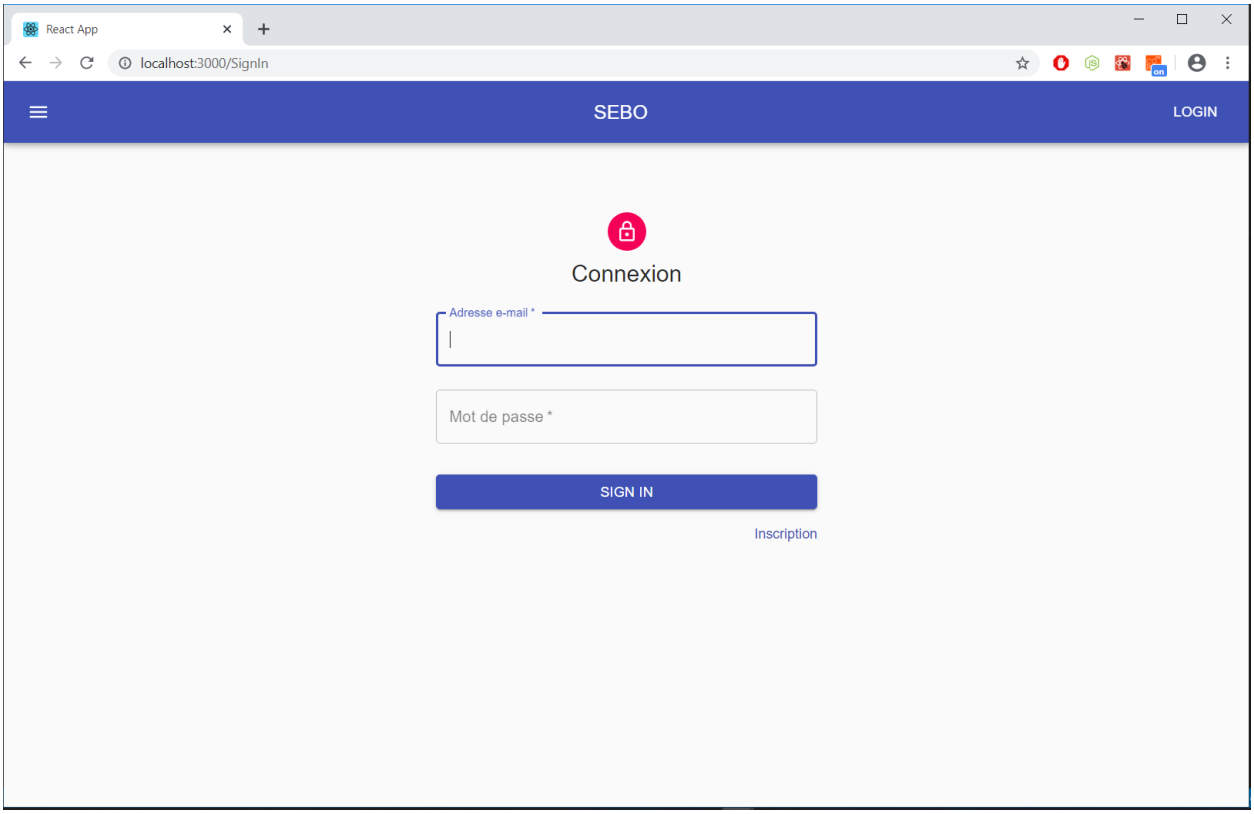
Welcome.js

src > components > Welcome.js > Welcome

```
import React from 'react';
import CssBaseline from '@material-ui/core/CssBaseline';
import Grid from '@material-ui/core/Grid';
import Typography from '@material-ui/core/Typography';
import { makeStyles } from '@material-ui/core/styles';
import Container from '@material-ui/core/Container';
import { Link } from "react-router-dom";
const useStyles = makeStyles(theme => ({
    icon: {
        marginRight: theme.spacing(2),
    },
    heroContent: {
        backgroundColor: theme.palette.background.paper,
        padding: theme.spacing(8, 0, 6),
    },
    heroButtons: {
        marginTop: theme.spacing(4),
    },
    cardGrid: {
        paddingTop: theme.spacing(8),
        paddingBottom: theme.spacing(8),
    },
    card: {
        height: '100%',
        display: 'flex',
        flexDirection: 'column',
    },
    cardMedia: {
        paddingTop: '56.25%', // 16:9
    },
    cardContent: {
        flexGrow: 1,
    },
    footer: {
        backgroundColor: theme.palette.background.paper,
        padding: theme.spacing(6),
    },
}));
export default function Welcome() {
    const classes = useStyles();
    return (
        <React.Fragment>
            <CssBaseline />
            <main>
                {/* Hero unit */}
                <div className={classes.heroContent}>
                    <Container maxWidth="sm">
                        <Typography component="h1" variant="h2" align="center" color="textPrimary" gutterBottom>
                            Bienvenue-vous chez SEBO.
                        </Typography>
                        <Typography variant="h5" align="center" color="textSecondary" paragraph>
                            Découvrez, achetez la musique de vos artistes préférés sur SEBO..
                        </Typography>
                        <div className={classes.heroButtons}>
                            <Grid container spacing={2} justify="center">
                                <Grid item>
                                    <Link variant="contained" color="primary" to="/SignUp">Inscription</Link>
                                </Grid>
                                <Grid item>
                                    <Link to="/SignIn">Connexion</Link>
                                </Grid>
                            </Grid>
                        </div>
                    </Container>
                </div>

            </main>
        </React.Fragment>
    );
}
```

➢ Page d'authentification :

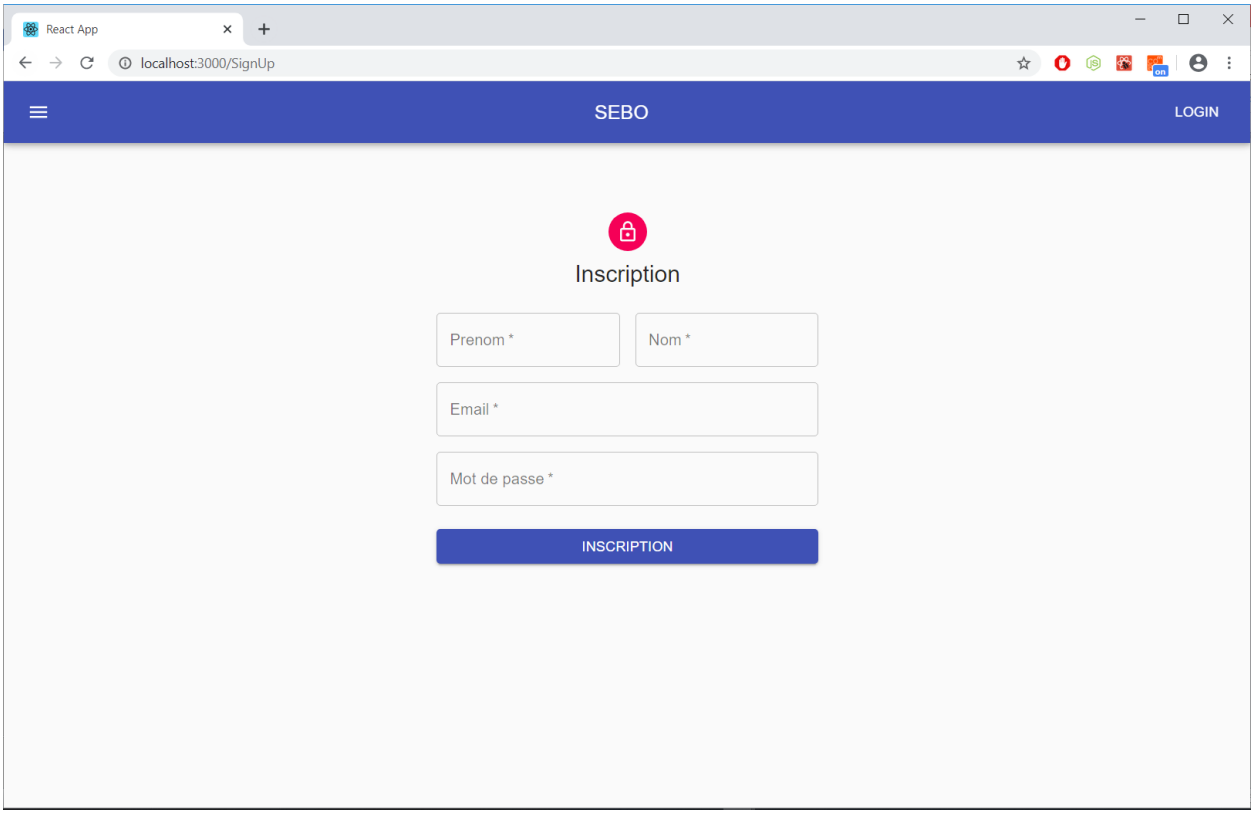
Dès l'accès à l'application une page d'authentification s'affiche.
Après authentification accéder aux
différentes fonctionnalités de l'site




```
import React from 'react';
import Avatar from '@material-ui/core/Avatar';
import Button from '@material-ui/core/Button';
import CssBaseline from '@material-ui/core/CssBaseline';
import TextField from '@material-ui/core/TextField';
import Link from '@material-ui/core/Link';
import Grid from '@material-ui/core/Grid';
import LockOutlinedIcon from '@material-ui/icons/LockOutlined';
import Typography from '@material-ui/core/Typography';
import { makeStyles } from '@material-ui/core/styles';
import Container from '@material-ui/core/Container';
const useStyles = makeStyles(theme => ({
    paper: {
        marginTop: theme.spacing(8),
        display: 'flex',
        flexDirection: 'column',
        alignItems: 'center',
    },
    avatar: {
        margin: theme.spacing(1),
        backgroundColor: theme.palette.secondary.main,
    },
    form: {
        width: '100%', // Fix IE 11 issue.
        marginTop: theme.spacing(1),
    },
    submit: { margin: theme.spacing(3, 0, 2), },
}));
```

```
export default function SignIn() {
    const classes = useStyles();
    return (
        <Container component="main" maxWidth="xs">
            <CssBaseline />
            <div className={classes.paper}>
                <Avatar className={classes.avatar}>
                    <LockOutlinedIcon />
                </Avatar>
                <Typography component="h1" variant="h5">
                    Connexion
                </Typography>
                <form className={classes.form} noValidate>
                    <TextField variant="outlined" margin="normal" required fullWidth
                        id="email"
                        label="Adresse e-mail"
                        name="email"
                        autoComplete="email"
                        autoFocus
                    />
                    <TextField variant="outlined" margin="normal" required fullWidth
                        name="password"
                        label="Mot de passe"
                        type="password"
                        id="password"
                        autoComplete="current-password"
                    />
                    <Button type="submit" fullWidthvariant="contained" color="primary"
                        className={classes.submit}
                    >
                        Sign In
                    </Button>
                    <Grid container>
                        <Grid item xs>
                        </Grid>
                        <Grid item>
                            <Link href="#" variant="body2">
                                {"Inscription"}
                            </Link>
                        </Grid>
                    </Grid>
                </form>
            </div>
        </Container>
    );
}
```

➢ Page Inscription:

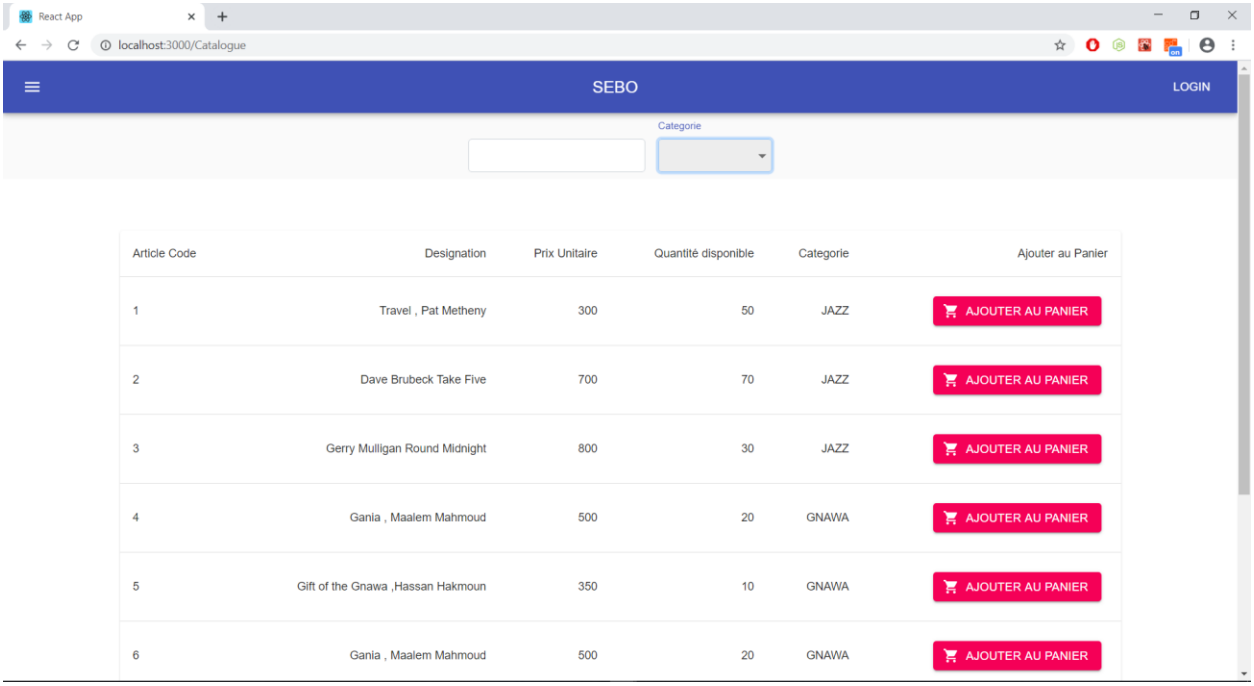


Code :

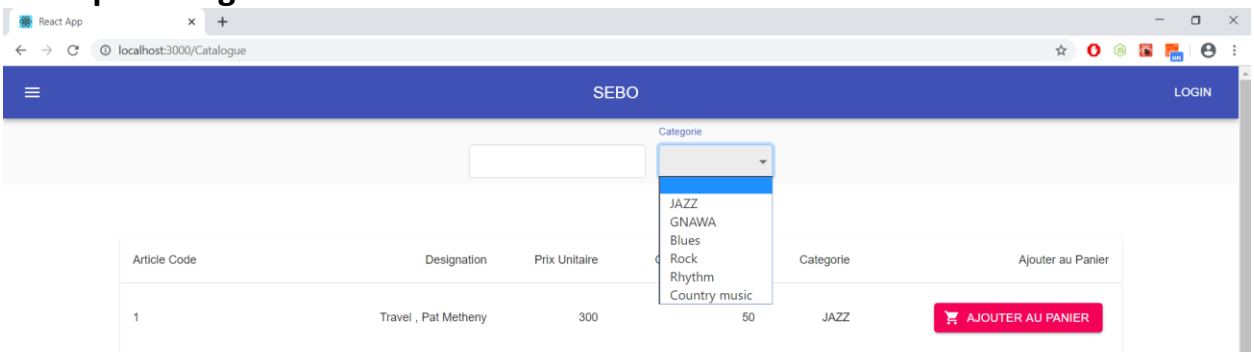
```
import React from 'react';
import Avatar from '@material-ui/core/Avatar';
import Button from '@material-ui/core/Button';
import CssBaseline from '@material-ui/core/CssBaseline';
import TextField from '@material-ui/core/TextField';
import Link from '@material-ui/core/Link';
import Grid from '@material-ui/core/Grid';
import LockOutlinedIcon from '@material-ui/icons/LockOutlined';
import Typography from '@material-ui/core/Typography';
import { makeStyles } from '@material-ui/core/styles';
import Container from '@material-ui/core/Container';



const useStyles = makeStyles(theme => ({
    paper: {
        marginTop: theme.spacing(8),
        display: 'flex',
        flexDirection: 'column',
        alignItems: 'center',
    },
    avatar: {
        margin: theme.spacing(1),
        backgroundColor: theme.palette.secondary.main,
    },
    form: {
        width: '100%', // Fix IE 11 issue.
        marginTop: theme.spacing(3),
    },
    submit: {
        margin: theme.spacing(3, 0, 2),
    },
}));
```

```jsx
export default function SignUp() {
    const classes = useStyles();

    return (
        <Container component="main" maxWidth="xs">
            <CssBaseline />
            <div className={classes.paper}>
                <Avatar className={classes.avatar}>
                    <LockOutlinedIcon />
                </Avatar>
                <Typography component="h1" variant="h5">
                    Inscription
                </Typography>
                <form className={classes.form} noValidate>
                    <Grid container spacing={2}>
                        <Grid item xs={12} sm={6}>
                            <TextField autoComplete="fname"  name="firstName"
                                variant="outlined"
                                required
                                fullWidth
                                id="firstName"
                                label="Prenom"
                                autoFocus
                            />
                        </Grid>
                        <Grid item xs={12} sm={6}>
                            <TextField variant="outlined"  required fullWidth
                                id="lastName"
                                label="Nom"
                                name="lastName"
                                autoComplete="lname"
                            />
                        </Grid>
                        <Grid item xs={12}>
                            <TextField variant="outlined"  required  fullWidth
                                id="email"
                                label="Email"
                                name="email"
                                autoComplete="email"
                            />
                        </Grid>
                        <Grid item xs={12}>
                            <TextField variant="outlined"  required fullWidth
                                name="password"
                                label="Mot de passe"
                                type="password"
                                id="password"
                                autoComplete="current-password"
                            />
                        </Grid>

                    </Grid>
                    <Button type="submit"  fullWidth variant="contained" color="primary"
                        className={classes.submit}
                    >
                        Inscription
                     </Button>

                </form>
            </div>

        </Container>
    );
}
```

➢ Page Catalogue:



Filter par categorie



Code :

```
import React from "react";
import CssBaseline from '@material-ui/core/CssBaseline';
import Table from '@material-ui/core/Table';
import TableBody from '@material-ui/core/TableBody';
import TableCell from '@material-ui/core/TableCell';
import TableContainer from '@material-ui/core/TableContainer';
import TableHead from '@material-ui/core/TableHead';
import TableRow from '@material-ui/core/TableRow';
import Paper from '@material-ui/core/Paper';
import Container from '@material-ui/core/Container';
import { withStyles } from '@material-ui/core/styles';
import InputBase from '@material-ui/core/InputBase';
import InputLabel from '@material-ui/core/InputLabel';
import FormControl from '@material-ui/core/FormControl';
import NativeSelect from '@material-ui/core/NativeSelect';
import Button from '@material-ui/core/Button';
import ShoppingCartIcon from '@material-ui/icons/ShoppingCart';


const styles = theme => ({
    icon: {
        marginRight: theme.spacing(2),
    },
    button: {
```

```
        margin: theme.spacing(1),
    },
    heroContent: {
        backgroundColor: theme.palette.background.paper,
        padding: theme.spacing(8, 0, 6),
    },
    margin: {
        margin: theme.spacing(1),
    },
    table: {
        minWidth: 650,
    },
    footer: {
        backgroundColor: theme.palette.background.paper,
        padding: theme.spacing(6),
    },
});

const BootstrapInput = withStyles(theme => ({
    root: {
        'label + &': {
            marginTop: theme.spacing(3),
        },
    },
    input: {
        borderRadius: 4,
        position: 'relative',
        backgroundColor: theme.palette.background.paper,
        border: '1px solid #ced4da',
        fontSize: 16,
        padding: '10px 26px 10px 12px',
        transition: theme.transitions.create(['border-color', 'box-shadow']),
        // Use the system font instead of the default Roboto font.
        fontFamily: [
            '-apple-system',
            'BlinkMacSystemFont',
            '"Segoe UI"',
            'Roboto',
            '"Helvetica Neue"',
            'Arial',
            'sans-serif',
            '"Apple Color Emoji"',
            '"Segoe UI Emoji"',
            '"Segoe UI Symbol"',
        ].join(','),
        '&:focus': {
            borderRadius: 4,
            borderColor: '#80bdff',
            boxShadow: '0 0 0 0.2rem rgba(0,123,255,.25)',
        },
    },
}))(InputBase);

class Catalogue extends React.Component {

    state = {
        articles: [],
        categories: []
    }

    componentDidMount() {
        var requestOptions = {
            method: 'GET',
            redirect: 'follow'
        };

        fetch("http://localhost:8080/API/Article/Articles", requestOptions)
            .then(response => response.text())
            .then(result => this.setState({ articles: JSON.parse(result) }))
            .catch(error => console.log('error', error));
```

```
    fetch("http://localhost:8080/API/Categorie/Categories", requestOptions)
        .then(response => response.text())
        //.then(result => console.log(result))
        .then(result => this.setState({ categories: JSON.parse(result) }))
        .catch(error => console.log('error', error));
}

handleChange = event => {
    //get
};
render() {

    const { classes } = this.props;

    return (
        <React.Fragment>
            <CssBaseline />
            <main>
                <div>
                    <FormControl className={classes.margin}>
                        <InputLabel htmlFor="demo-customized-textbox">Prix</InputLabel>
                        <BootstrapInput id="demo-customized-textbox" />
                    </FormControl>
                    <FormControl className={classes.margin}>
                        <InputLabel htmlFor="demo-customized-select-native">Categorie</InputLabel>
                        <NativeSelect
                            id="demo-customized-select-native"
                            value={"Categorie"}
                            onChange={this.handleChange}
                            input={<BootstrapInput />}
                        ><option aria-label="None" value="" />
                            {this.state.categories.map(row => (<option value={row.refCat}>{row.cat}</option>
                            ))}

                        </NativeSelect>
                    </FormControl>
                </div>
                <div className={classes.heroContent}>
                    <Container maxWidth="lg"  >
                        <TableContainer component={Paper} >
                            <Table className={classes.table} aria-label="simple table">
                                <TableHead>
                                    <TableRow>
                                        <TableCell>Article Code</TableCell>
                                        <TableCell align="right">Designation</TableCell>
                                        <TableCell align="right">Prix Unitaire</TableCell>
                                        <TableCell align="right">Quantité disponible</TableCell>
                                        <TableCell align="right">Categorie</TableCell>
                                        <TableCell align="right">Ajouter au Panier</TableCell>
                                    </TableRow>
                                </TableHead>
                                <TableBody>
                                    {this.state.articles.map(row => (
                                        <TableRow key={row.codeArticle}>
                                            <TableCell component="th" scope="row">
                                                {row.codeArticle}
                                            </TableCell>
                                            <TableCell align="right">{row.designation}</TableCell>
                                            <TableCell align="right">{row.prix}</TableCell>
                                            <TableCell align="right">{row.stock}</TableCell>
                                            <TableCell align="right">{row.categorie.cat}</TableCell>
                                            <TableCell align="right">
                                                <Button
                                                    variant="contained"
                                                    color="secondary"
                                                    className={classes.button}
                                                    startIcon={<ShoppingCartIcon />}
                                                >
                                                    Ajouter au panier
```

```
                                                    </Button>
                                                </TableCell>
                                            </TableRow>
                                        ))}
                                    </TableBody>
                                </Table>
                            </TableContainer>
                        </Container>
                    </div>


                </main>

                {/* End footer */}
            </React.Fragment >
        );
    }
}
export default withStyles(styles, { withTheme: true })(Catalogue);
```