Project Development Phase
Model Performance Testing

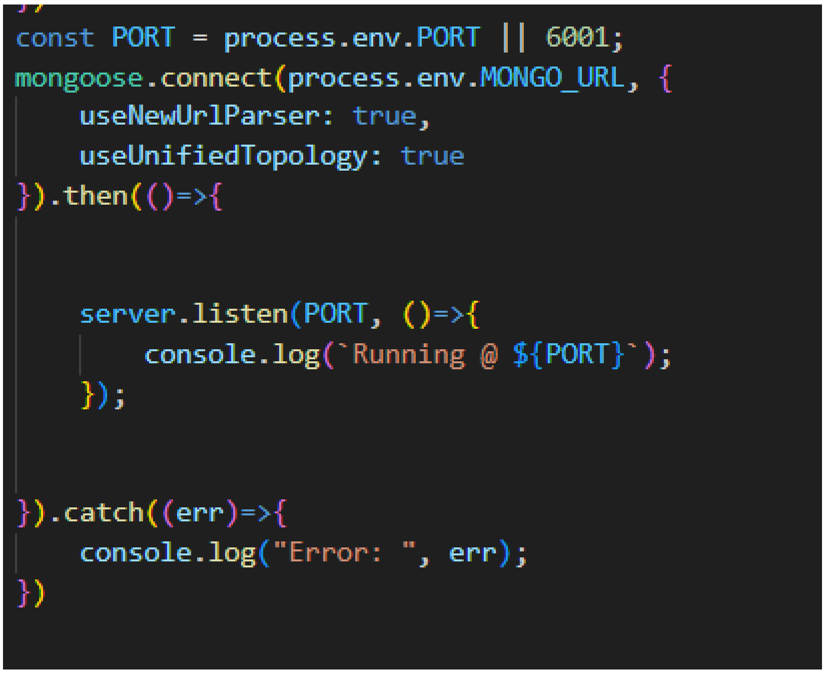
Date	20 Feb 2026
Team ID	LTVIP2026TMIDS79402
Project Name	Booknest : Where stories nestle

Model Performance Testing:

S.NO.	**Parameter**	**Values**
1.	**System Architecture**	**Frontend: React.js**
	Backend: Node.js + Express.js	
	Database: MongoDB	
	Authentication: JWT + bcrypt	
2.	**API Response Time**	**Average Response Time: < 300 ms (local testing)**
	Page Load Time: < 3 seconds	
3.	**Authentication Performance**	**Login & Token Generation: < 500 ms**
	Password Encryption: bcrypt with secure hashing	
4.	**Database Performance**	**Efficient CRUD operations using Mongoose**
	Indexed queries for faster book search	
5.	**Load Handling**	**Tested with multiple concurrent requests using Postman**
	System handles simultaneous users without crashing	
6.	**Frontend Performance**	**Fast rendering using React virtual DOM**
	Dynamic state updates without full page reload	

7.	**Optimization Applied**	**Environment variables for secure config**
	Proper error handling & validation	
	Modular folder structure for maintainability	

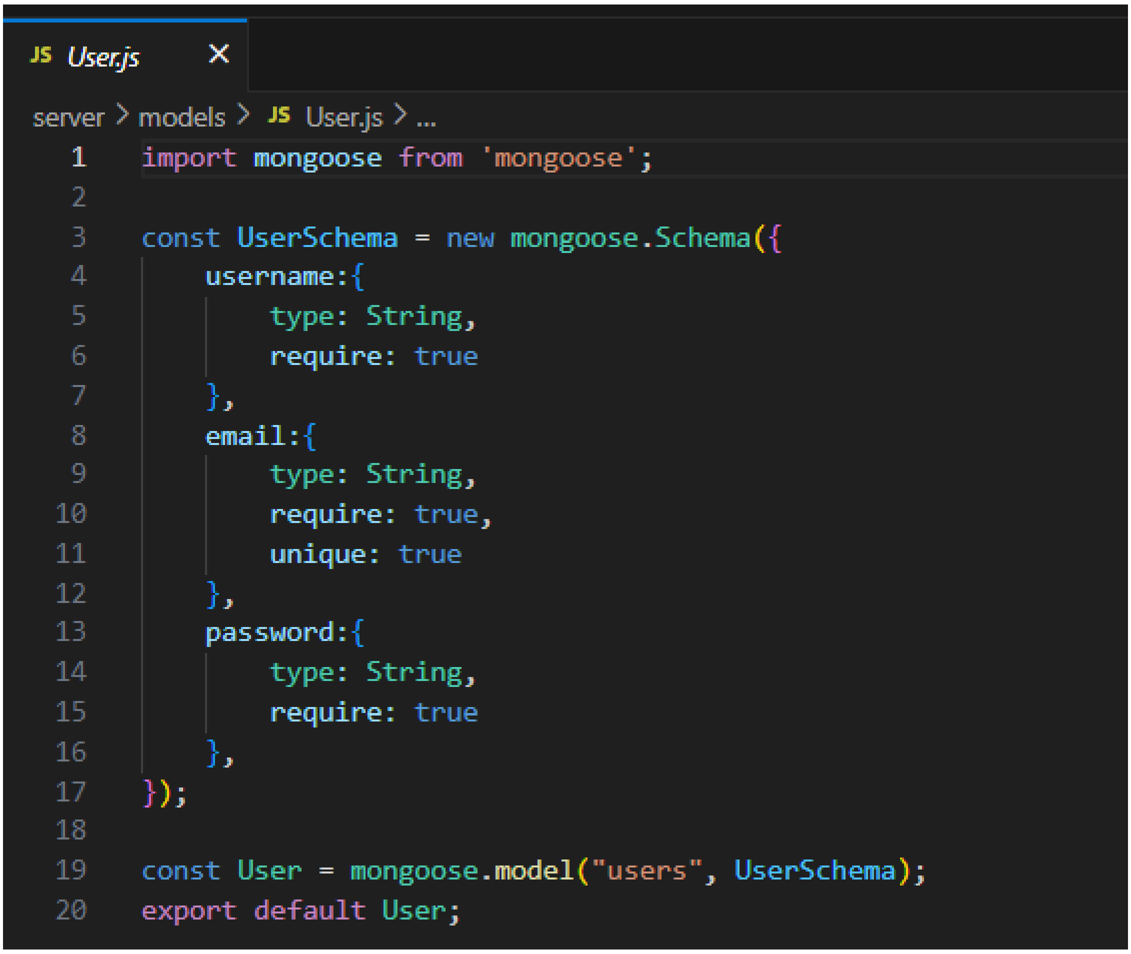
Screenshots:
The screenshots are given below



```
});
const PORT = process.env.PORT || 6001;
mongoose.connect(process.env.MONGO_URL, {
    useNewUrlParser: true,
    useUnifiedTopology: true
}).then(()=>{


    server.listen(PORT, ()=>{
        console.log(`Running @ ${PORT}`);
    });


}).catch((err)=>{
    console.log("Error: ", err);
})
```



```
import mongoose from 'mongoose';

const UserSchema = new mongoose.Schema({
    username:{
        type: String,
        require: true
    },
    email:{
        type: String,
        require: true,
        unique: true
    },
    password:{
        type: String,
        require: true
    },
});

const User = mongoose.model("users", UserSchema);
export default User;
```

The above are some screenshots of my project.