

Hobby Tracking App - Project Overview

March 12, 2025

1 Introduction

A hobby tracking web app that supports **user authentication**, **streak-based hobbies**, and **progress-based hobbies** with goal tracking. Users can log activities, track progress, and visualize streaks/goals.

2 Features of the App

- **User Authentication:** JWT-based login & bcrypt-encrypted passwords
- **Streak-Based Hobbies:** Track daily/weekly consistency (e.g., meditation, workouts)
- **Progress-Based Hobbies:** Measure goal-based progress (e.g., book reading, fitness goals)
- **Subtypes for Hobbies:** Categorize hobbies for better organization
- **API for CRUD operations:** Add, update, delete, and fetch hobbies
- **Statistics & Visualizations:** Track streaks, completed goals, and progress charts

3 Database Schema Design (MongoDB)

3.1 User Schema

```
const mongoose = require("mongoose");
const bcrypt = require("bcrypt");

const UserSchema = new mongoose.Schema({
  username: { type: String, required: true, unique: true },
  email: { type: String, required: true, unique: true },
```

```

    password: { type: String, required: true },
    created_at: { type: Date, default: Date.now }
  });

UserSchema.pre("save", async function (next) {
  if (!this.isModified("password")) return next();
  const salt = await bcrypt.genSalt(10);
  this.password = await bcrypt.hash(this.password,
    salt);
  next();
});

module.exports = mongoose.model("User", UserSchema);

```

3.2 Hobby Schema

```

const HobbySchema = new mongoose.Schema({
  userId: { type: mongoose.Schema.Types.ObjectId,
    ref: "User", required: true },
  hobbyName: { type: String, required: true },
  type: { type: String, enum: ["streak", "progress"], required: true },
  subtype: { type: String },
  streakCount: { type: Number, default: 0 },
  lastCompleted: { type: Date },
  progress: {
    unit: { type: String },
    totalGoal: { type: Number },
    currentProgress: { type: Number, default: 0 },
    goal: { type: String },
    startDate: { type: Date, default: Date.now }
  },
  created_at: { type: Date, default: Date.now }
});

module.exports = mongoose.model("Hobby", HobbySchema);

```

4 API Endpoints

Method	Endpoint	Description
POST	/auth/register	Register a new user
POST	/auth/login	Authenticate user & return JWT token
POST	/auth/refresh-token	Get a new JWT token
POST	/auth/logout	Invalidate user session
DELETE	/user/delete	Delete user account
POST	/hobby/add	Add a new hobby (streak or progress)
GET	/hobby/all	Get all hobbies for a user
GET	/hobby/:hobbyId	Get details of a specific hobby
PUT	/hobby/update-progress/:hobbyId	Update progress (e.g., pages read)
PUT	/hobby/reset-streak/:hobbyId	Reset streak manually
PUT	/hobby/set-goal/:hobbyId	Set or update a goal
GET	/hobby/statistics	Get analytics (longest streak, progress charts)
POST	/hobby/share-progress	Share progress with friends/social media
DELETE	/hobby/delete/:hobbyId	Delete a hobby

5 Hobby Types & Subtypes

5.1 Streak-Based Hobbies

- **Fitness** – Workouts, running, push-ups
- **Mental Well-being** – Meditation, journaling
- **Skill Development** – Coding, music, drawing
- **Learning** – Language practice, daily reading
- **Diet & Health** – Drinking water, intermittent fasting

5.2 Progress-Based Hobbies

- **Reading** – Books, research papers (track pages read)
- **Fitness Goals** – Running distance, weight loss
- **Learning** – Course completion, skill mastery
- **Creative Work** – Writing, composing music
- **DIY Projects** – Model building, coding projects
- **Finance** – Savings, investment tracking

6 Example Hobby Documents (MongoDB)

6.1 Streak-Based Hobby (Meditation)

```
{
  "userId": "abc123",
  "hobbyName": "Meditation",
  "type": "streak",
  "subtype": "Mental Well-being",
  "streakCount": 10,
  "lastCompleted": "2025-03-10"
}
```

6.2 Progress-Based Hobby (Book Reading)

```
{
  "userId": "abc123",
  "hobbyName": "Reading",
  "type": "progress",
  "subtype": "Learning",
  "progress": {
    "unit": "Pages",
    "totalGoal": 300,
    "currentProgress": 150,
    "goal": "Finish by March 30",
    "startDate": "2025-03-01"
  }
}
```

7 Potential Enhancements

- **Reminders & Notifications** – "Read 10 pages today!"
- **Progress Charts & Stats** – Visualize streaks & progress
- **Friend & Community Features** – Share progress with others
- **Flexible Streak Rules** – Allow 1-day breaks for flexibility