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Manobal

(A Personality Development App)

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Abstract

Manobal is a comprehensive mobile application designed to facilitate personality development by helping individuals overcome challenges such as low confidence, poor communication skills, and stage fear. Rooted in the **OCEAN** model of personality traits, the app adopts a structured, user-centric approach to foster holistic personal growth. It provides personalized development plans, interactive learning modules, and real-time progress tracking tools to support users in their journey toward self-improvement.

The platform begins with an initial assessment, where users answer a series of questions to evaluate their current personality traits, strengths, and areas for improvement. Based on these insights, the app curates customized development pathways to enhance confidence, communication abilities, and social adaptability.

Key features of *Manobal* include:

1. **Interactive Learning Modules** – Exercises focused on public speaking, interpersonal skills, and effective communication.
2. **Gamified Learning** – Daily challenges, quizzes, and reward-based engagement to encourage consistent participation.
3. **Progress Tracking** – Visual dashboards for monitoring personal achievements and long-term growth.
4. **Community Engagement** – A collaborative space where users can share experiences, participate in group activities, and practice acquired skills in a supportive environment.

Designed with an intuitive and accessible interface, *Manobal* ensures ease of use for individuals from diverse backgrounds. By integrating psychological insights with technology, the app aims to create a safe, judgment-free space for self-improvement, empowering users to develop essential life skills with confidence.

Introduction

Personality Development Plays a vital role in shaping an individual's confidence, communication skills, and overall social adaptability. Many individuals face challenges such as low self-esteem, stage fear, and ineffective communication, which hinder both personal and professional growth. Overcoming these obstacles requires a structured and personalized approach that fosters continuous self-improvement.

This research introduces *Manobal*, a mobile application designed to help individuals enhance their personality by addressing key challenges through **interactive learning modules, structured development plans, and progress tracking tools**. The application is based on the **OCEAN model of personality traits**, which categorizes personality into five dimensions—Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. By leveraging this psychological framework, *Manobal* provides users with an initial self-assessment to identify strengths and areas for improvement, enabling a tailored learning experience.

The app Incorporates **engaging activities, gamified challenges, and a supportive community environment** to ensure a motivating and effective learning process. Users participate in **daily tasks, self-improvement exercises, and interactive sessions** to gradually build confidence, improve communication skills, and overcome personal limitations. Additionally, a **progress tracking feature** helps users monitor their growth over time, reinforcing long-term behavioural improvements.

The objective of this study is to evaluate the impact of structured personality development programs and examine how mobile-based solutions can effectively support individuals in enhancing their self-confidence and interpersonal skills. By providing a **safe, judgment-free space**, *Manobal* aims to empower users to achieve holistic personal growth.

Methods

Design :

The study employed a **between-subjects design**, where participants were assigned personalized learning modules based on their initial assessment.

The independent variable was the **structured personality development program**, divided into three levels:

1. **Basic Level** –Personality Assessment, Authentication.
2. **Intermediate Level** – Progress Tracking, Task Generation .
3. **Advanced Level** – Real-world application, including group discussions and feedback sessions, With Community Support.

The dependent variable was **personal growth and skill improvement**, measured through:

- Self-reported confidence levels before and after using *Manobal*.
- Engagement rates with different modules.
- Task performance, including communication exercises and public speaking tasks.

Additional variables, such as **community engagement, and task completion rates**, were also recorded.

Development :

Participants interacted with the *Manobal* mobile application, which provided:

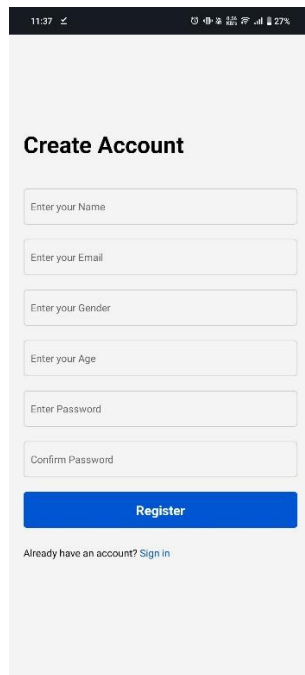
- **Landing Page** of our App to onboard users.



- **Authentication** of our app is based on JWT (JSON WEB TOKEN) which is controlled by backend.

➤ Algorithm to Authenticate Users (JavaScript Middleware) :

```
const authMiddleware = (req, res, next) => {
  const token = req.header('manobal'); // Bearer <token>
  if (!token) {
    return res.status(401).json({ message: 'No token provided, access denied' });
  }
  try {
    const decoded = jwt.verify(token, process.env.JWT_SECRET); // Replace with your secret key
    req.user = decoded; // Attach user info to the request object
    next(); // Pass control to the next middleware or route handler
  } catch (err) {
    return res.status(401).json({ message: 'Invalid token' });
  }
};
```



Create Account

Enter your Name

Enter your Email

Enter your Gender

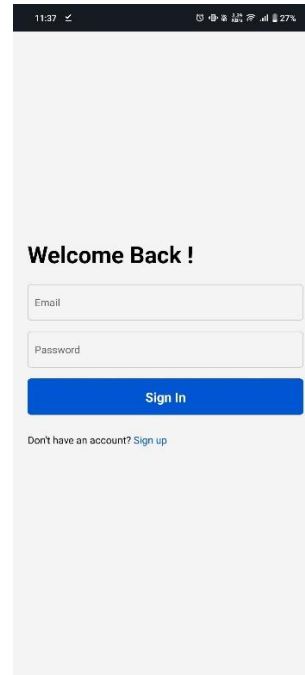
Enter your Age

Enter Password

Confirm Password

Register

Already have an account? [Sign in](#)



Welcome Back !

Email

Password

Sign In

Don't have an account? [Sign up](#)

- **Personalized Development Plans** based on the OCEAN personality model.

OCEAN Model : OCEAN is a personality model representing Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism, defining human traits and behavioural tendencies scientifically.

1. **Openness** – Creativity, curiosity, and willingness to explore new experiences, ideas, and perspectives, fostering adaptability and intellectual growth.
2. **Conscientiousness** – Organization, responsibility, and self-discipline, ensuring goal-directed behaviour, reliability, and efficiency in personal and professional tasks.
3. **Extraversion** – Sociability, enthusiasm, and assertiveness, influencing energy levels, interpersonal interactions, and preference for engaging with social environments.
4. **Agreeableness** – Compassion, cooperation, and trustworthiness, shaping positive relationships, empathy, and the ability to work harmoniously with others.
5. **Neuroticism** – Emotional stability versus stress sensitivity, determining resilience, mood fluctuations, and susceptibility to anxiety, depression, or emotional distress.

➤ Algorithm to analyse the personality of a user (JavaScript) :

```
const assessment = async (req, res) => {
  try {
    const { answers } = req.body;

    if (!answers || !Array.isArray(answers)) {
      return res.status(400).send({
        success: false,
        message: 'Invalid input: answers must be an array.',
      });
    }

    const traits = {
      Openness: [],
      Conscientiousness: [],
      Extraversion: [],
      Agreeableness: [],
      Neuroticism: [],
    };
  }
```

```

for (const answer of answers) {
  const { id, _id, answer: score } = answer;

  if (score < 1 || score > 5) {
    return res.status(400).send({
      success: false,
      message: `Invalid score for question ID ${id}: must be between 1 and 5.`
    });
  }

  const ques = await questionModel.findOne({ id });

  const trait = ques.trait;

  if (trait) {
    traits[trait].push(score);
  }
}

const result = {};
for (const trait in traits) {
  const scores = traits[trait];

  let sum = 0;

  for (const score of scores) {
    sum += score;
  }

  const average = sum / scores.length;
  result[trait] = average.toFixed(2);
}

const userEmail = req.user.email;
const scoreExist = await scoreModel.findOne({ userEmail });
if (scoreExist) {
  await scoreModel.deleteOne({ userEmail });
}
const userScore = new scoreModel({ userEmail, scores: result });
await userScore.save();

```

```

await userModel.updateOne({ email: userEmail }, { isAssesmentDone: true });

return res.status(200).send({
  success: true,
  message: 'Personality assessment completed successfully!',
  data: result,
});
} catch (error) {
return res.status(500).send({
  success: false,
  message: error.message,
});
}
};

```

11:37 2G 27%

Hi, **Tester4**

Complete Your Assessment

Do you often volunteer or offer help to others without being asked?

1

2

3

4

5

< >

Submit Assessment

- **Progress Tracking** through a visual dashboard for individual Traits and Overall

➤ Algorithm for the Progress Tracking (JavaScript):

```

const score = async (req, res) => {
  try {
    const userEmail = req.user.email;
    const userScore = await scoreModel.findOne({ userEmail });
    if (!userScore) {

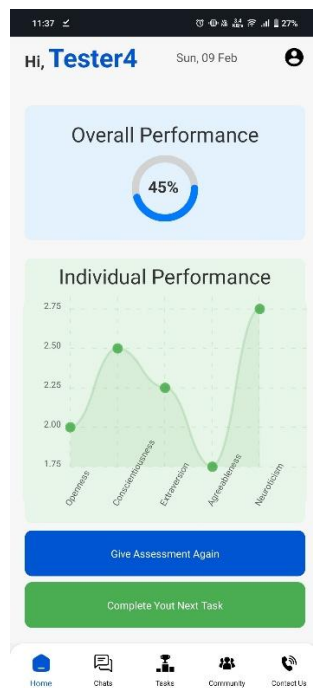
```



```

return res.status(400).send({
  success: false,
  message: 'Score is not calculated yet!',
});
}
return res.status(200).send({
  success: true,
  message: 'Score fetched sucessfully!',
  score: userScore,
});
} catch (error) {
return res.status(500).send({
  success: false,
  message: error.message,
});
}
};

```



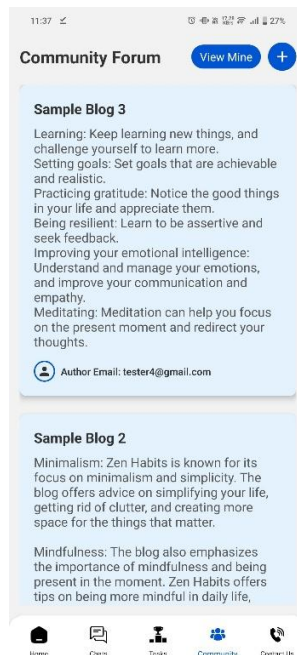
- **Community Engagement** to share experiences and participate in group activities.

➤ Algorithm for the Creating Post in Community (JavaScript):

```

const createpost = async (req, res) => {
  try {
    if (!req.body.title || !req.body.content) {
      return res.status(400).json({ error: 'Title and content are required' });
    }
    const post = await postModel({
      title: req.body.title,
      content: req.body.content,
      author: req.user.email,
    });
    post.save();
    return res.status(200).send({
      success: true,
      message: 'Post created sucessfully!',
    });
  } catch (error) {
    return res.status(500).send({
      success: false,
      message: error.message,
    });
  }
};

```



Some Additional Features Samples :

The image displays two mobile application screens. The left screen, titled 'Edit Profile', features a light blue background with white text and input fields. It includes fields for Name (containing 'Tester4'), Email (containing 'tester4@gmail.com'), Gender (containing 'Male'), and Age (containing '21'). A blue 'Save Changes' button is positioned at the bottom. The right screen, titled 'Feedback Form', also has a light blue background. It includes a 'Rate Us:' section with five yellow stars, a 'Feedback Type:' dropdown menu (currently showing 'Select Type'), and a 'Comments:' section with a text area labeled 'Write your comments here...'. A blue 'Submit' button is located below the comments section. Both screens show a status bar at the top with the time '11:37' and various icons, and a bottom navigation bar with icons for Home, Chats, Tasks, Community, and Contact Us.

Procedure

Participants began by completing an initial **self-assessment questionnaire**, which categorized their personality traits and identified areas for improvement. Based on this, they were assigned a structured learning path with **interactive exercises, and community participation**.

Users engaged with the app, completing tasks at their own pace. Progress was tracked through **in-app analytics**.

The study was conducted **online**, with participants using the app individually. Engagement data and behavioural changes were monitored to assess the effectiveness of the structured development approach.
