# BarterBrains

## Business Requirement Specification

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# 1. Introduction

## 1.1 Document Purpose

This document communicates the business requirements and scope for developing BarterBrains System. The scope of this document is to define the functional and non functional requirements, business rules and other constraints requirements.

## 1.2 Project Background

People today have many different skills, but there is no dedicated platform for direct skill exchange. Most learning platforms focus on paid courses, limiting chances for free, collaborative learning. BarterBrains solves this by allowing users to teach, learn, or swap skills with one another. Without fixed roles, anyone can share what they know and gain new skills in return. It creates a simple, community-driven space for mutual learning and growth.

## 1.3 Goals of the project

- To create a web-based platform that enables users to learn or teach various skills interactively.
- To connect skill owners and learners through an easy matchmaking system.
- To promote skill-based exchange without monetary dependency.
- To build a community-driven platform encouraging continuous peer learning.
- To maintain a user-friendly interface and secure database for user data and skill listings.

## 1.4 Customers and Stakeholders

**Customers :**

- Learners who want to learn new skills for personal or professional growth.
- Mentors who want to share their knowledge and mentor others.
- Users who want to exchange or swap skills with others instead of using money.
- Admins : Platform moderators, Payment Admins, Control Quality

**Stakeholders :**

- Learning Community.
- Students and Youth
- Educational Institutions
- System Administrator

# 2. Business Requirements Overview

- BarterBrains is a public web application.
- Users can sign up and create their profiles.
- Users can specify the skills they can teach and the skills they want to learn.
- The system will match users with suitable learning or teaching partners.
- BarterBrains includes messaging, scheduling, and feedback features for smoother interaction.
- The platform will be managed and maintained by an Administrator.
- Future versions may include gamification features such as badges and tokens.
- Future updates may also include mobile application support.

# 3. Functional Requirements Overview

BarterBrains system consists of the following modules :

1. User Module
2. Skill Management Module
3. Matching Module
4. Communication Module
5. Admin Module

## 3.1 User Module

• Users can register, log in, and create their profiles.
• Each user specifies skills they can teach and skills they want to learn.
• Users can update their profiles and view others' skill profiles.
• Users can rate or review their learning experiences.

## 3.2 Skill Management Module

• Users can add, edit, or remove their skills.
• Each skill has details like category, proficiency level, and availability.
• The system maintains a central skill directory for easy search and categorization.

## 3.3 Matching Module

• Matches learners with teachers or mutual skill swappers based on skill interests, location, and availability.
• The system suggests best matches using basic algorithmic matching.
• Users can accept or reject connection requests.

### 3.4 Communication Module

- Provides real-time messaging or chat between connected users.
- Enables skill session scheduling.
- Sends notifications for new requests, messages, and updates.
- Allows feedback and review submission after completion of learning sessions.

### 3.5 Admin Module

- Admin can monitor users, approve reports, and manage content.
- Can block or unblock users violating terms.
- Can view statistics of user engagement and activity.
- Handles system maintenance and backups.

# 4. Non-functional Requirements

- The system must provide a clean, interactive, and user-friendly interface that is easy to navigate across all modules.
- The platform should support up to 1000 concurrent users without performance degradation
- The system should be scalable to integrate future features such as AI-based recommendations and mobile application support.
- The website must ensure secure authentication, with all user data stored and transmitted in encrypted form.
- The system should provide 24/7 availability with automatic database backups performed every 24 hours.
- The platform must be portable and accessible across all modern browsers and device types.
- The system architecture should be modular to allow easy maintenance, updates, and feature enhancements.