

BlueNote

Software Requirements Specification



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Team Blue

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Version 1

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1. Introduction

Purpose


The product being built is an online music platform. The website will allow users to compose/read and learn music. The website will include songs, sheet music and interactive instruments for the user to play with. The goal of this project is to make an accessible and easy to use platform for music composition, education and practice. The interface will hopefully be easy to use and navigate. The project will solve problems of limited access to affordable tools, friendless to both advanced and beginner users and helping the creativity of aspiring musicians to create music.

2. Stakeholders

- **Musicians**
 - Music Artists
 - Music Teachers
 - Music Students
- **Music Industry Members**
 - Record Labels
 - Managers
 - Producers
- **University of South Carolina**
 - Music Department
 - Computer Science Department

Personas

Robert Harrison



BIO

Retired clinical psychologist at the mind helpers clinic. He's a big book reader and light outdoor activity enjoyer. In his retirement he wants something more to do so his mind stays sharp. He plans to learn an instrument from scratch.

Music Background

beginner	expert
<div></div>	
solo	ensemble
<div></div>	
composing	covering
<div></div>	
sheet	tab
<div></div>	

"Nothing beats retirement!"

Age: 75

Education:

- highschool education
- bachelors in psychology

Occupation:

Retired clinical psychologist

status:

Married

Hobbies:

reading, gardening, chess and birdwatching.

Goals:

- learn about different instruments
- find a suitable instrument
- learn to read/play music

core needs/concerns:

- has a hard time on the internet (navigation)
- struggles to read small text or sheet notes (zoomability)
- doesn't know where to start for music or what instrument best suits him.

Technology

beginner	expert
<div></div>	
Software	
<div></div>	
Mobile apps	
<div></div>	
Navigation	
<div></div>	

Josh Smith



BIO

Josh Smith is recent industrial engineering graduate and moved to Atlanta, GA for his job. He is far away from his friends and doesn't get to see them very often. Work also makes it so he can't go out during the week. He wants to pick up the guitar as a hobby to ward off the boredom during the week.

Music Background

beginner	expert
<div></div>	
solo	ensemble
<div></div>	
composing	covering
<div></div>	
sheet	tab
<div></div>	

"I need to find a hobby for after work"

Age: 24

Education:

B.S in Industrial Engineering from Duke University

Occupation:

Industrial Engineer at UPS

Status:

Single

Hobbies:

Watching TV, going out, playing basketball

Goals:

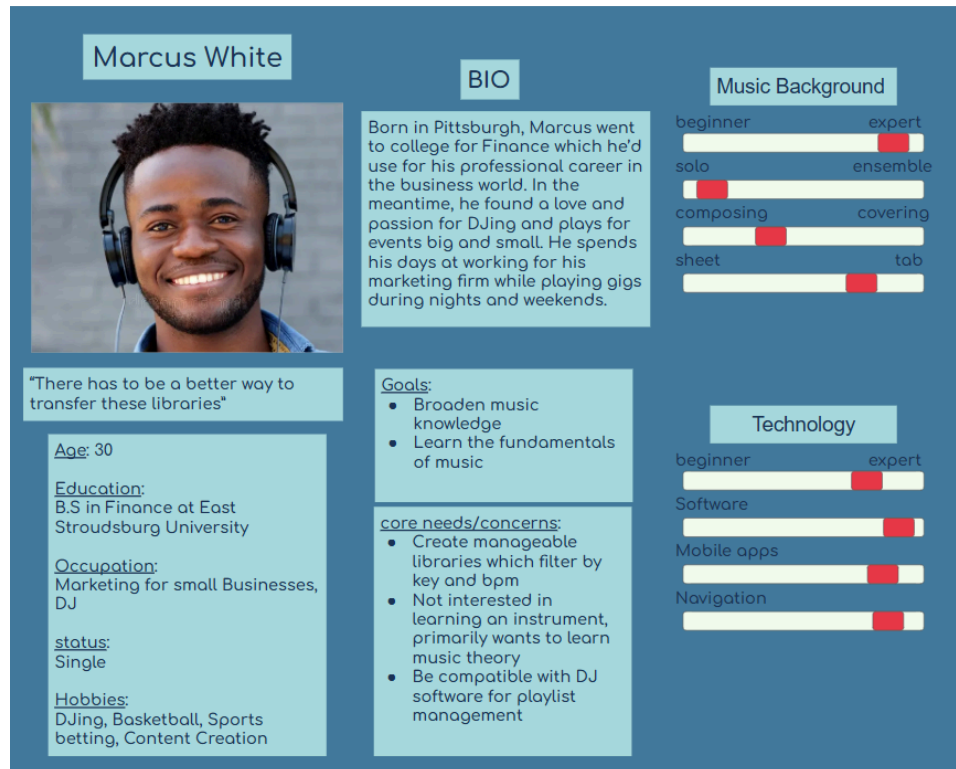
- Learn to play music with tabs or sheet
- Learn to play his favorite songs on an instrument

core needs/concerns:

- Wants easy and non-complex lessons to destress after work
- Wants to learn to play his favorite songs in the easiest way possible
- Needs to learn the parts of the guitar (i.e. frets, which string is which, etc.)

Technology

beginner	expert
<div></div>	
Software	
<div></div>	
Mobile apps	
<div></div>	
Navigation	
<div></div>	



3. Constraints

Time Constraints

- This project is to be completed by April 27th

Monetary Constraints

- This project's development has been allocated a budget of \$0

Technical Constraints

- The code must be done in Java
- The app must be accessible on computers, tablets, and mobile devices

4. Overall Description

This app will be accessible on mobile devices in order to maintain convenience on the go when it comes to rehearsing the selected instrument. The app will lead the user throughout their musical journey from learning how to play certain notes and leading them to eventually play full fledged songs. Their data will be stored in order to maintain a synchronous learning style so they can start where they left off.

9. Competitive Analysis

Product	<u>Yousician</u>	<u>Simply Guitar</u>	<u>Playground</u>
Pros	<p>Interactive Learning: Provides real-time feedback as you play, helping users correct mistakes immediately.</p> <p>Structured Courses: Offers comprehensive lessons for various skill levels, covering multiple instruments including guitar and piano.</p> <p>Extensive Song Library: Features a vast collection of songs across different genres, allowing users to practice with familiar tunes.</p>	<p>Beginner-Friendly: Designed specifically for beginners, with simple and concise lessons that are easy to follow.</p> <p>Real-Time Feedback: Listens to your playing and provides immediate feedback, helping to correct mistakes as they happen.</p> <p>Affordable Pricing: Offers a 14-day free trial with access to all materials, and competitive subscription rates thereafter.</p>	<p>Comprehensive Piano Focus: Offers in-depth lessons specifically tailored for piano learners, from beginners to advanced players.</p> <p>Interactive Sheet Music: Provides real-time feedback and allows users to play along with interactive sheet music, enhancing the learning experience.</p> <p>High-Quality Video Lessons: Features lessons from experienced instructors, including renowned musicians, adding credibility and depth to the instruction.</p>
Cons	<p>Over-Reliance on Visual Cues: Some users may become dependent on the app's visual guidance, potentially hindering the development of independent playing skills.</p> <p>Subscription Model: Full access requires a paid subscription, which might be a consideration for budget-conscious learners.</p>	<p>Limited Advanced Content: May not offer sufficient material for intermediate to advanced players, potentially necessitating a switch to more comprehensive platforms as skills progress.</p> <p>Song Library Size: Currently has a smaller selection of songs compared to some competitors, which might limit practice options.</p>	<p>Requires Digital Piano for Full Features: To fully utilize all features, a digital piano is necessary, which might be a limitation for those with acoustic pianos.</p> <p>Subscription Cost: Access to the full range of features requires a subscription, which could be a consideration for some users.</p>

Key Points

Accessibility and Inclusivity

- Opportunity:** While Yousician and Simply Guitar cater to various skill levels, this platform can differentiate by being equally accessible for beginners and advanced musicians, offering tools and content tailored to their needs.

- **Actionable Insight:** Provide clear onboarding for new users, a gradual learning curve, and advanced features like composition tools, professional sheet music, or custom practice plans.

Affordability

- **Challenge:** Many users are deterred by high subscription fees seen in competitors.
- **Actionable Insight:** Flexible pricing, free models, or affordable subscription tiers. Offer free access to basic tools and premium upgrades for advanced features or exclusive content.

Diverse Features

- **Opportunity:** While Yousician focuses on interactive feedback, and Playground Sessions excels in piano-specific learning, this platform can stand out by combining:
 - Composition tools for creating original music.
 - Interactive features for learning and practicing multiple instruments.
 - A rich library of songs and sheet music.
- **Actionable Insight:** Offer an integrated suite that seamlessly blends learning, playing, and composing features.

Engagement through Creativity

- **Opportunity:** Existing apps often emphasize structured lessons, but fewer focus on fostering creativity in users through composition and improvisation.
- **Actionable Insight:** Include tools like virtual instruments, collaborative composition features, and AI-driven suggestions for chord progressions or melodies.

User Experience and Interface

- **Challenge:** Apps like Yousician and Playground Sessions receive criticism for overly visual cues or digital dependencies.
- **Actionable Insight:** Design an intuitive yet empowering interface. Focus on:
 - Clear navigation for beginners.
 - Customizable layouts for advanced users.
 - A balance between guided learning and freedom to explore creative features.

Community and Collaboration

- **Opportunity:** None of the analyzed competitors focus significantly on building a sense of community among users.
- **Actionable Insight:** Include features like user profiles, forums, and the ability to share compositions, join challenges, or collaborate with others online.

Summary

To succeed, this platform should position itself as a comprehensive, user-friendly ecosystem for music learning, composition, and practice. Highlight accessibility, affordability, and an emphasis on creativity as your unique selling points. Combining interactive learning, diverse resources, and tools that promote creative freedom will address gaps left by existing platforms while appealing to a broad audience.