

ENTENDU!

A tutorial on French Phonetics

Detailed Functional Specification

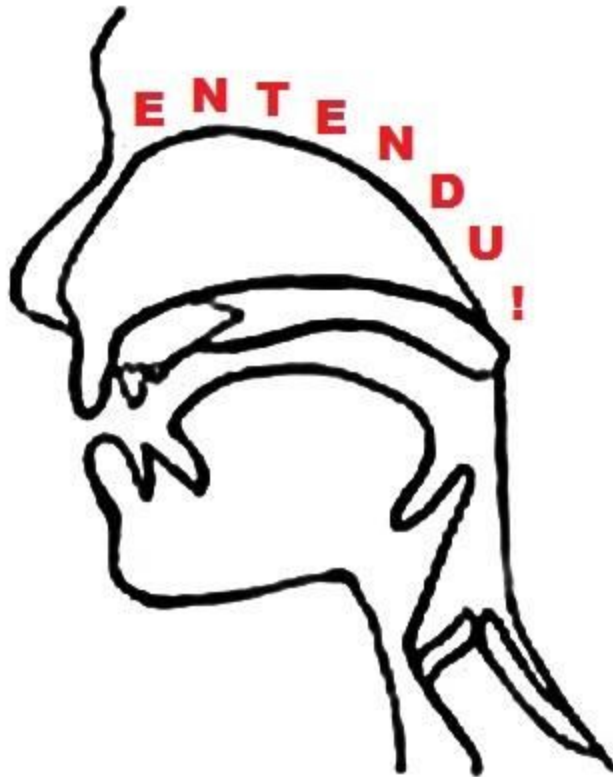
Nathan Morse and Austin O'Malley

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Introduction



ENTENDU! is an online web application designed to help college students who want to improve their French speaking skills and overall knowledge of the language. The application allows students to learn and review phonemes and speech articulation through interactive lessons, quizzes, audio files, and schematic images. This project was proposed by Jonathan David Walsh, Professor of French Studies at Wheaton College in Norton, MA. Although this application is designed and made solely by members of the Wheaton College community, our team is confident that *ENTENDU!* will benefit French students across the globe.

Client Profile

Professor Jonathan David Walsh



Jonathan David Walsh is a Professor of French Studies at Wheaton College in Norton, MA. He received his Ph.D. from the University of California, Santa Barbara and his B.A. from the University of Connecticut, Storrs. Professor Walsh conducts research focusing on eighteenth-century French essays, newsletters, and novels. His teaching interests are not limited to the French language, but also French culture, literature, philosophies, and cinema. He teaches a course on Francophone women authors from France, as well as other countries, but focuses on postmodern French feminist ideology such as Cixous and Leclerc. In addition to seven publications of his own, Professor Walsh enjoys fishing, listening to jazz, drinking wine and partaking in cheese consumption. He also has an interesting fascination with the nearly-extinct Ivory-Billed Woodpecker.

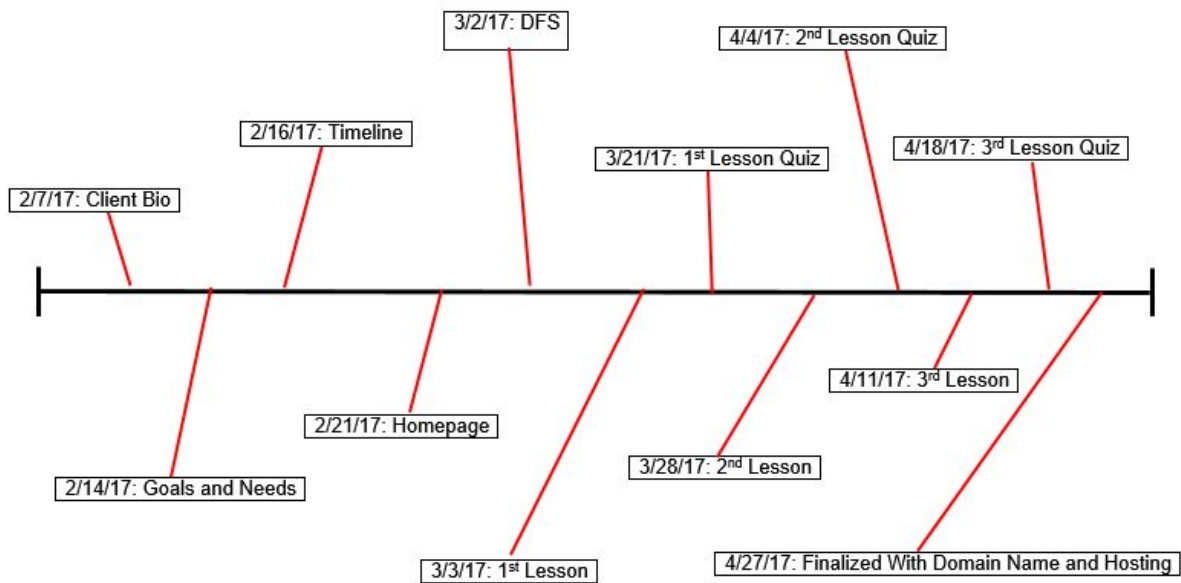
Goals

As a team, our goal is to help Professor Walsh of the Wheaton College French Department create an online tool that successfully teaches French phonetics to students. This public application will use various quizzes and lessons combined with audio and visual cues to effectively demonstrate different concepts in phonetics.

Needs

- Determine and agree upon the exact layout of the web application, which includes how visuals and audio will be presented.
- Receive the information that is going to be presented for each lesson, which includes images and audio files.
- Obtain the questions and answers that are going to be presented for each lesson's quiz.
- Design a simple way of collecting the user's input for quizzes and showing the user their mistakes.
- Manage a hosting service as well as a domain name. The host may include registering Professor Walsh for a private email service so that he can have a custom email address ending with his domain name (eg. jonathan_walsh@entendu.com)

Timeline



Emphasized Deadline Descriptions:

- **2/21/17: Homepage** - Using Bootstrap, implement a functional homepage that effectively represents the mission of *ENTENDU!* as well as the members of our team. This page adequately introduces the web application and ties in all of its functionality.
- **Lessons 1, 2, and 3** - Provided by Professor Walsh, each lesson is divided up differently and presents images, diagrams, audio files, charts, and texts that teach various concepts in French phonetics.
- **Quizzes 1, 2, and 3** - Quizzes contain a set of questions that test the user on the French phonetics taught in each consecutive lesson. The application will alert the student of their mistakes at the end of each quiz. Professor Walsh provides the questions and answers to each question, as well as their format, whether it be multiple choice or fill in the blank.
- **4/27/17: Finalized with Domain Name and Hosting** - By this time, the website is finished and we will register for an appropriate domain name chosen by Professor Walsh. We may register Professor Walsh for a hosting service and a private email ending in his domain name, which will allow site visitors to contact him in a convenient submittable form listed on the homepage.

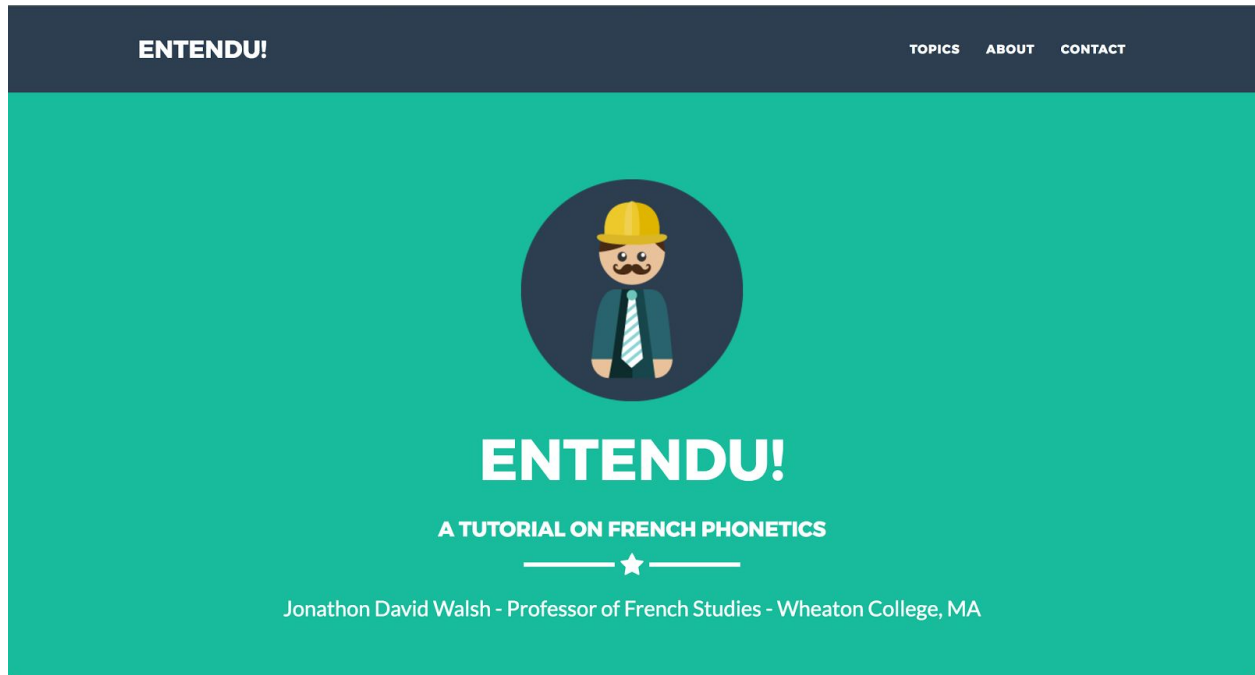
User Interface

Our users will interact with several different HTML/CSS web interfaces. Each page of the web application incorporates a long-scrolling webpage design, with the navigation bar always visible. The *ENTENDU!* homepage offers links to the ‘lesson’ and ‘quiz’ web interfaces, as well as information on those involved with the creation of the web app and a means of contacting them. Following the links on the homepage intuitively guide the user to our lesson and quiz pages for each of the three topics.

The following are screenshots from the actual web application as it exists today. Additions to the existing format will be made in the future, but the overall look and feel shall remain the same.

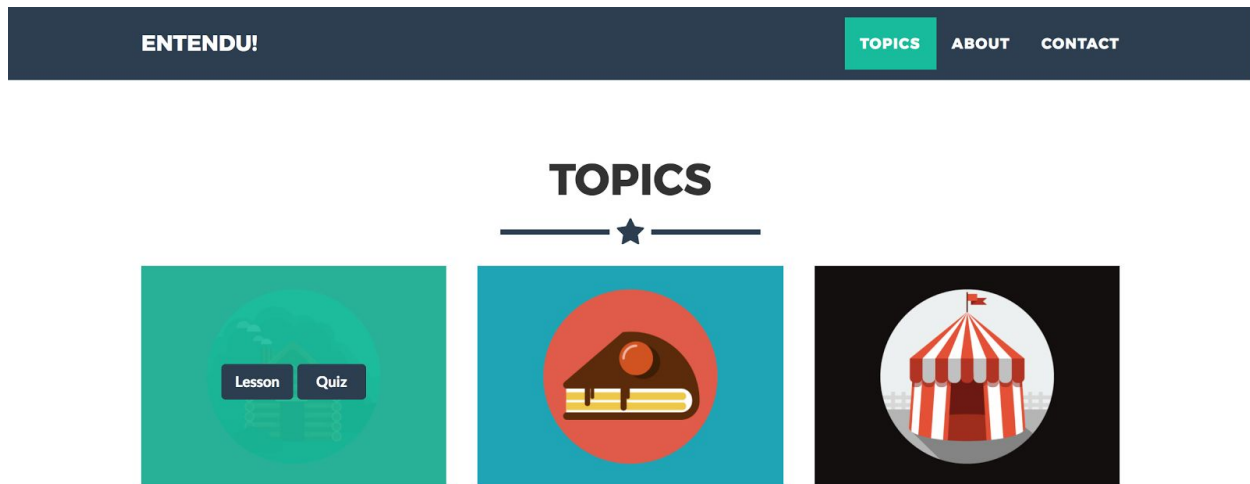
Homepage – Landing

Figure 1. Here we have the landing section of our homepage. This section provides the application's title and purpose, followed by the brief information of its curator. The blue-grey bar at the top of the page is the navigation bar, which is always present and visible in the same top region of the page. Clicking the 'ENTENDU!' button scrolls the user back to this section of the page. Clicking the 'TOPICS' button scrolls down to the topics section, which we will see next. The 'ABOUT' and 'CONTACT' buttons have similar functionality.



Homepage – Topics

Figure 2. This section displays the three available topics, each with its own image. Upon hovering on one of the of the images, two buttons are gently overlaid: One for the ‘Lesson’, the other the ‘Quiz’. Here, we see topic one in this state. These buttons redirect to their corresponding page. We will see what selecting the lesson button grants when we cover the ‘Lesson’ page.



Homepage – About

Figure 3. In this section, we have a short biography of Professor Walsh describing his involvements with Wheaton College, French studies, and the *ENTENDU!* web application. The button at the bottom redirects to Professor Walsh’s profile on the Wheaton College website.

ENTENDU! TOPICS ABOUT CONTACT

ABOUT PROFESSOR WALSH

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Jonathan Walsh is Professor of French Studies at Wheaton College. He has taught French language, literature and culture at Wheaton since 1994. He grew up in Connecticut, completing his Bachelor's at The University of Connecticut, Storrs, and his PhD at the University of California Santa Barbara, where was a graduate student and teaching assistant. As an undergraduate, he studied for a year in France, at the Université de Rouen.

Professor Walsh's dissertation, published as a monograph in 2001, focused on the early eighteenth-century French author, Antoine-François Prévost. He has penned articles on Prévost, Montesquieu, Proust and Edward Said for scholarly journals, and his interview of Aminata Sow Fall, of Senegal, one of Africa's most revered novelists, appeared in *Women in French Studies*. Most recently he published a volume of translations, with introduction, of two novels by Claudine-Alexandrine de Tencin: *Memoirs of the Count of Comminges* and *The Misfortunes of Love*, the latter being the first translation of the novel into English. The volume contains a forward by a prominent French scholar of Enlightenment literature, Michel Delon.

Professor Walsh has always taught a unit on French phonetics in his intermediate French courses, having been inspired by a phonetics course he took in Rouen in the early eighties. As a graduate student, he produced the first computer-based tutorial on French phonetics, specifically, French phonemes and the International Phonetic symbols, entitled *Entendu*, in 1991. His current project involves making a web-based phonetics tutorial with the help of two computer science majors, Austin O'Malley and Nathan Morse.

[Professor Jonathan Walsh at Wheaton College](#)

Homepage – Contact

Figure 4. This contact form allows students and other visitors to the site to get in touch with curators of the site. The form is simple, self-explanatory, and effective. It is designed to send the user's inputted information to a private email address server, which is often included with a hosting service. The form works off of a PHP file offered by the Bootstrap template creators (Miller, David).

CONTACT ME
— ★ —

Name
Email Address
Phone Number
Message

Homepage – Footer

Figure 5. Provides quick information regarding where the curators are based, social media links, and links to the linkedIn pages of the web developers responsible for the coding of the web application.



Lesson Page – Landing

Figure 6. The ‘Lesson Page’ greets the user with a title describing the lesson they selected, and a subtitle giving a brief overview of what they will be learning in the lesson. The navigation bar maintains the same style as on other pages, but the selections on the right-hand side have changed to ‘HOME’ and ‘QUIZ’. The ‘HOME’ button redirects to the homepage, while the ‘QUIZ’ button redirects to the quiz that follows the current lesson.



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Lesson Page – Content

Figure 7. Scrolling down, we reach the ‘content section’ of the lesson. Users will be lead through a series of exercises with complimentary audio samples to make their experience as interactive and involving as possible. The strings of characters preceded by a play button are our interactive audio samples. The play button allows the user to listen to each sample in sequence, highlighting each character in the string as they are played. Clicking an individual character plays and highlights just that single character. Upon completing the lesson, the user will be instructed to redirect to the ‘Quiz Page’.

ENTENDU!HOMEQUIZ

IN THIS LESSON WE WILL LEARN TO PRONOUNCE THE FRENCH PHONEMES AND IDENTIFY THEIR SYMBOLS FROM THE INTERNATIONAL PHONETIC ALPHABET.

There are 35 French phonemes altogether: 15 vowels, 17 consonants, and 3 semi-vowels.

Listen to and repeat the following vowel sounds:

▶

i

y

u

e

ø

o

ɛ

œ

ɔ

a

ɑ

ɛ̃

œ̃

ā

ō

▶

i

Listen to and repeat the following semi-vowels:

▶

j

ɥ

w

Listen to and repeat the following consonant sounds.

We will use them as the first sounds in words to make it easier to pronounce them:

▶

m

n

ɲ

p

t

k

b

d

g

f

s

ʃ

v

z

ʒ

l

ʁ

Use Cases

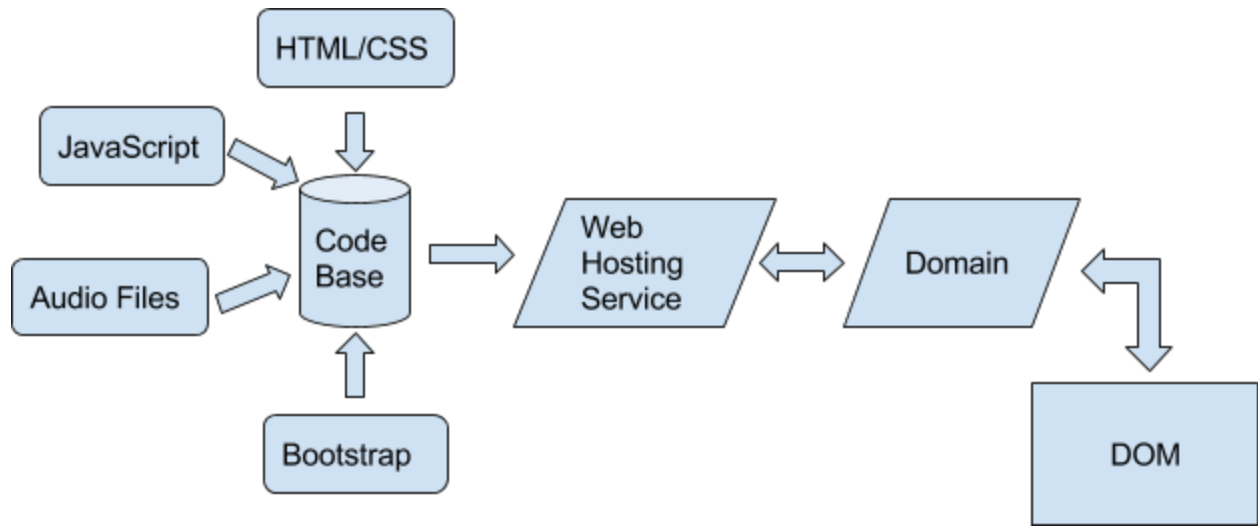
1. Professor Jonathan Walsh is teaching a 200-level French course focusing on speaking and various articulations within the French language. This course is specifically designed to mature students' speaking capabilities. Professor Walsh reaches a point in the curriculum where it becomes necessary to learn about French phonemes, but he needs an additional resource to solidify students' understanding of his teachings outside of class. Fortunately, he has *ENTENDU!* as a valuable teaching tool at his disposal, so he can assign reading of online lessons for homework. In addition, students will be able to quiz themselves at the end of each lesson and bring a printout of their results, which allows for Professor Walsh to see phonemes that students are having difficulty with.

2. Jimmy is a Freshman studying French at his local college. He can fully understand the language but speaking it does not come as easily. No matter how much he expands his French vocabulary, he still cannot pronounce certain words and accents correctly. Jimmy decided to turn to his current French professor for help, and she immediately pointed him in the direction of French phonemes. Prior to college, Jimmy had not even heard about French phonemes. Unfortunately, Jimmy's French class this semester does not teach phonemes, so he decided to do some research on his own. Through a quick search of Google, Jimmy stumbles upon *ENTENDU!* and finds that the lessons break down French phonemes into easily understood concepts with attention grabbing visuals and audio files. The individual audio files and instructions provided Jimmy with the perfect opportunity to practice phonemes and pronunciation in his own time at home.

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3. Colleen graduated from her state's university a few years ago. She graduated with a major in Computer Science and a minor in French Studies. She could speak French fluently, but her accent and knowledge of French phonemes is a little rusty due to the fact that she had not studied French since her active college career. She is required to visit Paris in a month as part of her current job, but she does not want to embarrass herself with reluctant French speaking. Colleen decided to retest her current knowledge of French phonemes by visiting *ENTENDU!* and immediately skipping the lessons to get to the quizzes. After performing well on the quizzes, she regained her French speaking confidence back by further listening to the audio presented in each lesson to familiarize her listening skills. She now feels much more comfortable with the idea of visiting Paris soon.

System Architecture



References

Miller, David. (2016). *<https://github.com/BlackrockDigital/startbootstrap-freelancer>*.

Otto, Mark (2017). *<https://github.com/twbs/bootstrap>*.