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Audemes Website

Programmer’s Manual

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# Vision

To build a fun, educational, and useful product which is fully accessible to visually

impaired users. The product will be simple, using basic web technologies, as these allow us to provide the best accessibility to visually impaired users. It should be simple, yet provide a platform for further projects to build upon.

# Introduction

This is the programmer’s manual for the American Printing House for the Blind’s

Audemes website. Here you will find information about the tools used to build the website and how the website is structured.

The project is a joint work between Professor Stephen Mannheimer of Indiana

University Purdue University Indianapolis, the American Printing House for the Blind, and students at Indiana University Southeast. Below is a list of those involved with the project.

* + Product Owner
    - Larry Skutchan – APH Director of Technology Product Research
  + Product Sponsors
    - Professor Stephen Mannheimer – IUPUI
    - Dr. Ronald Finkbine – IUS
  + Development Team
    - Alan Grant – IUS student
    - Rebecca Luttmer – IUS student and APH employee
    - Jeremy Stephens – IUS student

# Component Overview

The project has only two components to it: the front facing website and the database which stores information about the audemes.

### The Website

The website exists as four pages. There is a home page, about page, dictionary page, and a games page. It is made using basic web technologies listed in the tool overview section.

### Database

The database is a MySQL database. It has two tables: dictionary and gridgame.

These two tables are used by the search and game pages respectively.

The dictionary table is used by the search page to allow users to search our dictionary of audemes. It stores information about all the audemes in the dictionary. This information includes things such as a description, the category the audeme belongs to, etc.

The gridgame table is used by the our Atomic Guessing Game. It stores in it the different combinations of audemes and answers for the game. The schemas for these two tables are described below.

**Table**: dictionary

**Fields (name, type)**: (‘name’, varchar(100)), (‘category’, varchar(100)), (‘keywords’, varchar(100)), (‘description’, varchar(300))

**Table**: gridgame

**Fields (name, type)**: (‘atomic’, varchar(100)), (‘name’, varchar(100)), (‘hint’, varchar(100))

# Tool Overview

The Audemes website is built using standard web technologies. The Goal of the

project was to be as simple as possible in order to facilitate making the website accessible to the visually impaired. There was no real need for flashy javascript animations or other largely visual and aesthetic things. The site is meant for the visually impaired after all.

### HTML

HTML is the basic building block for all websites and ours is no different. We use HTML as any other website would. It gives our website the structure we desire.

### CSS

There is not much CSS in use on our website, but there is a basic CSS page. Our styling is minimalist as we wanted the site to be simple to make it more accessible for visually impaired users.

### PHP

PHP does most of the work on our website. We’ve used it to generate

HTML blocks dynamically when needed. This is most readily evident on our search page where, when a user searches the dictionary, PHP code automatically generates each search result in its own little HTML block separate from the other results.

### MySQL

We’ve used a MySQL database for storage of information about the

audemes. Our database has two tables: dictionary and gridgame. These tables and their schemas were described earlier in section 3.b.

### Github

Github was used for version control of this project. The repository can be

found at <https://github.com/rluttmeratius/Audemes>.

# Project Repository

### Team Website

OffByOne development located at <http://ada.ius.edu/~agrant/>.

### Code

<https://github.com/rluttmeratius/Audemes>

### Pre-development Documentation

<http://ada.ius.edu/~agrant/documents/precode.html>

### Post-development and Testing Documentation

<http://ada.ius.edu/~agrant/documents/postcode.html>

# New Install

Installing the system onto a new machine is simple. All of the needed files are located in the Github repository at <https://github.com/rluttmeratius/Audemes>. There are several ways in which you can install the system onto the new machine. In both methods the first step is to deploy the website and its files onto the new machine. This can be done by simply cloning or downloading the repository from Github.

Once this is done the next step is to deal with the database. The first way to do this is to use MySQL’s built in dumping capabilities to dump the contents of the tables into a file. You can then simply load the tables from that file once your new MySQL database is set up on the new machine.

The second way to deal with the database is to use the SQL scripts in the

repository to create the tables and load the information from CSV files. These scripts and CSV files are included in the repository as well. The first SQL script is for the dictionary (dictionary.sql) and can be found in Audemes/html/search along with the associated .csv file. The second SQL script is GRIDGAME.sql and can be found in Audemes/html/game along with the associated .csv file.

# Future

Given more time the plan would be to add community driven features to the

website such as forums and the ability for community members to upload their own audemes. To do this more tables would need to be added into the database to store user data. We would also need to add in an authentication system. Users would need to create accounts and log in to be able to access these community features.