

Creating Apps Using WordPress Plugins and MySQL

This presentation is an overview of creating simple database applications in WordPress.

No programming is needed, but you should be familiar with the following concepts.

- Database: a container for tables
- Tables: data organized in rows and columns
- Plugins: configurable software tools that generate input forms, tables, and reports



Alan Baker 11/20/2020

Database Tables

- Most WordPress data is stored in MySQL tables, e.g. users, links, terms, posts, options.
- Plugin configurations are stored in tables in the same database, e.g. participants_database_fields, exportsreports_reports.
- You can add your own custom tables to store data there too.



WordPress plugins used in these examples

Participants Database (PDB): A membership database app

Pods: Create a simple app with a form and a table

WP phpMyAdmin: Database administration tools

Exports and Reports: Custom reports using SQL queries

Plugin: Participants Database (PDB)

1. Add the form fields (creates a MySQL table)
2. Add the shortcode to a WordPress page (creates the form)
3. Users enter data into the form
4. List the collected input using Exports and Reports

Participants Database (PDB) Input Form

* = required

First Name*

Last Name*

Email*

Phone #1*

Phone #2

Preferred method of contact?

Mailing Address
(street or PO Box)*

Postal City*

State*

Zip Code*

How did you hear about CASP?

Days/times available to volunteer*

CASP Communities

 Rockingham Westminster Brattleboro Marlboro Putney other:

Check the CASP communities (if any) you'd like to be a part of.

Spanish Level

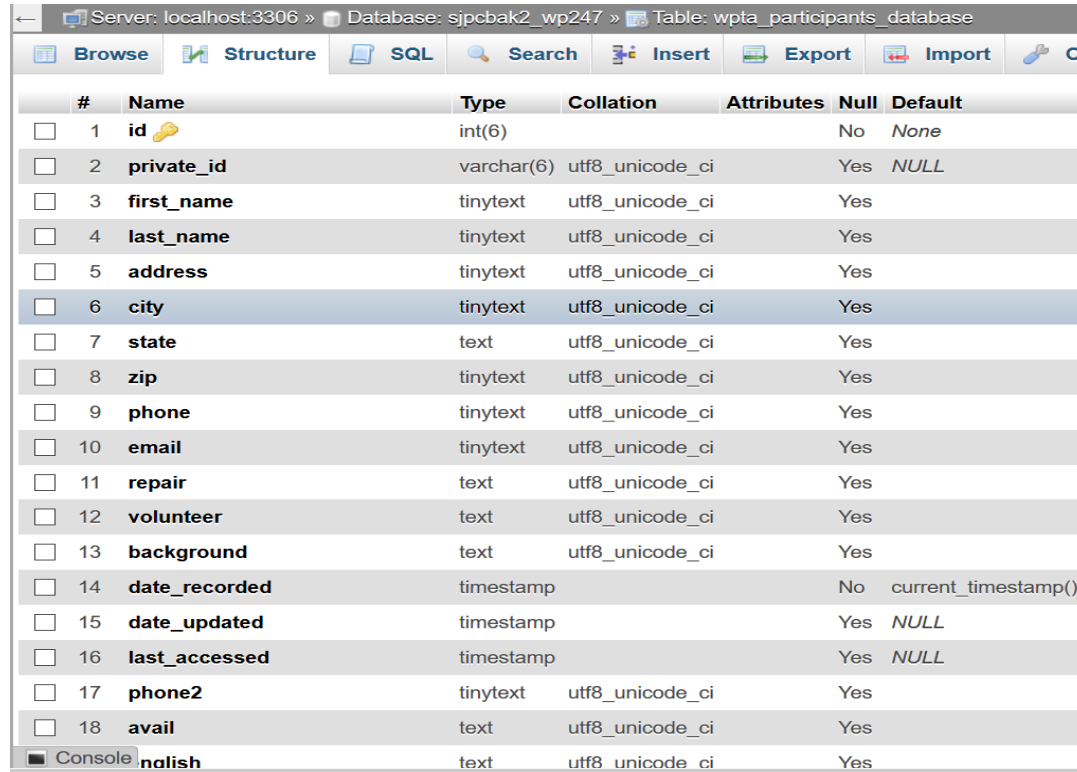
 None Beginning Intermediate Advanced Fluent/Near Fluent

Text boxes

Check boxes

Radio buttons

1b. PDB generates the MySQL table

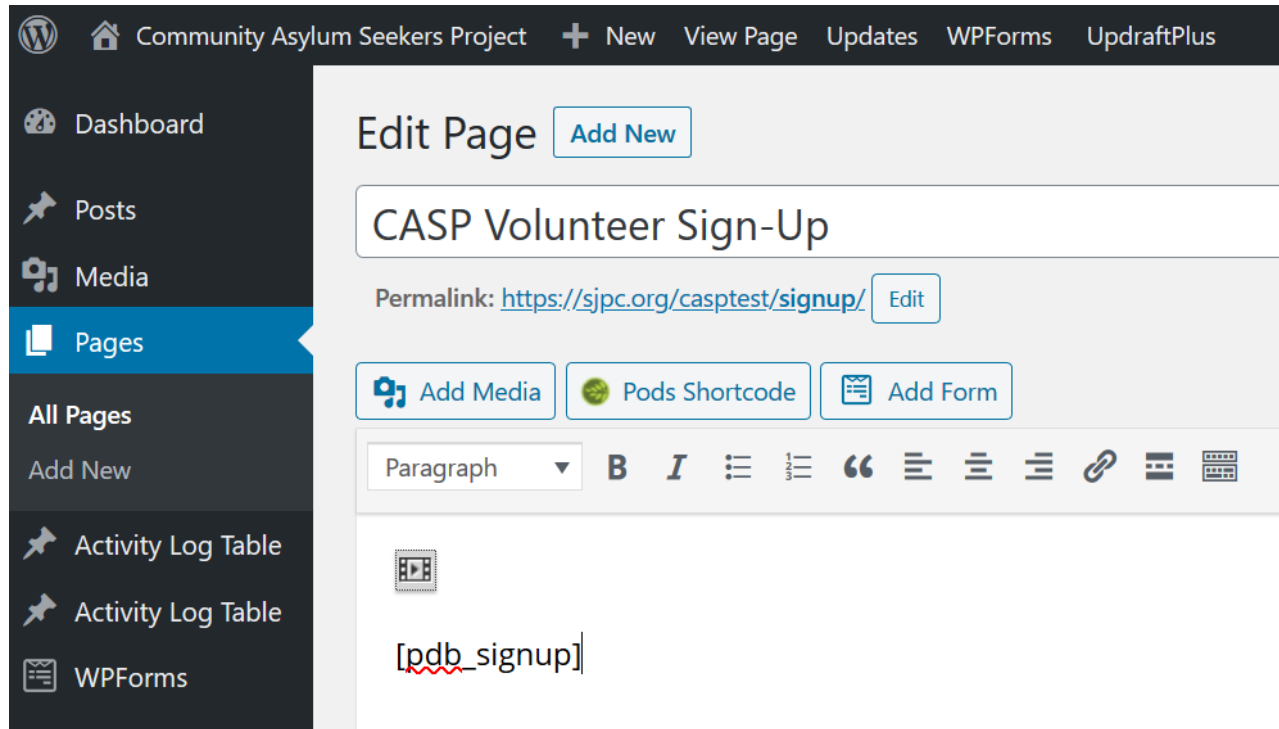


The screenshot shows the phpMyAdmin interface for a MySQL database. The breadcrumb path is "Server: localhost:3306 » Database: sjpcbak2_wp247 » Table: wpta_participants_database". The "Structure" tab is active, displaying a table with 18 columns. The columns are: id (int(6), primary key), private_id (varchar(6)), first_name (tinytext), last_name (tinytext), address (tinytext), city (tinytext), state (text), zip (tinytext), phone (tinytext), email (tinytext), repair (text), volunteer (text), background (text), date_recorded (timestamp), date_updated (timestamp), last_accessed (timestamp), phone2 (tinytext), and avail (text). The "city" column is highlighted in blue. The "Console" tab at the bottom shows the text "nalish".

#	Name	Type	Collation	Attributes	Null	Default
<input type="checkbox"/>	1 id 🔑	int(6)			No	None
<input type="checkbox"/>	2 private_id	varchar(6)	utf8_unicode_ci		Yes	NULL
<input type="checkbox"/>	3 first_name	tinytext	utf8_unicode_ci		Yes	
<input type="checkbox"/>	4 last_name	tinytext	utf8_unicode_ci		Yes	
<input type="checkbox"/>	5 address	tinytext	utf8_unicode_ci		Yes	
<input type="checkbox"/>	6 city	tinytext	utf8_unicode_ci		Yes	
<input type="checkbox"/>	7 state	text	utf8_unicode_ci		Yes	
<input type="checkbox"/>	8 zip	tinytext	utf8_unicode_ci		Yes	
<input type="checkbox"/>	9 phone	tinytext	utf8_unicode_ci		Yes	
<input type="checkbox"/>	10 email	tinytext	utf8_unicode_ci		Yes	
<input type="checkbox"/>	11 repair	text	utf8_unicode_ci		Yes	
<input type="checkbox"/>	12 volunteer	text	utf8_unicode_ci		Yes	
<input type="checkbox"/>	13 background	text	utf8_unicode_ci		Yes	
<input type="checkbox"/>	14 date_recorded	timestamp			No	current_timestamp()
<input type="checkbox"/>	15 date_updated	timestamp			Yes	NULL
<input type="checkbox"/>	16 last_accessed	timestamp			Yes	NULL
<input type="checkbox"/>	17 phone2	tinytext	utf8_unicode_ci		Yes	
<input type="checkbox"/>	18 avail	text	utf8_unicode_ci		Yes	
<input checked="" type="checkbox"/>	Console nalish	text	utf8_unicode_ci		Yes	

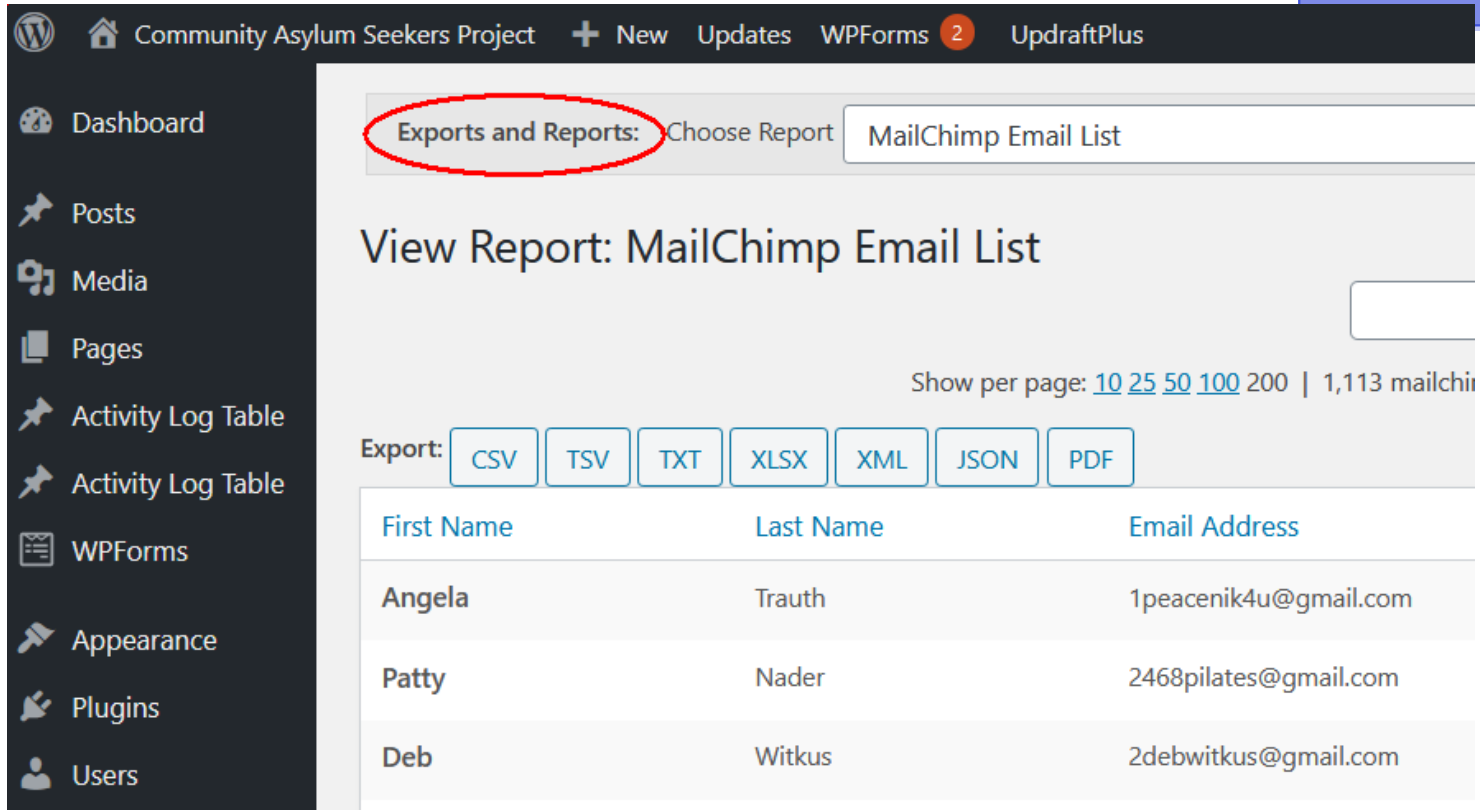
Viewed via WP
phpMyAdmin

2. Add the PDB shortcode to a WordPress page



The screenshot displays the WordPress admin interface for editing a page. The top navigation bar includes the WordPress logo, the site name 'Community Asylum Seekers Project', and several utility links: '+ New', 'View Page', 'Updates', 'WPForms', and 'UpdraftPlus'. The left sidebar menu is dark-themed and lists various dashboard options: 'Dashboard', 'Posts', 'Media', 'Pages' (highlighted in blue), 'All Pages', 'Add New', 'Activity Log Table' (two instances), and 'WPForms'. The main content area is titled 'Edit Page' with an 'Add New' button. Below the title is the page content 'CASP Volunteer Sign-Up'. A 'Permalink' section shows the URL <https://sjpc.org/casptest/signup/> with an 'Edit' button. Below the permalink are three buttons: 'Add Media', 'Pods Shortcode', and 'Add Form'. A rich text editor toolbar is visible, featuring a dropdown menu set to 'Paragraph' and icons for bold, italic, list, link, and other text formatting options. The main text area contains a redacted image icon followed by the shortcode `[pdb_signup]`.

4. Report of names and email addresses



Community Asylum Seekers Project + New Updates WPForms 2 UpdraftPlus

Exports and Reports: Choose Report MailChimp Email List

View Report: MailChimp Email List

Show per page: [10](#) [25](#) [50](#) [100](#) 200 | 1,113 mailchi

Export: [CSV](#) [TSV](#) [TXT](#) [XLSX](#) [XML](#) [JSON](#) [PDF](#)

First Name	Last Name	Email Address
Angela	Trauth	1peacenik4u@gmail.com
Patty	Nader	2468pilates@gmail.com
Deb	Witkus	2debwitkus@gmail.com

Plugin Pods can create an app with a form and a table

1. Add the form fields (creates a MySQL table)
2. Add the shortcode to a WordPress page (creates the form)
3. Users enter data into the form
4. List the collected input using Exports and Reports

Enter the application data into an input form

Activity Log

Please enter the miles you've driven for CASP and the number of hours you've volunteered since your last log entry.

Fields marked with * are required fields.

First Name *	<input type="text"/>	Text
Last Name *	<input type="text"/>	
Log Date *	<input type="text"/>	Date
Hours	<input type="text" value="0"/>	Number
Mileage	<input type="text" value="0"/>	

Submit Log

1a. Create the input form fields in Pods

Community Asylum Seekers Project + New Updates WPForms UpdraftPlus

Dashboard
Posts
Media
Pages
Activity Log Table
Activity Log Table
WPForms
Appearance
Plugins
Users
Tools
All-in-One WP Migration
Settings
AAM
Pods Admin
Edit Pods

Edit Pod: *activity_log* [Edit](#)

Manage Fields Labels Admin UI Advanced Options Auto Template Options REST API

Manage Fields [Add Field](#)

Label ?	Name ?	Field Type ?
≡ First Name *	first_name	Plain Text
≡ Last Name *	last_name	Plain Text
≡ Log Date *	log_date	Date
≡ Mileage	miles	Plain Number
≡ Hours	hours	Plain Number
Label ?	Name ?	Field Type ?

[Add Field](#)

1b. Pods generates the MySQL table

Server: localhost:3306 » Database: sjpcbak2_wp247 » Table: wpta_pods_activity_log

Browse Structure SQL Search Insert Export

#	Name	Type	Collation	Attributes	Null	Default	Comments
<input type="checkbox"/>	1 id	bigint(20)		UNSIGNED	No	None	
<input type="checkbox"/>	2 first_name	varchar(255)	utf8_unicode_ci		Yes	NULL	
<input type="checkbox"/>	3 last_name	varchar(255)	utf8_unicode_ci		Yes	NULL	
<input type="checkbox"/>	4 log_date	date			No	0000-00-00	
<input type="checkbox"/>	5 hours	decimal(4,0)			Yes	NULL	
<input type="checkbox"/>	6 miles	decimal(4,0)			Yes	NULL	

Check all With selected: Browse Change Drop Primary

Viewed via WP
phpMyAdmin

2. Add the Pods shortcode to a WordPress page

Please enter the miles you've driven for CASP and the number of hours you've volunteered since your last log entry.

Fields marked with * are required fields.

```
[pods-form name="Activity Log" slug="activitylog"
fields="first_name,last_name,log_date,hours,miles" label="Submit
Log"]
```

3. Users entered this data into the form

```
SELECT * FROM `wpta_pods_activity_log` WHERE 1
```

Profiling [\[Edit inline\]](#)

Show all | Number of rows: Filter rows: Sort by key

+ Options

		id	first_name	last_name	log_date	hours	miles
<input type="checkbox"/>	Edit Copy Delete	699	Steve	Crofter	2019-03-03	120	0
<input type="checkbox"/>	Edit Copy Delete	700	Ursula	Nadolny	2019-03-06	4	48
<input type="checkbox"/>	Edit Copy Delete	738	Ursula	Nadolny	2019-03-24	15	64
<input type="checkbox"/>	Edit Copy Delete	1570	Shana	Frank	2019-09-28	2	75

Viewed via WP
phpMyAdmin

4a. Exports and Reports output

View Report: Test activity log query

Show per page: [10](#) [25](#) [50](#) [100](#) [200](#) | 4 test activity log query

Export:

CSV

TSV

TXT

XLSX

XML

JSON

PDF

Log Date	First Name	Last Name	Hours	Mileage
2019/03/03	Steve	Crofter	120	0
2019/03/06	Ursula	Nadolny	4	48
2019/03/24	Ursula	Nadolny	15	64
2019/09/28	Shana	Frank	2	75

4b. Exports and Reports MySQL query

SQL Query

```
SELECT log_date, first_name, last_name, hours, miles  
FROM wpta_pods_activity_log  
ORDER BY log_date, first_name, last_name
```

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Questions?

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