

Problem: Create a solution to re-use existing data saving myself significant time listing products for sale on ebay, facebook marketplace, amazon, and mercari. Also use the system to track sales and various other metrics. Currently the system has two complete datasets of reference products that I often re-sell... Collectible Plates and Books. I will cover how I utilized laravel/vue/mysql/php to implement this system.

Step one: Acquire offline data for product references for Plates. In order to do this I built a custom set of laravel artisan commands that utilize curl through the guzzle library to grab each and every plate info page which is about 30,000 plates.

Harvesting Command

```
CloneCollectorPoint.php x
49 }
50
51 private function guzzleFile($start, $end){
52     $files_not_found = 0;
53     $images_not_found = 0;
54     $back_images_not_found = 0;
55     $local_html_file_path = '/home/john.mcdonnell/code/buyvintageplates/data/guzzled/collector-point/html/';
56     $local_image_file_path = '/home/john.mcdonnell/code/buyvintageplates/data/guzzled/collector-point/images/';
57     $local_back_image_file_path = '/home/john.mcdonnell/code/buyvintageplates/data/guzzled/collector-point/images/backs/';
58     $client = new \GuzzleHttp\Client();
59     echo "\nCloner Cloning...\n";
60     $this->output->progressStart(($end - $start));
61     for($i=$start; $i<$end; $i++){
62         $html_file_endpoint = "https://www.collectorpoint.com/plate/itemview.php?id=".$i;
63         $image_file_endpoint = "http://www.collectorpoint.com/plate/plimage/".$i.".jpg";
64         $back_image_file_endpoint = "http://www.collectorpoint.com/plate/plimage/".$i."_b.jpg";
65         try {
66             $dynamic_html_path = $local_html_file_path . $i . ".html";
67             $dynamic_image_path = $local_image_file_path . $i . ".jpg";
68             $dynamic_image_back_path = $local_back_image_file_path . $i . "_b.jpg";
69             $response = $client->request('GET', $html_file_endpoint, ['http_errors' => false]);
70             if ($response->getStatusCode() == 200) {
71                 if(!file_put_contents($dynamic_html_path, $response->getBody())){
72                     $files_not_found++;
73                 }
74             }else{
75                 $files_not_found++;
76             }
77             $response = $client->request('GET', $image_file_endpoint, ['http_errors' => false]);
78             if ($response->getStatusCode() == 200) {
79                 if(!file_put_contents($dynamic_image_path, $response->getBody())){
80                     $images_not_found++;
81                 }
82             }else{
83                 $images_not_found++;
84             }
85             $response = $client->request('GET', $back_image_file_endpoint, ['http_errors' => false]);
86             if ($response->getStatusCode() == 200) {
87                 if(!file_put_contents($dynamic_image_back_path, $response->getBody())){
88                     $back_images_not_found++;
89                 }
90             }else{
91                 $back_images_not_found++;
92             }
93         }
94         $this->output->progressAdvance();
95     } catch (Exception $e) {
96         return $e->getMessage();
97     }
98 }
99 $this->output->progressFinish();
100 $this->renameDirectories($start, $end);
101 echo "Total HTML Requests not cloned: " . $files_not_found . "\n";
102 echo "Total Image Requests not cloned: " . $images_not_found . "\n";
103 echo "Total Back Image Requests not cloned: " . $back_images_not_found . "\n";
104 echo "\nCloning Complete!\n";
105 }
```

This command basically gives a progress bar and utilizes an improvised semi-restful design based off and existing sites URL structure to harvest sequential pages based on IDs. It then stores the raw HTML (contains all the plate data) inside the appropriately labeled data directory. The command was structured to run small sets or large sets of harvesting passes through \$start-\$end being the ID range... Obviously I didn't want to invoke an accidental DOS so I did small passes at harvesting.

Harvesting Command Results

The results of the command are pictured here:



Step two: After acquiring all the data the next step was to take the plate data from the raw HTML and store it into a database table. To do this I created a another command that implemented a basic HTML DOM parser to parse out the various desired data fields according to certain custom parsing rules that had to be created to target specific parts of the data. This often required very specifically and meticulously crafted rule-sets to isolate the data against many varying conditions.

The Parsing Command

```
43  * @return int
44  */
45  public function handle()
46  {
47      $start = $this->argument('start');
48      $end = $this->argument('end');
49      $this->initParsing($start, $end);
50      return 0;
51  }
52
53  private function initParsing($start, $end){
54      ini_set('memory_limit', '1024M');
55      $this->dom = new Dom;
56      $this->domString = new Dom;
57      $this->parseYears($start, $end);
58  }
59
60
61  private function parseYears($start, $end){
62      echo "(1/15) Parsing Years...\n" ;
63      $this->output->progressStart(($end - $start));
64      for($i=$start;$i<$end;$i++){
65          $path = "/home/vagrant/code/buyvintageplates/data/guzzled/aggregated_cp/all/". $i. ".html";
66          $this->setDomPath($path);
67          $year = $this->parsePlateYearFromSpan();
68          if(strlen($year)==4){
69              $this->insertDbWrapper($i, "year", $year);
70              DB::table('collector_point')->where('id', $i)->update(['year' => $year]);
71              $this->output->progressAdvance();
72          }
73      }
74      $this->output->progressFinish();
75      echo "\nFinished Parsing Years.\n";
76      $this->parseMakers($start, $end);
77  }
78
79  private function parseMakers($start, $end){
80      echo "(2/15) Parsing Makers...\n" ;
81      $this->output->progressStart(($end - $start));
82      for($i=$start;$i<$end;$i++){
83          $path = "/home/vagrant/code/buyvintageplates/data/guzzled/aggregated_cp/all/". $i. ".html";
84          $this->setDomPath($path);
85          $maker = $this->parseMakerFromH3();
86          $this->insertDbWrapper($i, "maker", $maker);
87          $this->output->progressAdvance();
88      }
89      $this->output->progressFinish();
90      echo "\nFinished Parsing Makers.\n";
91      $this->parseSeries($start, $end);
92  }
93
94  private function parseSeries($start, $end){
95      echo "(3/15) Parsing Series Name...\n" ;
96      $this->output->progressStart(($end - $start));
97      for($i=$start;$i<$end;$i++){
98          $path = "/home/vagrant/code/buyvintageplates/data/guzzled/aggregated_cp/all/". $i. ".html";
```

The Parsing Command rule-set

```
private function parsePlateNameFromTitle(){
    $name = null;
    $elements = $this->dom->getElementsByTag("title");
    if(count($elements)==1){
        foreach ($elements as $tag){
            if(!empty($tag->firstChild())){
                $parts = explode("-", $tag->firstChild());
                $name = substr_replace($parts[1], "", 0, 12);
            }
        }
    }
    return $name;
}

private function parsePlateYearFromSpan(){
    $year = null;
    $elements = $this->dom->getElementsByTag("span");
    if(count($elements)==1){
        foreach ($elements as $tag){
            if(!empty($tag->firstChild())){
                $year = str_replace("&nbsp;", "", $tag->firstChild());
            }
        }
    }
    return $year;
}

private function parseMakerFromH3(){
    $maker = null;
    $elements = $this->dom->getElementsByTag("h3");
    if(count($elements)==1){
        foreach ($elements as $tag){
            if(!empty($tag->children)){
                $maker = str_replace($tag->firstChild(), "", $tag);
                $maker = str_replace("&nbsp;", "", $maker);
                $this->domString->loadStr($maker);
                $h3 = $this->domString->find('h3');
                $maker = $h3->text;
            }
        }
    }
    if($maker == null){
        $maker = $this->parseMakerFromHref();
    }
    return $maker;
}
```

The parsing command could run all the methods from the init or individual methods as they were tested and developed to improve accuracy. The command parsed the isolated data to a corresponding mysql table... i.e. the parsed year → year column – parsed plate → plate name etc. This created a pretty rudimentary and basic table show below with an approximate **non-normalized size of 6.5 mb**

Info	Columns	Indexes	Triggers	Foreign keys	Partitions	Grants	DDL	
Column	Type	Default Value	Nulla	Character	Collation	Privileges	Extra	
♦ artist	varchar(255)		YES	utf8mb4	utf8mb4_unicc	select,insert,update,reference		
♦ bradex	varchar(255)		YES	utf8mb4	utf8mb4_unicc	select,insert,update,reference		
♦ collections	varchar(255)		YES	utf8mb4	utf8mb4_unicc	select,insert,update,reference		
♦ created_at	timestamp		YES			select,insert,update,reference		
♦ deleted_at	timestamp		YES			select,insert,update,reference		
♦ description	text		YES	utf8mb4	utf8mb4_unicc	select,insert,update,reference		
♦ diameter	decimal(13,2)		YES			select,insert,update,reference		
♦ fine_quote	varchar(255)		YES	utf8mb4	utf8mb4_unicc	select,insert,update,reference		
♦ for_sale	varchar(255)		YES	utf8mb4	utf8mb4_unicc	select,insert,update,reference		
♦ good_quote	varchar(255)		YES	utf8mb4	utf8mb4_unicc	select,insert,update,reference		
♦ id	bigint unsigned		NO			select,insert,update,reference	auto_increme	
♦ issue_price	varchar(255)		YES	utf8mb4	utf8mb4_unicc	select,insert,update,reference		
♦ limit	varchar(255)		YES	utf8mb4	utf8mb4_unicc	select,insert,update,reference		
♦ maker	varchar(255)		YES	utf8mb4	utf8mb4_unicc	select,insert,update,reference		
♦ makers_code	varchar(255)		YES	utf8mb4	utf8mb4_unicc	select,insert,update,reference		
♦ mint_quote	varchar(255)		YES	utf8mb4	utf8mb4_unicc	select,insert,update,reference		
♦ numbered_cert_i	varchar(500)		YES	utf8mb4	utf8mb4_unicc	select,insert,update,reference		
♦ series	varchar(255)		YES	utf8mb4	utf8mb4_unicc	select,insert,update,reference		
♦ series_code	varchar(255)		YES	utf8mb4	utf8mb4_unicc	select,insert,update,reference		
♦ tags	varchar(500)		YES	utf8mb4	utf8mb4_unicc	select,insert,update,reference		
♦ title	varchar(255)		YES	utf8mb4	utf8mb4_unicc	select,insert,update,reference		
♦ updated_at	timestamp		YES			select,insert,update,reference		
♦ wanted	varchar(255)		YES	utf8mb4	utf8mb4_unicc	select,insert,update,reference		
♦ watch_lists	varchar(255)		YES	utf8mb4	utf8mb4_unicc	select,insert,update,reference		
♦ weight	decimal(13,2)		YES			select,insert,update,reference		
♦ wish_lists	varchar(255)		YES	utf8mb4	utf8mb4_unicc	select,insert,update,reference		
♦ year	varchar(255)		YES	utf8mb4	utf8mb4_unicc	select,insert,update,reference		

Table Details	
Engine:	InnoDB
Row format:	Dynamic
Column count:	27
Table rows:	104367
AVG row length:	65
Data length:	6.5 MiB
Index length:	0.0 bytes
Max data length:	0.0 bytes
Data free:	0.0 bytes
Table size (estimate):	6.5 MiB

Step Three: Normalize the data into a newer more efficient table with relationships to other tables... For instance the Plate Artists and Manufacturers were moved to their own tables and their total size is less than 100 KB... I actually created a normalization command to resolve fields from one table to the other...

```

    return 0;
}

public function handle()
{
    $start = 7;
    $end = 29214;
    $data = array();
    // $end = 29214;
    $this->output->progressStart(($end - $start));
    for($i = $start; $i < $end; $i++){
        $sql = "select id, year, maker, series, title, artist, diameter, description, tags, bradex from buyvintagegoods.collector_point
        where id=" . $i;
        $plate = DB::select($sql);
        if($plate[0]->title != null && (!empty($plate[0]->title))){
            $data['year_id'] = $this->resolveYear($plate[0]->year);
            $data['manufacturer_id'] = $this->resolveMaker($plate[0]->maker);
            $data['collection_id'] = $this->resolveSeries($plate[0]->series);
            $data['artist_id'] = $this->resolveArtist($plate[0]->artist);
            $data['title'] = $plate[0]->title;
            $data['description'] = $plate[0]->description;
            $data['bradex'] = $plate[0]->bradex;
            $data['diameter'] = $plate[0]->diameter;
            $data['tags'] = $plate[0]->tags;
            $data['origin_id'] = $plate[0]->id;
            $this->insertHandler($data);
        }
        $this->output->progressAdvance();
    }
    $this->output->progressFinish();
    return 0;
}

private function resolveYear($year){
    $result = null;
    if(is_numeric($year)){
        $result = DB::table('meta_years')->where('year', $year)->value('id');
    }
    return $result;
}

private function resolveMaker($maker){
    $result = null;
    if(($maker != null) && (!empty($maker))){
        $result = DB::table('plate_manufacturers')->where('manufacturer', $maker)->value('id');
    }
    return $result;
}

private function resolveSeries($series){
    $result = null;
    if(($series != null) && (!empty($series))){
        $result = DB::table('plate_collections')->where('collection', $series)->value('id');
    }
    return $result;
}

```

Which resulted in the following normalized table(s)

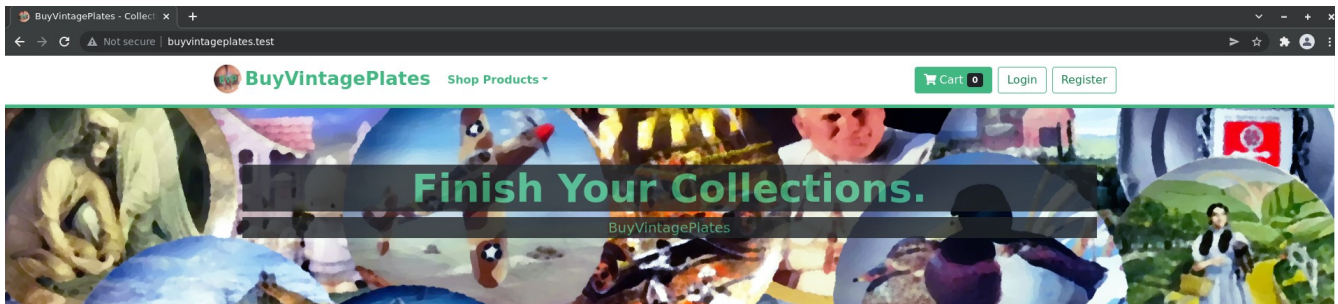
Table Details




Engine:	InnoDB
Row format:	Dynamic
Column count:	34
Table rows:	25873
AVG row length:	101
Data length:	2.5 MiB
Index length:	0.0 bytes
Max data length:	0.0 bytes
Data free:	0.0 bytes
Table size (estimate):	2.5 MiB

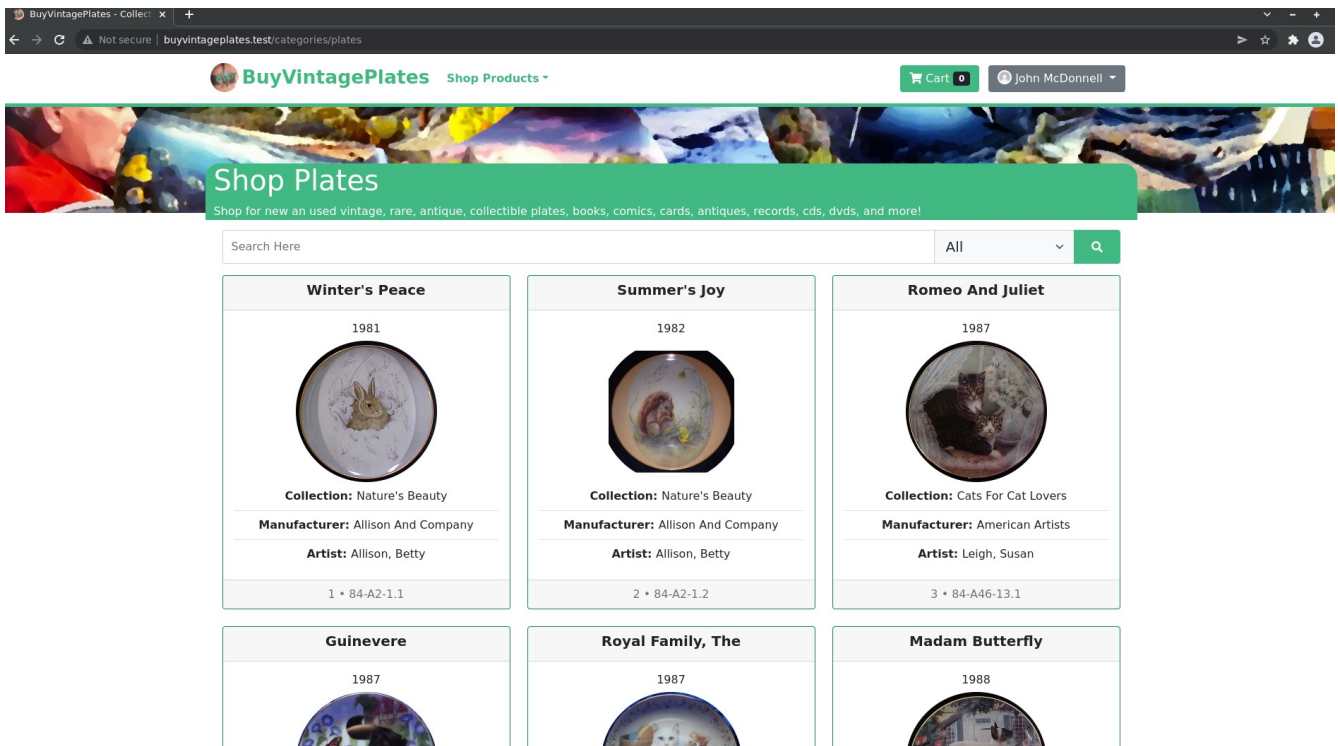


Column	Type
♦ art_theme_id	int unsigned
♦ artist_id	int unsigned
♦ bradex	varchar(255)
♦ brand_id	int unsigned
♦ character_id	int unsigned
♦ collection_edition_id	int unsigned
♦ collection_id	int unsigned
♦ created_at	timestamp
♦ culture_id	int unsigned
♦ decor_style_id	int unsigned
♦ deleted_at	timestamp
♦ description	text
♦ diameter	decimal(13,2) unsigned
♦ era_id	int unsigned
♦ franchise_id	int unsigned
♦ id	bigint unsigned
♦ is_antique	tinyint(1)
♦ is_limited	tinyint(1)
♦ is_rare	tinyint(1)
♦ is_vintage	tinyint(1)
♦ manufacturer_id	int unsigned
♦ materials	varchar(255)
♦ occasion_id	int unsigned
♦ origin_id	int unsigned
♦ original_price	decimal(13,2) unsigned
♦ production_date	datetime
♦ production_quantity	int unsigned
♦ shape_id	int unsigned
♦ tags	text
♦ title	varchar(255)
♦ type_id	int unsigned
♦ updated_at	timestamp
♦ weight	decimal(13,2) unsigned
♦ year_id	int unsigned

Final Result



Winter's Peace 1981  Collection: Nature's Beauty Manufacturer: Allison And Company Artist: Allison, Betty 1 • 84-A2-1.1	Summer's Joy 1982  Collection: Nature's Beauty Manufacturer: Allison And Company Artist: Allison, Betty 2 • 84-A2-1.2	Romeo And Juliet 1987  Collection: Cats For Cat Lovers Manufacturer: American Artists Artist: Leigh, Susan 3 • 84-A46-13.1
Guinevere	Royal Family, The	Madam Butterfly





[Home](#) / [Plates](#) / Colonial Christmas Wreath Collection Massachusetts Plate Made By Lenox China



Massachusetts

Colonial Christmas Wreath

Lenox China

1982
Colonial Christmas Wreath Collection Massachusetts Plate
Made By Lenox China

\$0.00

1

Add to cart

Massachusetts, The Second Colony "Christmas 1982" is the second in a limited edition series of thirteen fine china plates depicting Christmas wreaths create with materials which in each instance were native to one of the thirteen

pears, pine cones, blueberries, juniper cones, wild fennel, cinnamon sticks, radishes and chestnuts.

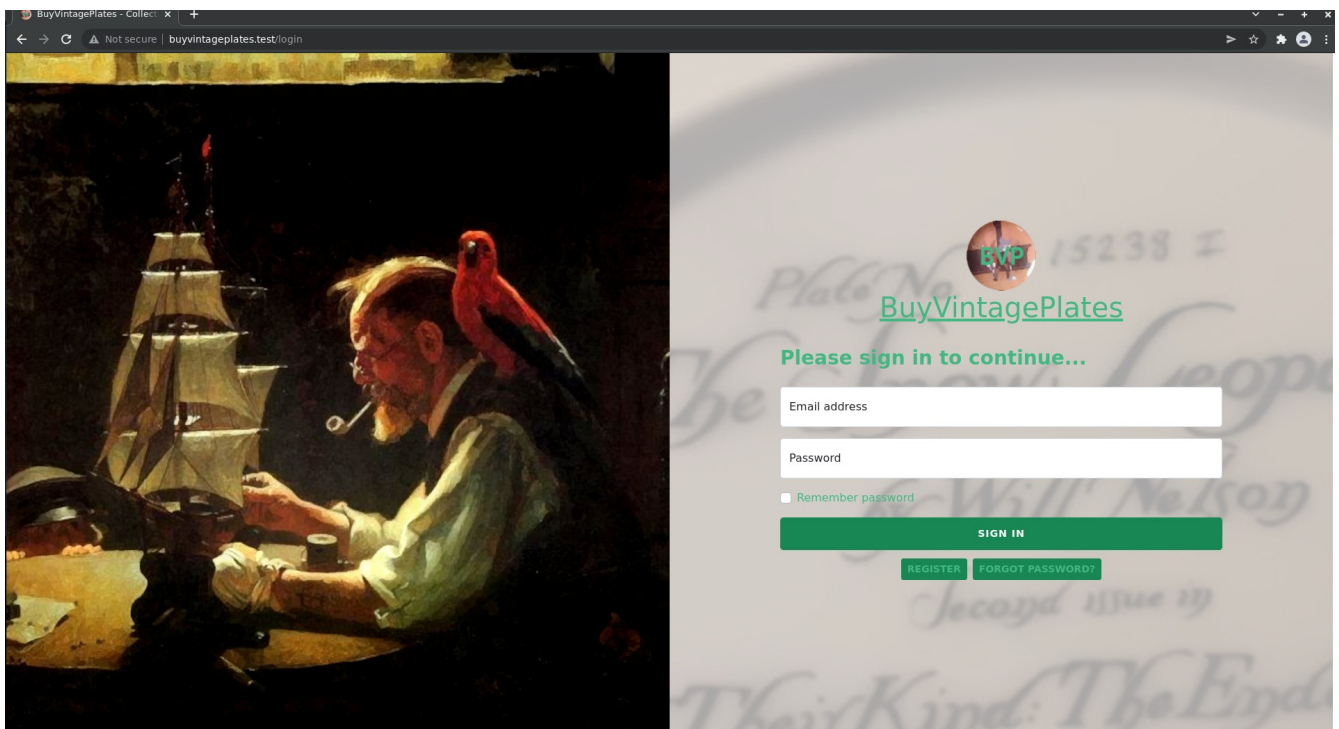
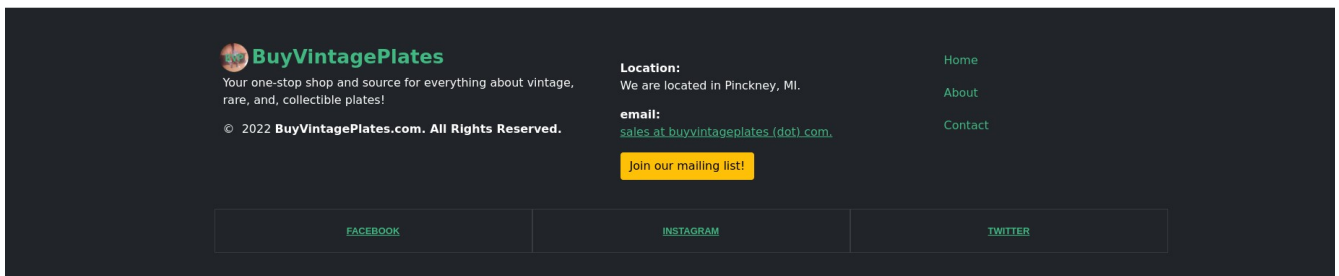
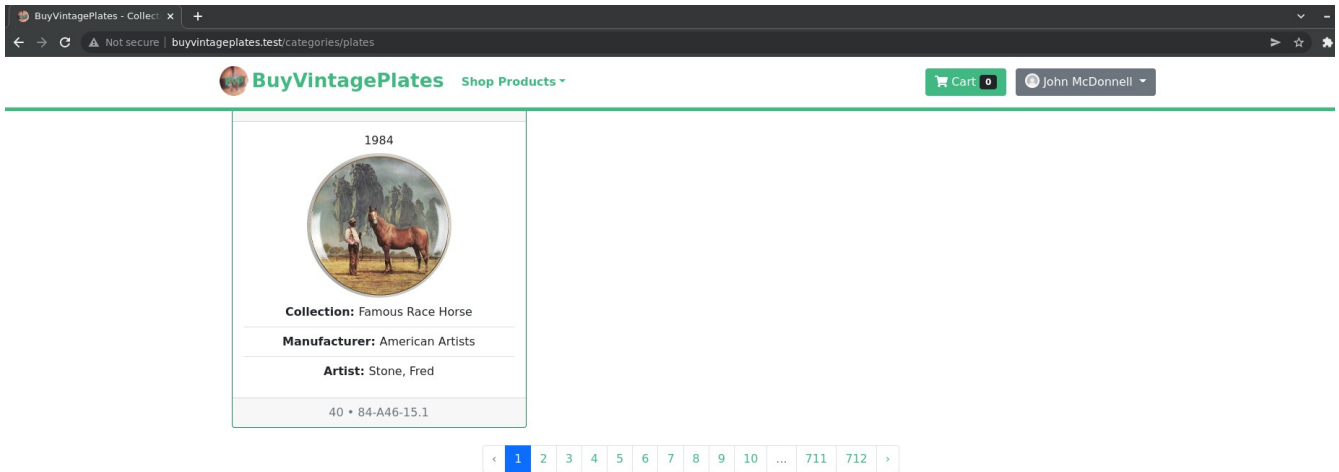
Product Details

Shipping & Handling

Papers & Certifications

Warranty & Return Policy

Plate Name	Massachusetts
Plate Number	
Registered Plate	
Plate Year	1982
Condition	
Type	
Brand	
Manufacturer	Lenox China
Collection/Product Line	Colonial Christmas Wreath
Limited Edition	
Franchise	
Culture	
Artist	
Art Era	
Style	
Origin	
Character	



BuyVintagePlates - Online

Not secure | buyvintageplates.test/portal/referencing

BuyVintagePlates

Menu

John McDonnell

Dashboard

Product Inventory

Sales & Accounting

Order Tracking

Reporting

Referencing

Referencing

Manage your data referencing sources.

Product References

#	Product	Description	Action
1	Plates	Reusable data records for plates products.	CreateBrowse
2	Antiques	Reusable data records for antiques products.	CreateBrowse
3	Books	Reusable data records for books products.	CreateBrowseGoogle
4	Comics	Reusable data records for comics products.	CreateBrowse

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Search Here

All

Click the folder to launch product creation from reference data

Winter's Peace

1981



Collection: Nature's Beauty


Manufacturer: Allison And Company

Artist: Allison, Betty

1 • 84-A2-1.1 •

Summer's Joy

1982



Collection: Nature's Beauty


Manufacturer: Allison And Company

Artist: Allison, Betty

2 • 84-A2-1.2 •

Romeo And Juliet

1987



Collection: Cats For Cat Lovers

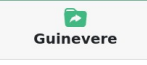
Manufacturer: American Artists

Artist: Leigh, Susan

3 • 84-A46-13.1 •

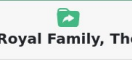
Guinevere

1987



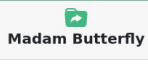
Royal Family, The

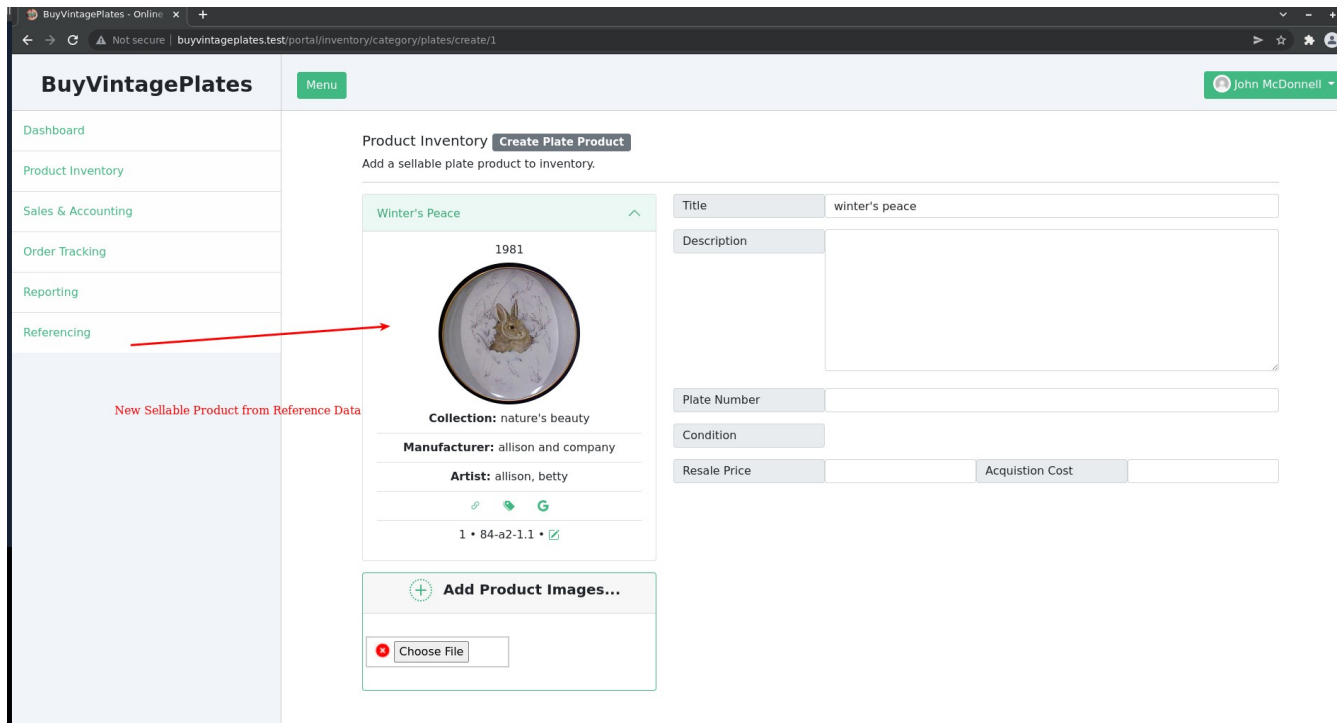
1987



Madam Butterfly

1988





I also wrote the following code to integrate the google books API into laravel with custom configuration for the API endpoints, a API Interface Controller Class and an actual Portal Interface Controller class...

```
return [
    'keys' => [
        'books' => env('GOOGLE_BOOKS_API_KEY','default'),
    ],
    'apis' => [
        'books_v1' => [
            'endpoint' => 'https://www.googleapis.com/books/v1/',
            'volumes' => 'https://www.googleapis.com/books/v1/volumes/',
            'isbn_query' => 'https://www.googleapis.com/books/v1/volumes?q=isbn:',
        ],
    ],
];
```

```

<?php

namespace App\Http\Controllers\Portal\Referencing\Books\Google;

use Illuminate\Http\Request;
use App\Http\Controllers\Controller;
use GuzzleHttp\Client;

class GoogleBooksApiController extends Controller
{
    /** sample id = ZMO-uQAACAAJ TOM SAWYER */
    public static function getSelfLinkObject($id){
        return self::guzzler(config('google.apis.books_v1.volumes') . $id);
    }

    /** sample isbn_10 = 0590433520 & isbn_13 = 9780590433525 */
    public static function getIsbnObject($isbn){
        return self::guzzler(config('google.apis.books_v1.isbn_query') . $isbn);
    }

    public static function IsbnIdResolver($isbn){
        $id = false;
        $isbn_object = json_decode(self::guzzler(config('google.apis.books_v1.isbn_query') . $isbn));
        if($isbn_object->totalItems=="1"){
            $id = $isbn_object->items[0]->id;
        }
        if($id){
            return $id;
        }
    }

    public static function guzzler($url){
        $json = false;
        $client = new \GuzzleHttp\Client();
        $response = $client->request('GET', $url, ['http_errors' => false]);
        if ($response->getStatusCode() == 200) {
            $json = $response->getBody();
        }
        return $json;
    }
}

```

```

namespace App\Http\Controllers\Portal\Referencing\Books\Google;

use Illuminate\Http\Request;
use App\Http\Controllers\Controller;
use App\Http\Controllers\Portal\Referencing\Books\Google\GoogleBooksApiController;

class GoogleReferencesController extends Controller
{
    /**
     * Display a listing of the resource.
     *
     * @return \Illuminate\Http\Response
     */
    public function index()
    {
        //GoogleBooksApiController::IsbnIdResolver("0590433520");
        return view('content.private.pages.referencing.books.google.index');
    }

    public function search(Request $request){
        $product = $request->input('product');
        $query = $request->input('query');
        $field = $request->input('field');
        $results = null;
        $view = null;
        switch($field){
            case 'id': {
                $results = json_decode(GoogleBooksApiController::getSelfLinkObject($query), true);
                $view = "content.private.pages.referencing.books.google.self-link";
            }break;
            case 'isbn': {
                $results = json_decode(GoogleBooksApiController::getIsbnObject($query), true);
                $view = "content.private.pages.referencing.books.google.isbn";
            }break;
        }
        return view($view, compact('results'));
    }
}

```

← → google.com/books/edition/Professional_CUDA_C_Programming/q3DvBQAQBAJ?hl=en&gbpv=0

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Preview 56 pages

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Professional CUDA C Programming

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Search Google Books API And Optionally Create Individual Product Inventory or Book References For Future Use.

1118739329 ISBN-10 or ISBN-13

Google Books Reference Importer

Upload CSV of ISBN-10 and ISBN-13's To Create References From an Inventory In Bulk.

Choose File No file chosen Upload

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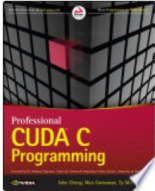
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Professional CUDA C Programming

Break into the powerful world of parallel GPU programming with this down-to-earth, practical guide. Designed for professionals across multiple industrial sectors, Professional CUDA C Programming presents CUDA -- a parallel computing platform and programming model designed to ease the development of GPU programming -- fundamentals in an easy-to-follow format, and teaches readers how to think in parallel and implement parallel algorithms on GPUs. Each chapter covers a specific topic, and includes workable examples that demonstrate the development process, allowing readers to explore both the "hard" and "soft" aspects of GPU programming. Computing architectures are experiencing a fundamental shift toward scalable parallel computing motivated by application requirements in industry and science. This book demonstrates the challenges of efficiently utilizing compute resources at peak performance, presents modern techniques for tackling these challenges, while increasing accessibility for professionals who are not necessarily parallel programming experts. The CUDA programming model and tools empower developers to write high-performance applications on a scalable, parallel computing platform: the GPU. However, CUDA itself can be difficult to learn without extensive programming experience. Recognized CUDA authorities John Cheng, Max Grossman, and Ty McKercher guide readers through essential GPU programming skills and best practices in Professional CUDA C Programming, including: CUDA Programming Model GPU Execution Model GPU Memory model Streams, Event and Concurrency Multi-GPU Programming CUDA Domain-Specific Libraries Profiling and Performance Tuning The book makes complex CUDA concepts easy to understand for anyone with knowledge of basic software development with exercises designed to be both readable and high-performance. For the professional seeking entrance to parallel computing and the high-performance computing community, Professional CUDA C Programming is an invaluable resource, with the most current information available on the market.

Authors

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