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PARAGON
INTERNATIONAL UNIVERSITY
C A M B O D I A

MyProduct

Project Report

Supervisor

Rejep Hekimov

Submitted by:

Kimchhung Pech

CS340

Department of Computer Science

Faculty of Information and Computer Technologies

[july /16/2020]

Abstract

In this report, I am going to present to you the basic fundamental of creating an app in Android studio that use Database for storing and taking care of data (any kind of information) for those who like to use Database Management though API with a beautiful UI design. In this project, I used the Laravel framework to create Laravel API that can access MySQL, and Android Studio can access to the data through API. In UI design, I used Adobe XD to create the activities of android, to make it look beautiful, clean, and modern. In the android studio, to build an interface we need to write the XML code which is a little complex. Therefore, we need Adobe XD to have a good-looking interface for creating an XML file and writing XML code much easier.
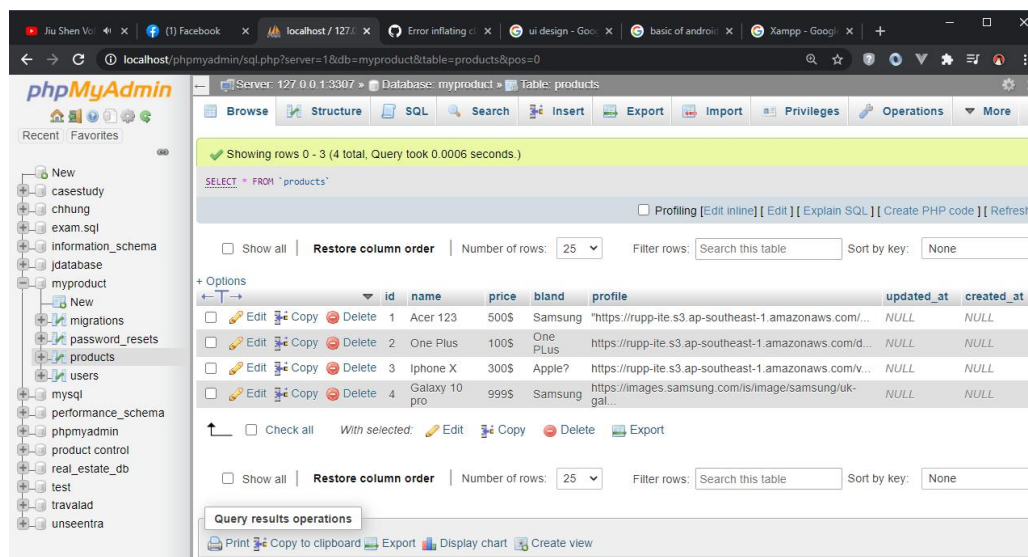
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1. Introduction

My Project is MyProduct is a Product Management System app that helps the seller to manage products such as, stock, cashier and reporting (daily, Monthly, yearly sold the product. As we know that, in Cambodia, there is countless seller, they do not have time for calculation of buying, selling product. Moreover, there are several problems that the seller may forget the price of the product and sell a random price that prevents them from getting income.

2. Literature Review

The project is using Java for building an android app and Java is a general-purpose programming language that is class-based, object-oriented, and designed to have as few implementation dependencies as possible. However, in order to store the data, I need to access to Mysql. Likewise, I used Laravel to create API for Android App to access the data. In the process of creating API, I need Xampp for hosting the server such as Apache, MySQL, and PHP. Postman test the API. Postman offers a sleek user interface with which to make HTML requests, without the hassle of writing a bunch of code just to test an API's functionality.

3. Methodology
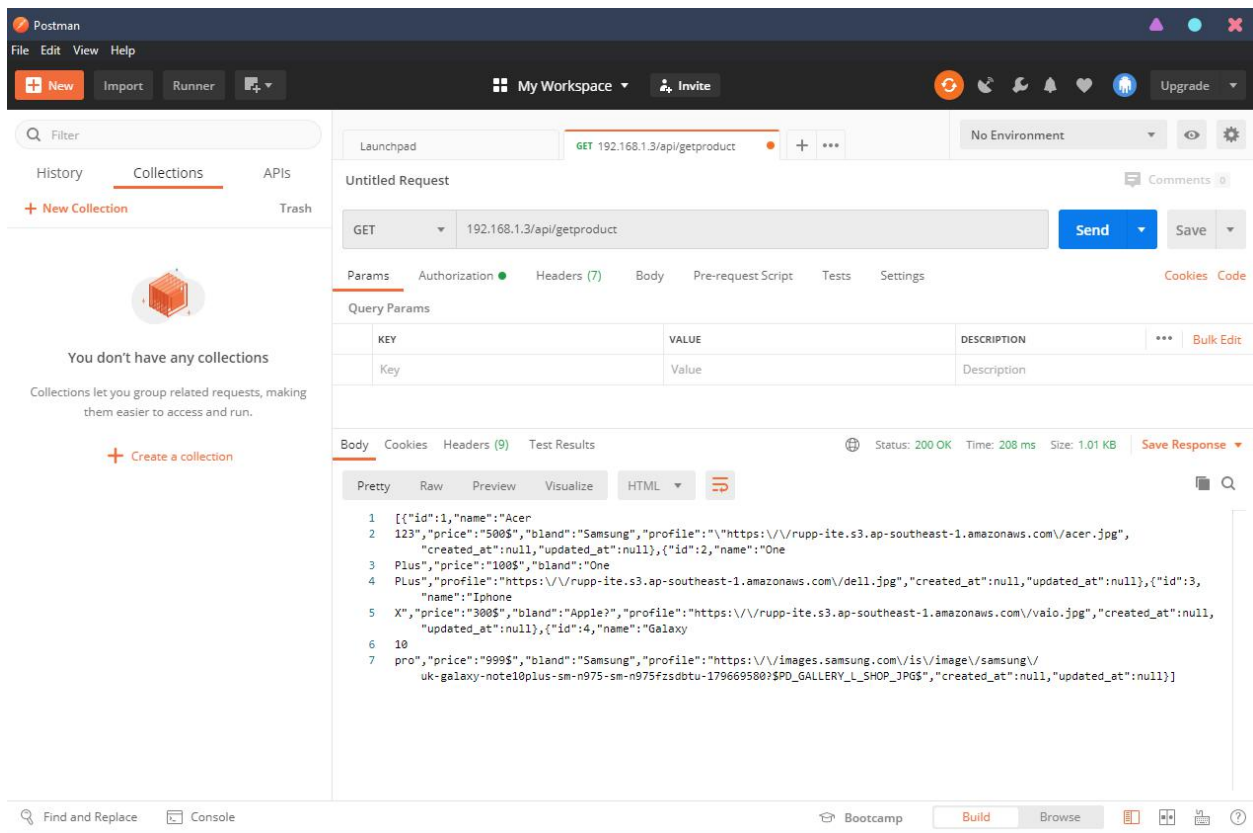
Xammp : for create management data, create,edit etc.

Creating API using Laravel Framework

```php
                                            server.php                    AuthController.php                    api.php
32          'user'=> Auth::user()                                    1  <?php
33      ]);                                                          2
34  }                                                                3  use Illuminate\Http\Request;
35                                                                   4
36  public function register(Request $request){                     5  /*
37      $encryptedPass = Hash::make($request->password);            6  |--------------------------------------------------------------
38      $user = new User;                                           7  | API Routes
39                                                                   8  |--------------------------------------------------------------
40      try{                                                         9  |
41          $user->name = $request->name;                          10  | Here is where you can register API routes for your applicati
42          $user->email = $request->email;                        11  | routes are loaded by the RouteServiceProvider within a group
43          $user->password = $encryptedPass;                      12  | is assigned the "api" middleware group. Enjoy building your
44          $user->save();                                         13  |
45          return $this->login($request);                         14  */
46      }                                                           15  Route::post('login','Api\AuthController@login');
47      catch(Exception $e){                                       16  Route::post('register','Api\AuthController@register');
48          return response()->json([                              17  Route::get('logout','Api\AuthController@logout');
49              'success'=>false,                                  18  Route::get('getproduct','Api\AuthController@getproduct');
50              'message'=>$e                                      19
51          ]);                                                    20  // Route::middleware('auth:api')->get('/user', function (Reques
52      }                                                          21  //     return $request->user();
53  }                                                              22  // });
54                                                                 23
55  public function logout(Request $request){
56      try {
57          JWTAuth::invalidate(JWTAuth::parseToken($request->token));
58          return response()->json([
59              'success'=>true,
60              'message'=>'logout success'
61          ]);
62      } catch (Exception $e) {
63
64      }
65
66  }
67
68  public function getproduct(Request $request){
69      try{
70          $products = product::all()->toJson();
71          return $products;
72      }
73      catch(Exception $e){
74          return response()->json([
75              'success'=>false,
76              'message'=>$e
77          ]);
78      }
79  }
80
81
82  }
83
```

Postman , Testing API make sure there is nothing wrong with API

Java , Loading products by API

```java
private void loadProducts(final ProductsAdapter.onProductListener onProductListener){
    String url = "http://192.168.1.3:80/api/getproduct";
    StringRequest request = new StringRequest(url, (response) → {
        Gson gson = new Gson();
        products = gson.fromJson(response, Product[].class);
        //create and set adapter
        ProductsAdapter adapter = new ProductsAdapter(products,onProductListener);
        recyclerView.setAdapter(adapter);
    }, (error) → {
        Toast.makeText( context: ProductsActivity.this, text: "Something go wrong while querying data", Toast.LENGTH_SHORT).s
        Log.d( tag: "app.com", msg: "load data error :" + error.getMessage());
    });
    // add req to queue
    Volley.newRequestQueue( context: this).add(request);
}
```

Java for android :

- A Task, Activity stack : control android back stack

- Start Activity

-Intent: to pass session id to the another activity

- Fragment

4. Results

As a result, I found that developing under Android is not so simple as there are many possible versions of the OS against which you can decide to develop, many possible target tools and methods so on. And he upgrade rate of the development tools is extremely high. It uses java for the development part and XML for the layout. Both are equally important. And thanks to Coursera Java for android, I managed to build an android application with modern UI design, accessing MySQL, learned some basic knowledge, and achieved using an Integrated Development Environment.

5. Discussion

As an application, a student, this project has made know about Integrated Development Environment which is very important because as long as we can integrate it, we can gain any resources as we want. Integrated Development Environment, allows for increased efficiency which helps me to code fast with less effort.

6. Conclusion

In conclusion, building an app that can store data SQL to the server through the Laravel API. This journal of building an android made me realize many mistakes and improves my experience where I can build An android app, understand the purpose of application UI and UX design for users that provide meaningful and relevant experiences to users. conclusion, building an app that can store data SQL to the server through Laravel API. This journal of building an android made me realize many mistakes, and improves my experience where I can build An android app, understand purpose of application UI and UX design for user that provide meaningful and relevant experiences to users.

7. References

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https://developer.android.com/guide/components/activities/activity-lifecycle

Java for android :https://www.coursera.org/learn/java-for-android/home/welcome

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Android APP with Laravel API:https://www.cloudways.com/blog/connect-android-app-with-laravel-api/

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