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by Gunawan Gunawan

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PELESIR: DIGITAL PLATFORM WITH A COMBINATION OF FRAMEWORKS TO INTRODUCE TOURISM IN SOUTHERN OF WEST JAVA, INDONESIA

Gunawan Undang^{1*}, Ali Mukti Tanjung², Tom Maskun³

¹Program studi Ilmu Administrasi, Program Pascasarjana, Universitas Pembinaan Masyarakat Indonesia (UPMI), Medan ⁵20214, Indonesia.

²Program studi Ilmu Hukum, Program Pascasarjana, Universitas Pembinaan Masyarakat Indonesia (UPMI), Medan 20214, Indonesia.

³Program studi Manajemen, Sekolah Pascasarjana, Universitas Al Ghifari, Bandung 40195, Indonesia.

*Corresponding Author: gunawanundang@gmail.com

Abstract

This study aims to offer a tourism solution amidst the global pandemic of COVID-19 as well as to introduce a variety of tourism choices located in southern part of West Java province, Indonesia through a digital platform. The digital platform is created using a combination of Laravel and CodeIgniter frameworks which is later called Velniter. A development method utilizing a prototype model SDLC (System Development Life Cycle) consisting of basic need identification, early prototype development, prototype review, and prototype evaluation was employed. This study is able to create a digital platform namely "Pelesir" using such a method. Users of the platform are able to enjoy a variety of tourism types in southern West Java virtually. They are also given information about a tourism destination they are visiting such as gifts, location coordinates, location routes integrated with Google Maps, and brief descriptions. The use of Velniter framework which is a combination of Laravel and CodeIgniter is able to give easier access to develop such a digital platform and provide good security.

Keywords: Digital platform, Combination of framework, Tourism, Southern of West Java

1. Introduction

Wide and massive development of digital platforms is affected by a variety of programming languages and frameworks used [1], particularly on web-based platforms featuring PHP codes. Each of the languages and frameworks come with strengths and weaknesses. However, some of the most popular and commonly used PHP frameworks are Laravel and CodeIgniter [2–4]. Based on Google trends, both of the frameworks are better in comparison with the other PHP types [5].

Either Laravel or CodeIgniter has its own advantages and disadvantages. It is known that CodeIgniter is object-oriented while Laravel is object relational. This indicates that CodeIgniter focuses on objects yet Laravel comprises the combination of object-oriented and relational database [6,7]. In terms of

authentication, CodeIgniter does not provide class authentication feature while Laravel does. In addition, CodeIgniter does not have unit testing where Laravel does [2,8]. The nature of CodeIgniter framework is object-oriented event-driven meaning that it is based on a certain event. In the meantime, the Laravel is component-oriented which means that it combines available components to become a running program. It is also believed that CodeIgniter is easier to understand by beginners yet Laravel is more difficult as it contains more features which might be not easy to understand by beginner programmers. Thus, Laravel is more compatible for experienced programmers [9,10].

In this study, we tried to combine both Laravel and CodeIgniter frameworks in order to create a digital platform to introduce a variety of tourism types in southern West Java, Indonesia. Such a combination is intended to acquire advantages and reduce disadvantages of both the frameworks. We named such a combined framework "Velniter" [11].

Natural and cultural heritage of Indonesia is such a huge potential, including one located in West Java, Indonesia. These two types of potential, with good management, are a capital of tourism development [12,13]. Southern part of West Java has such tourism potential as mountains, jungle, sea, beaches, rivers, and also culture [14]. It is commonly known that one of the pillars of national development is tourism as economic growth in Indonesia and other South East Asian and Asian countries is obtained through tourism [15]. Literature also shows that tourism is able to create various business opportunities, provide job vacancies, encourage income equity, improve income levels, and enhance national economic growth through tax [16,17]. The number of tourists coming to Indonesia keeps increasing; for instance, in December 2019, there were 1,377,067 international tourists coming to Indonesia through different gates all over the country [18]. Based on tourists' country origins, the highest-visiting tourist countries to Indonesia in order are Malaysia, Singapore, China, Australia, and Timor Leste [18]. Another literature concludes that tourism sector gives stimulus to other sectors such as production, transportation, expedition, and supports health programs, cultural facility projects, and environmental preservation [19].

4 Starting in late 2019, the world was faced by a global health issue caused by COVID-19 pandemic. World Health Organization (WHO) declared that it was a pandemic on 11 March 2020 [20,21]. There have been massive impacts of the pandemic as the number of patients infected by the virus keeps increasing. COVID-19 also creates new rules in daily lives namely health protocols which consist of physical distancing, mask wearing, and hand washing. Such conditions also occur in Indonesia as the government huge-scaled social distancing (PSBB) to reduce the widespread infection of the virus. Both state and private institutions then implement limitations of works such as work from home and educational institutions also implement school from home [22]. Consequently, this condition also impacts people's activities as their mobility is getting limited and even stopped. Several activities which used to be easy to do turn out to be only done in private. Another big impact also occurs in the economic sector as the need fulfillment focuses no longer of tertiary needs, yet more on primary and secondary needs.

Policies on lockdown and PSBB also affect the movement of both humans and non-humans. Business sectors depending on international, national, and regional

streams of humans and non-humans are facing a big challenge. Transportation industry, especially ones providing interprovincial services should also be limited and even stopped temporarily. The Indonesian government also gradually closes several routes and banned commercial airplanes to take passengers. The same rules apply to sea transportation as well. These types of banning really impact tourism destinations [23]. In addition, the people are also encouraged to not travel. In March 2020, UNWTO announced that all the tourism chains will be impacted by COVID-19 [24]. Around 80% of the tourism small and medium enterprises (SMEs) with millions of professions are affected by the virus. UNWTO even revised the international tourism growth prospect into -1% to 3% with financial loss approximately ranging from \$ 30 billion to \$ 50 billion. International tourists were predicted to reach its growth by 3% to 4% pre-pandemic. Countries in Asia Pacific were predicted to have the worst impacts, with the decreasing number of tourists by 9% to 12% [25]. Within the same month, UNWTO also evaluated the impacts of the virus to the international tourism. It was acquired that international tourism has developed since 1995 and even survived the SARS in 2003 and global economic crisis in 2009. Those issues could actually be overcome in 2019, indicated by the increasing number of tourists reaching 1.461 million people as presented in Figure 1 [24].

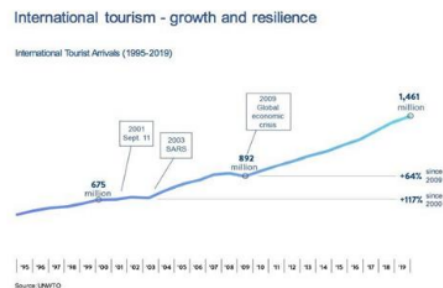


Fig 1 International Tourism-Growth and Resilience, source: UNWTO

The main objective of this study is to provide an alternative solution in order to solve problems of tourism, particularly southern West Java. Furthermore, this study also introduces a variety of tourism choices in the site through technology. This study specifically tries to develop a digital platform combining various frameworks aiming to introduce southern West Java tourism.

2. Development Method and Data

Development of the digital platform in this study used prototype model SDLC (System Development Life Cycle) [26]. The stages of development comprise basic need identification, early prototype development, prototype review, and prototype revision and evaluation (Figure 2).

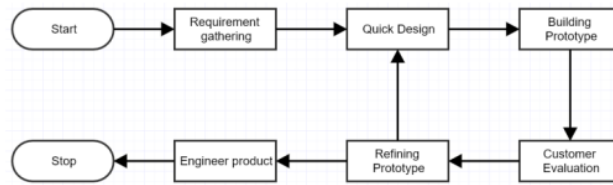


Fig 2. Stages of prototype model SDLC

The framework used in this study is a combination of Laravel and CodeIgniter frameworks which we named Velniter [11]. This combined framework has been published on Github at the following link <https://github.com/Velniter/velniter-framework>.

This study was initially started with data collection of southern West Java. The data consisted of situations, pictures, 360° videos, and coordinate locations. All the data were then made into digital database. The digital platform was also made in three languages including Indonesian, English, and Sundanese. The platform design was then built through coding using the Velniter platform. Coordinate integration with the Google maps API was also carried out. Finally, we named the digital platform "Pelesir" which translates into travel.

3. Results and Discussion

Data of situations, pictures, 360° videos, and coordinate locations were acquired in the early stage of the study. There were 87 tourism destinations located in the site consisting of beach and sea tourism, jungle tourism, waterfall tourism, river tourism, and cultural tourism. One of the most popular destinations in southern West Java is Pelabuhan Ratu beach. The beach is named after a south beach queen named Ratu Kidul. People in the neighborhood believe that the queen is the master of the beach. In the meantime, the waves in the beach are quite challenging so that surfers often go there. Another popular, even the most popular, destination is Green Canyon (Figure 3). The beauty of Green Canyon can be enjoyed by riding a boat or swimming. All the initial data were translated into three languages (Indonesian, English, and Sundanese) and make into digital database.



Fig 3. Green Canyon, Pangandaran

The Pelesir prototype had been made with the following code structure:

- app
 - > for security library, email, and user data
 - > for controllers
 - > for models
 - > views
- public
 - > for saving such files as pictures, javascripts, and css in assets folder
- vendor
 - > the core system of Velniter framework

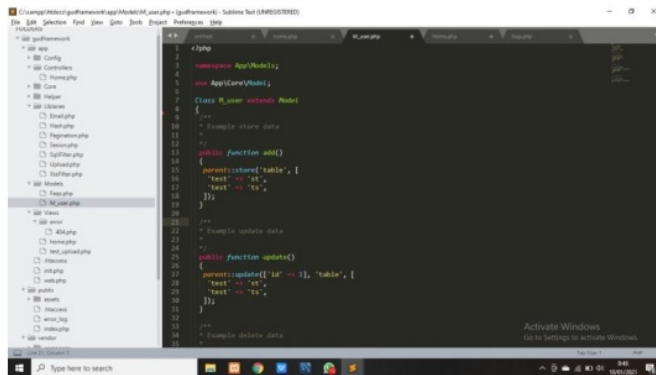
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1 <?php
2 namespace App\Controllers;
3 use App\Controllers;
4 use App\Libraries\User;
5 use App\Libraries\Upload;
6 use App\Models\User;
7
8 class index_Controller
9 {
10     public function index()
11     {
12         $data['app_name'] = 'welcome';
13     }
14     public function view()
15     {
16         view('home', $data);
17     }
18 }
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Fig 4. Controller Code

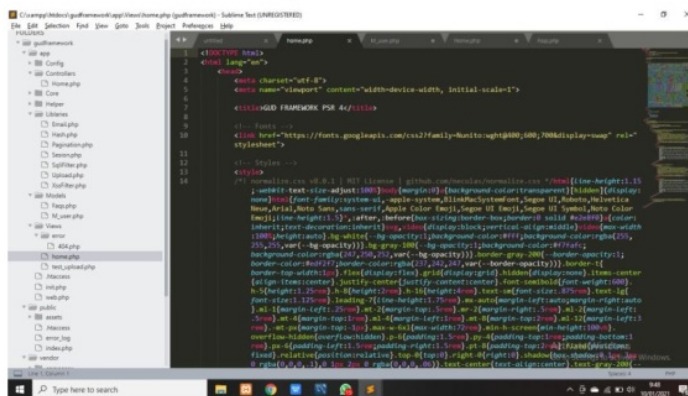
Figure 4 shows the controller code of Pelesir. Meanwhile, Figure 5 presents the models code and Figure 6 shows library code used of data input security. The use of such a framework for programmers aims to ease things up in creating a digital platform. The codes presented in Figures 4 to 6 are simple so that Velniter is compatible for beginners. The developed digital platform appears to be made by Laravel yet the simplicity is equal to the level of CodeIgniter. In terms of security, Velniter has the combined strengths of both frameworks. In terms of speed, the platform has that of both the frameworks as well. However, as Velniter is new, it is such a fresh framework ready for further development.



```

1 <?php
2 namespace App\Models;
3 use Illuminate\Database\Eloquent\Factories\HasFactory;
4 use Illuminate\Database\Eloquent\Model;
5
6 class Model extends Model
7 {
8     use HasFactory;
9
10    // Example create data
11
12    public function add()
13    {
14        parent::create(['table' => 1,
15            'test' => 'test',
16            'test' => 'test',
17        ]);
18    }
19
20    // Example update data
21
22    public function update()
23    {
24        parent::update(['table' => 1, 'table' => 1,
25            'test' => 'test',
26            'test' => 'test',
27        ]);
28    }
29
30    // Example delete data
  
```

Fig 5. Models Code



```

1 <input type="text" class="form-control" value="" style="width: 100%; height: 30px; border: 1px solid #ccc; border-radius: 4px; padding: 5px 15px; font-size: 14px; font-family: sans-serif; color: #333; background-color: #fff; transition: border-color 0.15s ease-in-out, box-shadow 0.15s ease-in-out;"/>
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Fig 6. Library Code for Data Input Security

Users are able to operate the digital platform through smartphones or other gadgets utilizing the internet. They can also travel virtually to destinations located in southern West Java as they are provided with 360° videos in every destination (Figure 7). Moreover, they obtain information about the destination ⁶ such as brief description of the destinations, giftshops, and any other locations integrated with

Google Maps enabling them to find the routes to reach their desired destinations. Some of the other displays of the platform are presented in Figure 8.

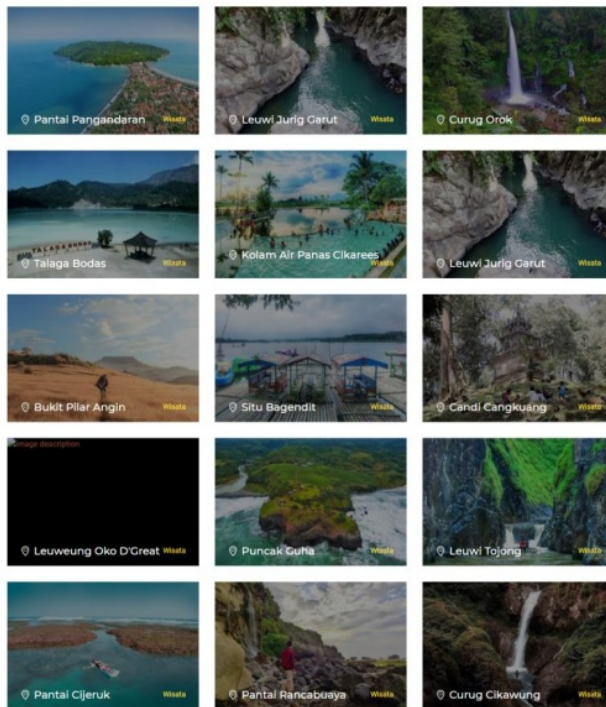


Fig 7. 360° Videos in Every Destination

Tourism is one of the human needs to fulfill. In this context, humans serve as consumers as discussed in a book entitled Consumer Behavior in Travel and Tourism [27]. Maslow's hierarchy of needs give simplified understanding of human needs as tourism is believed to fulfill humans' needs of recognition [28]. In relation to this, the developed platform is an alternative to fulfill this kind of

need **as users** can virtually enjoy travel and tourism, particularly in the areas of southern West Java.

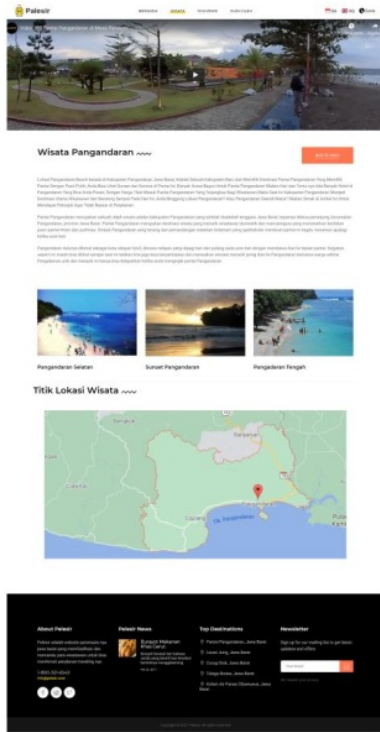


Fig 8 (a). Details of Destinations

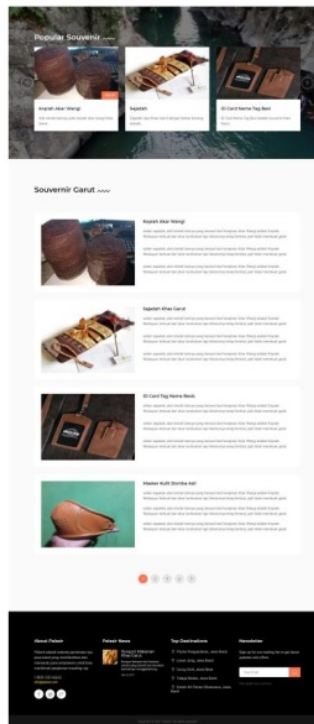


Fig 8 (b). Information of Gifts

4. Conclusions

The primary objective of this study is to solve issues in tourism within the pandemic era as well as to introduce various types of tourism in southern West Java using a digital platform. While virtually enjoying tourism destination in the areas, users are also given valuable information about it. Such information includes giftshops, location coordinates, and routes integrated to Google maps. The developed platform, namely Velniter, has been proven to be both user-friendly and secure as it combines two previously developed frameworks namely Laravel and CodeIgniter.

5. References

- [1] Prokofyeva N and Boltunova V 2017 Analysis and Practical Application of PHP Frameworks in Development of Web Information Systems

- Procedia Comput. Sci.* **104** 51–6
- [2] Laaziri M, Benmoussa K, Khoulji S and Kerkeb M L 2019 A Comparative study of PHP frameworks performance *Procedia Manuf.* **32** 864–71
- [3] Dhina M A, Hadisoebroto G and Mubaroq S R 2019 Development of E-Practicum Module for Pharmacy Physics Learning *Momentum Phys. Educ. J.* 95–102
- [4] Widiaty I, Riza L S, Abdullah A G and Mubaroq S R 2020 Multiplatform application technology–based heutagogy on learning batik: A curriculum development framework *Indones. J. Sci. Technol.* **5** 45–61
- [5] Google Trend 2020 laravel, codeigniter, cakePHP, symfony - Explore - Google Trends
- [6] Das R and Saikia L P 2016 Comparison of Procedural PHP with Codeigniter and Laravel Framework *Int. J. Curr. Trends Eng. Res.* **2** 42–8
- [7] Li X, Kaman S and Chishti J A 2017 An empirical study of three PHP frameworks *2017 4th International Conference on Systems and Informatics (ICSAI)* (IEEE) pp 1636–40
- [8] Samra J 2015 Comparing performance of plain PHP and four of its popular frameworks
- [9] Stauffer M 2019 *Laravel: Up & Running: A Framework for Building Modern PHP Apps* (O'Reilly Media)
- [10] Soegoto E S 2018 Implementing Laravel framework website as brand image in higher-education institution *IOP Conference Series: Materials Science and Engineering* vol 407 p 12066
- [11] Velniter 2020 GitHub - Velniter/velniter-framework
- [12] Cater E 2006 Ecotourism as a western construct *J. Ecotourism* **5** 23–39
- [13] Dalem A 2002 Ecotourism in Indonesia *Link. Green Product. to Ecotourism Exp. Asia-Pacific Reg. Tokyo Asian Product. Organ.*
- [14] Dinas Pariwisata dan Kebudayaan Provinsi Jawa Barat 2020 Info Wisata
- [15] Lubis Z and Osman A 2014 Indonesian tourism sector: A potential sector that has not been optimized *Aust. J. Basic Appl. Sci.* **8** 286–90
- [16] Aynalem S, Birhanu K and Tesefay S 2016 Employment opportunities and challenges in tourism and hospitality sectors *J. Tour. Hosp.* **5** 1–5
- [17] Ali M A M, Ismail M A F Bin, Ali M A B M, Ramli M F Bin and Idris N A R B N 2018 The Determinants of Perceive Impact on Tourism Tax Implementation among Foreign Tourist in Pahang. *Glob. Bus. Manag. Res.* **10**
- [18] Sucipto A, Ntb U, Ratulangi S, Sulut U, Riau U, Nad U, Yani A, Jateng U and Ii B 2019 Data on Monthly Foreign Tourists Visit in 2019 *Minist. Tour. Creat. Econ.* **2018** 2018–20
- [19] Subagyo H 2019 The Effect of Destination Brand Awareness on Destination Brand Loyalty Through Brand Image, Perceived Brand Quality, Brand Value and Brand Satisfaction in Banyuwangi City As a Tourism Objective *Arch. Bus. Res.* **7** 211–25
- [20] Velavan T P and Meyer C G 2020 The COVID-19 epidemic *Trop. Med.*

Int. Heal. **25** 278

- [21] Organization W H 2020 Coronavirus disease (COVID-19)
- [22] Setiati S and Azwar M K 2020 COVID-19 and Indonesia *Acta Med. Indones.* **52** 84–9
- [23] Bakar N A and Rosbi S 2020 Effect of Coronavirus disease (COVID-19) to tourism industry *Int. J. Adv. Eng. Res. Sci.* **7**
- [24] Pololikashvili Z 2020 COVID-19 Statement | UNWTO *WORLD Tour. Organ.*
- [25] Sugihamretha I D G 2020 Respon Kebijakan: Mitigasi Dampak Wabah Covid-19 Pada Sektor Pariwisata *Indones. J. Dev. Plan.* **4** 191–206
- [26] Kute S S and Thorat S D 2014 A Review on Various Software Development Life Cycle (SDLC) Models *Int. J. Res. Comput. Commun. Technol.* **3** 778–9
- [27] Chon K S, Pizam A and Mansfeld Y 2012 *Consumer behavior in travel and tourism* (Routledge)
- [28] McLeod S 2007 Maslow’s hierarchy of needs *Simply Psychol.* **1** 1–8

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