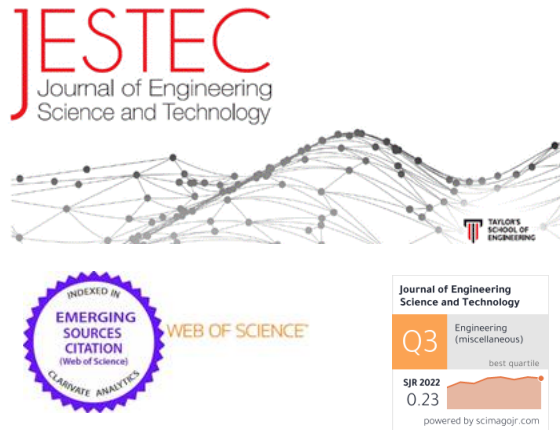


Journal of Engineering Science and Technology (JESTEC)

- [Home](#)
- [Editorial Board](#)
- [Submit a paper](#)
- [Indexing and Awards](#)
- [Reviewers](#)
- [Articles in Press](#)
- [Publication Ethics](#)
- [Archives](#)



- **Editor-in-Chief**
Assoc Prof Dr Abdulkareem Sh. Mahdi Al-Obai
Taylor's University, Malaysia
- [Editorial Board](#)

Journal of Engineering Science and Technology (JESTEC) indexed by [SCOPUS](#) since 2010.

Journal of Engineering Science and Technology has been selected for coverage in [Clarivate Analytics products and services](#).

Beginning with 2016, this publication will be indexed abstracted in:

[Emerging Sources Citation Index \(ESCI\)](#)

ISSN: 1823-4690

Aims and Scope

Aims & Scope

JESTEC (Journal of Engineering Science and Technology) is a peer-reviewed journal that aims to publish and disseminate original research articles latest developments in all fields of engineering science and technology. The journal publishes original papers in English, which contribute to understand engineering science and improving engineering technology and education. The articles may be theoretical (including computational), experimental both. The contribution should be unpublished before and not under consideration for publication elsewhere.

JESTEC maintains a standard double-blind peer-review process. The double-blind process means that the author and the reviewer's identity not known to each other.

JESTEC is an Open Access journal and does not charge readers or their institutions to access the journal articles. Open access supports rights to read, download, copy, distribute, print, search, or link to these articles' full texts, provided they are properly acknowledged and cited.

JESTEC publishes six issues per year.

The publication fees in JESTEC include submission, reviewing, editing, publishing, and uploading the accepted article to the JESTEC website. All these services, JESTEC charges USD375 or MYR1550 per paper (inclusive 6% SST). The number of pages per paper should be a minimum of 10 pages and a maximum of 15-18 pages.

Subscriptions and enquiries

Contact the [Executive Editor](#)

- [Home](#)
- [Editorial Board](#)
- [Submit a paper](#)
- [Indexing and Awards](#)
- [Reviewers](#)
- [Articles in Press](#)
- [Publication Ethics](#)
- [Archives](#)



Copyright ©2006-2023 by: School of Engineering, Taylor's University

Editor-In-Chief

- **Abdulkareem Shafiq Mahdi Al-Obaidi**, Ph.D.
Associate Professor, School of Computer Science and Engineering
Faculty of Innovation and Technology
Taylor's University
Taylor's Lakeside Campus
No. 1 Jalan Taylor's, 47500 Subang Jaya
Selangor DE
Malaysia

Editors

- **G. Davies**, Ph.D.
Professor, Dean, Faculty School of Engineering
The University of New South Wales
UNSW Sydney
NSW 2052
Australia
- **Rodney Chaplin**, Ph.D.
Associate, Professor, Associate Dean (International)
Faculty of Engineering
The University of New South Wales
UNSW Sydney
NSW 2052
Australia
- **Andrew Ooi**, Ph.D.
Associate, Professor, Assistant Dean (International)
School of Engineering
The University of Melbourne
Victoria 3010
Australia
- **David WL Hukins**, Ph.D.
B.Sc., Ph.D. (London), D.Sc. (Manchester), C.Phys., F.Inst.P., F.I.P.E.M., F.R.S.E.
Professor of Bio-medical Engineering
Head of Mechanical and Manufacturing Engineering
School of Engineering
Mechanical Engineering
The University of Birmingham
Edgbaston
Birmingham
B15 2TT
United Kingdom
- **Takayuki Saito**, Ph.D.
Professor, Shizuoka University
Graduate School of Science and Engineering
3-5-1 Johoku
Hamamatsu
Shizuoka 432-8561
Japan
- **S. B. Chin**, Ph.D.
Professor, The University of Sheffield
Mechanical Engineering Department
Mappin Street, Sheffield
S1 3JD,
United Kingdom
- **Xiaoyu Luo**, Ph.D.
Professor, Department of Mathematics
University of Glasgow

Glasgow G12 8QW

- **Stephen B M Beck**, Ph.D.
Professor in Mechanical Engineering
Faculty Director of Learning and Teaching – Engineering
Department of Mechanical Engineering
The University of Sheffield
Mappin Street
Sheffield
S1 3JD
United Kingdom
- **Xiao (Yun) Xu**, Ph.D.
Professor of Biofluid Mechanics
Department of Chemical Engineering
Imperial College
London
United Kingdom
- **Seeram Ramakrishna**, Ph.D.
Professor, Dean, Faculty of Engineering
Dean's Office, Block EA, #07-26
9 Engineering Drive 1,
National University of Singapore,
Singapore 117576
- **Ramesh Singh Kuldip Singh**, Ph.D.
Senior Professor of Mechanical and Materials Engineering
Faculty of Engineering
University of Malaya, 50603 Kuala Lumpur, Malaysia
Universiti Teknologi Brunei, BE1410 Gadong, Brunei Darussalam
- **Gary Hawley**, Ph.D.
Professor of Automotive Engineering
Dean and Medlock Chair of Engineering,
Faculty of Engineering and Design
University of Bath,
Claverton Down, Bath BA2 7AY
United Kingdom
- **Yousif Abdall Abakr**, Ph.D.
School of Mechanical Engineering
The University of Nottingham, Malaysia Campus
Jalan Broga, 43500 Semenyih, Selangor
Malaysia
- **R. Rajesh @ Nithyanandam**, Ph.D, PGChETL, MICHEM
Professor, Department of Chemical Engineering
Mohamed Sathak Engineering College
Kilakarai, Tamil Nadu
(Affiliated to Anna University)
India
- **Chong Perk Lin**, Ph.D, PgCLTHE, FHEA, CEng, MIMechE
Senior Lecturer of Mechanical Engineering
Programme Leader of BEng Tech (Hons) Mechanical Engineering
School of Computing, Engineering and Digital Technologies
Teesside University, Middlesbrough, Tees Valley. TS1 3BX.
United Kingdom.



Experimental behaviour of the reinforced concrete beams strengthened and repaired with steel plates

M. D. Abdullah, J. T. Abodi, M. F. Ojaimi

3726 – 3741

The development of a path planning algorithm combining the rapidly-exploring random tree algorithm and the particle swarm optimization algorithm

A. Malik, M. A. R. Pohan

3742 – 3754

Natural dye sensitizers mixture of curcumin, chlorophyll, and anthocyanin for dye-sensitized solar cells

D. Widhiyanuriawan, M. H. Mubarak, F. Maulana, C. Harsito, S. D. Prasetyo, Suyitno, Z. Arifin

3755 – 3765

Hydrogen-fuelled internal combustion engine and curtailing NOx emissions with cost benefit analysis

Z. Abbas, M. Amjad, M. Waqas, S. Larkin

3766 – 3786

Physical and thermal characteristics of coco peat fibre reinforced polyurethane composite for insulation box in marine application

N. Fitriadi, Balkhaya, M. Rizal, S. Fonna

3787 – 3799

Amplitude percentage index study for beam vibration signal analysis based on EEMD

T.-T. Luu, K.-D. Phan, V.-T. Luong

3800 – 3814

Comparative study on compressive strength of fibre-reinforced concrete made with industrial hybrid fibre and natural waste fibre

M. S. H. M. Sani, F. Muftah, M. F. Muda, L. S. Ho

3815 – 3833

The effect of quenching and holding time on white cast iron material properties applied to grinding balls on ball mills for cement production

U. Sumirat, A. S. Husen, A. Saputra, I. Kuntadi, M. Komaro

3834 – 3842

Open source software maintenance effort estimation: a systematic mapping study

C. Miloudi, L. Cheikhi, A. Abran, A. Idri

3843 – 3861

Implementation of augmented reality on earthquake and tsunami socialization in BMKG Goes to school

Ruhimat, E. S. Soegoto

3862 – 3871

Strength enhancement of reinforced peat with rubber waste and melamine urea formaldehyde (MUF) resin

N. Razali, N. M. Sa'don, A. R. A. Karim

3872 – 3892

Forecasting wave height and wave period using long short-term memory and gated recurrent unit neural networks

A. R. Khan, M. S. Ab Razak, B. Yusuf, H. Z. M. Shafri

3893 – 3915

Design of non-organic trash processing machine based on solar panels in tourism village

E. S. Soegoto, T. V. L. Gaol, C. N. Albar, N. P. Dewi

3916 – 3925

Silk fiber orientation effect on flexural and tensile strength of zeolite-reinforced high-density polyethylene composites

Purnomo, P. H. Setyarini, H. Purwanto, Solechan

3926 – 3939

Correlation-based feature selection with bag-based fusion scheme for multi-instance learning application

M. Berahim, N. A. Samsudin, A. Mustapha

3940 – 3955

Website-based catering service information system

E. Suhayati, W. Novianti, A. N. Zakiah

3956– 3972

The optimal location and sizing of single and multiple STATCOM using analytical approaches under high loading occasion

B. Ismail, N. I. A. Wahab, M. L. Othman, M. A. M. Radzi, K. N. Vijayakumar, M. K. Rahmat, M. N. M. Naain

3973 – 3988

Efficient single image haze removal for advanced driver assistance systems by optimizing PatchGAN based conditional GAN

O. A. Ramwala, S. A. Dhakecha, C. N. Paunwala, M. C. Paunwala

3989 – 4004

Non-volatile binary content addressable memory cell with read/write scheme using spin-polarized current mode magnetic tunnel junction

A. Sinha, M. Guduri, P. Srivastava, A. Islam

4005 – 4021

Improving the performance of Laston AC-WC padding with the utilization of nickel slag waste

Falderika, N. Fitrah

4022 – 4031

Effect of solid volume fraction and particle size on rheology of debris flow using digital hybrid rheometer

M. A. Khan, Z. Mustafa, I. H. Harahap, A.-L. B. Balogun, M. B. Ibrahim, A. Ahmad

4032 – 4046

Embedded system design of path planning for planar manipulator based on chaos a* algorithm with known-obstacle environment

M. L. Muhammed, E. H. Flaieh, A. J. Humaidi

4047 – 4064

Particle size and pore size of rice husk ash on the resin-based brake pads performance: Experiments and bibliometric literature review

A. B. D. Nandiyanto, S. Fatimah, R. Ragadhita, D. N. Al Husaeni
4965 – 4081

Finite element analysis of stress distribution on high-heeled shoes

S. Sivarao, S. Sivakumar, S. Ramesh, K.Y. S. Lee, M. S. Salleh, M. A. M. Ali, D. Rao, K. Kumaran, S. Pujari, U. K. Vatesh
4082 – 4091

Seismic structural analysis of multi-story concrete building based on Halabja 2017 earthquake

A. R. Mohammed, L. R. Abdulwahed, B. Rashid
4092 – 4106

Mechanical and structural properties improvement of wheat starch and poly (vinyl alcohol) bio-nanocomposite films formed by ethanol non-solvent precipitation

C. K. Sheng, D. M. Fong
4107 – 4116

Curcumin inhibitor for iron corrosion isotherm adsorption using C++ program in determining NaCl solution

A. B. D. Nandiyanto, D. F. Al Husaeni, R. Ragadhita, R. Maryanti, F. N. Resa
4117 – 4129

An amalgamation of active appearance model and opponent color local binary pattern in age estimation

Q.-Y. Chang, S.-C. Chong, T.-S. Ong
4130 – 4143

Mechanical properties of foamed concrete reinforced with natural fibre

M. A. Othuman Mydin
4144 – 4162

Sustainable urban space strategies in the reconstruction of destroyed cities after the wars

K. K. Kawther, R. H. Hassan
4163 – 4186

Adsorption isotherm analysis of floating composite zinc imidazole framework-8 in millimeter epoxy cubes

A. B. D. Nandiyanto, S. N. Hofifah, R. Ragadhita
4187 – 4202

Investigation of thermosolutal convection in a side wall heated and soluted cavity filled with a binary nanofluid

M. Naima, M. Elmir, E. Benachour, K. Naima
4203 – 4217

Automatic counting method of touching wheat grains with Fourier analysis and shape similarity method

C. Y. Wang, M. L. Sun, L. P. Liu, P. Liu, X. Li
4218 – 4234

Using household-scale biogas digesters as a tool for poverty alleviation in central Vietnam

T. H. Hoang, T. Kato, H. Hoang
4235 – 4252

Innovation of “Braille Corner” digital learning based on learning for the students with visual impairment in inclusion settings

Y. Suherman, J. Juhanaini, R. Maryanti, E. Rochyadi
4253 – 4265

Optimization experiment on polishing of cylindrical roller bearings

D.-N. Nguyen, C.-T. Doan, T.-D. Lam

4266 – 4276

CFD modelling of sand particle transport in a horizontal multiphase 90° pipeline flows

N. T. A. Othman, F. N. Rostam

4277 – 4290

Noise management strategy for stone and metal fabrication industry

C. N. Subida, M. A. R. Codera

4291 – 4307

Analysis of NBTI effects on read and write operations of 6T SRAM cells

H. Zahari, H. Hussin, M. Muhamad, N. Soin, Y. A. Wahab

4308 – 4319

Flexural behaviour of rectangular CFST beams strengthened with innovative steel plate reinforcements

N. S. Obeng, A. A. Abdullah

4320 – 4334

Navigation and control design for catamaran autonomous surface vessel in gazebo environment

C. K. Cheong, M. R. Arshad, S. Din

4335 – 4354

The resistance evaluation of the autonomous underwater vehicle (AUV) using the low speed wind tunnel test

A. Sulisetyono, R. E. Wardhana

4355 – 4366

Ranked multi-view skeletal video-based sign language recognition with triplet loss embeddings

S. A. Ali, M. V. D. Prasad, P. V. V. Kishore

4367 – 4397

Hydrological modelling and evaluation of detention ponds transformed from roundabout to mitigate urban flooding

K. K. Kuok, P. C. Chiu

4398 – 4409

Brain tumor MRI medical images classification model based on CNN (BTMIC-CNN)

S. A. Y. Al-Galal, I. F. T. Alshaikhli, M. M. Abdulrazzaq, R. Hassan

4410 – 4432

A 11.91 pJ/step 70-MS/s 7-bit sub-ranging SAR-ADC in 90 nm CMOS technology

A. Khatak, M. Kumar, S. Dhull

4433 – 4447

Influence of sodium hydroxide concentrations on reeds (*Imperata Cylindrica*) extraction process

F. Kusumattaqiin, N. W. Pratiwi, S. N. Izzah, C. Pebriwirasanti

4448 – 4458

Development of instrument in post occupancy evaluation for IBS high-rise residential through Rasch measurement model

M. A. A. Rahman, M. K. Musa, N. Hashim, M. N. A. Azman

4459 – 4468

Selective harmonic elimination pulse width modulation (SHEPWM) for five-phase nine-level inverter using improved whale optimization algorithm

M. A. S. Bimazlim, B. Ismail, M. Z. Aihsan, R. Ali, M. S. M. A. Walter

4469 – 4486

Implementing load-balanced concurrent service layer for improving the response time of an IOT network.

J. K. R. Sastry, K. V. Sowmya

WEBSITE-BASED CATERING SERVICE INFORMATION SYSTEM

ELY SUHAYATI*, WINDI NOVIANTI, AURA NUR ZAKIAH

Faculty of Economics and Business, Universitas Komputer Indonesia,
Jl. Dipatiukur no. 112-116, Kec. Coblong, Kota Bandung, Indonesia

*Corresponding Author: ely.suhayati@email.unikom.ac.id

Abstract

Physical distancing is the new government policy during the COVID-19 pandemic, and it has greatly affected Erna Sari Catering. One of Erna Sari Catering's marketing strategy solutions during the COVID-19 Pandemic is to carry out all business processes using electronic technology, particularly information technology. The purpose of this research is to develop marketing strategies and job vacancies through digital services. This research was conducted by implementing website-based digital marketing in order to assist Erna Sari Catering's business in developing and excelling in digital technology, as well as to assist the government in reducing unemployment caused by the COVID-19 Pandemic. The use of digital marketing for business services and job vacancies is expected to be a way to speed up recovery and economic growth for the Indonesian people after the COVID-19 Pandemic.

Keywords: Business services, Digital marketing, Job vacancies, Strategy, Website.

1. Introduction

Physical distancing, known as Pembatasan sosial berskala besar in Indonesia, is one of the government policies used to combat the spread of the Corona Virus [1]. The existence of these restrictions greatly affects all types of businesses. Many businesses are forced to close due to a lack of customers, and workers are laid off due to business owners' inability to pay wages [2]. Digital entrepreneurs with their new ways of doing business have made a big impact around the world, especially in the last decade [3]. Digitization is not reduced to a new development in entrepreneurship [4]. Digital marketing technology is a solution that partners require in order to market their products through digital media, such as social media. Social media is a website-based method of marketing a product in which partners can market content as a product in the form of web posts and as web pages in the form of images, photos, and videos [5].

According to a 2017 survey conducted by the Association of Internet Service Providers in 2017, it is known that Internet users in Indonesia reached 5.68% of the total population of Indonesia, or 262 million people. Furthermore, Internet use has increased threefold in the last eight years, registered in business, business sector, and the economy, up to 37.82% - 51% of internet users who search for information about products and services also find information that helps their work. This extraordinary number can be used as an indicator for entrepreneurs who are adopting a digital approach, products, and services [6]. The effects of the COVID-19 pandemic are increasingly rampant for web providers in Indonesia. This is important to be used as research material. Erna Sari Catering is one of the MSMEs affected by the COVID-19 pandemic. Erna Sari Catering has not realized the importance of information technology because she is unfamiliar with the IT field, such as how to create content to market their products where buyers can order directly from home. With the 2021 Scientific Research Grant from RISTEKBUDEKTI through LPDP, it can help the government in overcoming economic problems at Erna Sari Catering through the creation of 2 application models, namely digital marketing strategies and digital job vacancies.

In the digital era, everyone has access to the Internet. This is one of the website-based digital marketing strategies. Websites are used to present marketing messages through page views and advertisements to reach many people in a short time [7]. Technological advancement in the twenty-first century have resulted in the use of the Internet for commercial purposes [8].

Justitia et al. [9] explained that with MSME Go Digital that business owners can strengthen the value proposition of their products and services offered, identify customer segments, reach wider customers, as well as save resources.

Aryanto and Victor [10] explained that the use of digital marketing in Photography Business Services using WordPress as a platform can help increase brand awareness/exposure to the public and potential service users if it is carried out on a scheduled and regular basis, as well as attracting and targeting buyers.

Rapitasari [11] used an application-based descriptive approach explained that application-based digital marketing is a strategy to increase customer satisfaction. Further, Hanim et al. [12] explained that the development of digital-based MSMEs is an alternative to saving the MSME sector during the COVID-19 pandemic. The service management information system makes wedding planners at Nana

Wedding Organizer Madiun using the waterfall and web-based DFD can increase the promotion area, make it easier for consumers to make ordering transactions, and make it easier for admins in data management [13].

This research is different from previous researches. The novelty of this research is that there are two functions in the development of digital services, The first is to provide marketing services and to be implemented in a mobile phone.

This research is necessary to help the government program to reduce unemployment caused by the COVID-19 pandemic because it has an impact on production and all community activities, including Erna Sari Catering, resulting in a decrease in business income or even no income/profit [14].

This research was funded by the Ministry of Education and Culture, Research and Technology from the 2021 Scientific Research Program Grant with the Entrepreneurship Research Grant Scheme which aims to provide product Marketing Service Applications to increase business at Erna Sari Catering business in marketing products/services in the form of images, photos or videos and provide job opportunities for people who are looking for work through the application of content creator job information services.

2. Methods

The method used in This research used a website-based qualitative description method with literature studies, field surveys, interviews, and questions and answers through a structured approach, a systematic application using data flow diagrams, mapping of lecturer and student participation in partnerships through collaboration with partner needs, and implementation of learning plans through job application makers. Content and app makers to enhance product marketing through images, videos, or photos. The partner for this research is CV Erna Sari Catering located in Pungkur Loji Village no. 23, Cicalengka Kulon, Waluya, Kec. Cicalengka, Bandung Regency, West Java Postal Code 0395 is a catering business and is engaged in food service, weddings, and event organization.

Based on the survey and interview results, it is known that Erna Sari Catering requires 2 service system functions, namely a web system created for Erna Sari Catering to show products or services in the form of images, videos, or photos for digital marketing and the second function is a job vacancy information service. These two functions are integrated centrally through a digital application.

This Integration System is designed using the SDLC (Software Development Life Cycle) method. One part of the SDLC method is the SDLC Waterfall. The Waterfall method is the earliest SDLC approach used for software development [15]. The sequence in the Waterfall Method is a series that starts from the process of planning, analysis, design, and implementation of the system [16].

The method used is carried out with a systematic approach, starting from the system requirements stage and then moving on to the analysis, design, coding, testing/verification, and maintenance stages. The steps that are passed must be completed one by one (we cannot jump to the next stage) and run sequentially. Therefore, it is called a waterfall (Fig. 1).

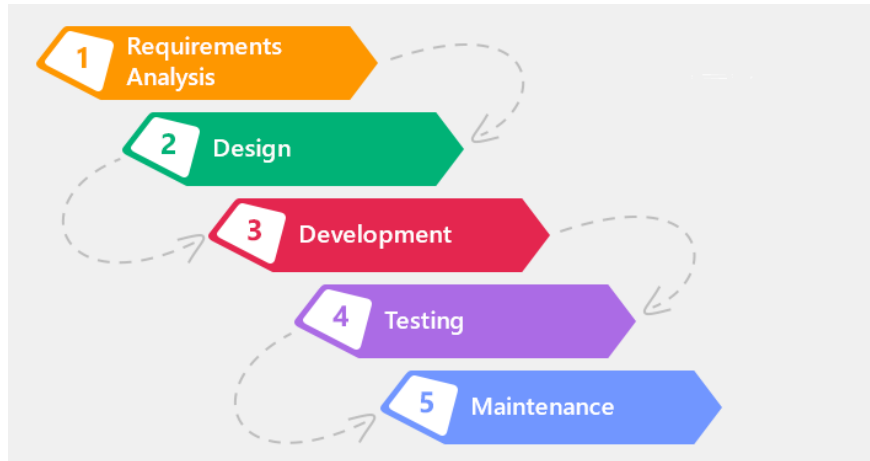


Fig. 1. Metode SDLC: *Waterfall model* [17].

2.1. Stages in performing the waterfall method

a. Requirement analysis

Before doing software development, a developer must know and understand the needs of information for software. This information collection method can be obtained in various ways including, discussion, observation, survey, interview, and so on. The information obtained is then processed and analysed so that complete data or information is obtained regarding the specifications of user needs for the software to be developed.

b. System and Software Design

Information about the requirements specification from the requirements analysis stage is then analysed at this stage and then implemented in the development design. The design is carried out to help to provide a complete picture of what must be done [18]. This stage will also help developers to prepare hardware requirements in making the software system architecture that will be made as a whole.

c. Implementation and Unit Testing

The implementation and unit testing phase are the programming phase. Software development is divided into small modules which will be combined in the next stage. In addition, in this phase, testing and checking of the functionality of the modules that have been made are also carried out, whether they meet the desired criteria or not.

d. Integration and System Testing

After all units or modules that have been developed and tested in the implementation phase are then integrated into the overall system. After the integration process is complete, further inspection and testing of the system as a whole is carried out to identify possible system failures and errors.

e. Operational Maintenance

In the last stage of the Waterfall Method, the finished software is operated by the user, and maintenance is carried out. Maintenance allows

developers to make improvements to errors that were not detected in the previous stages [19]. Maintenance includes repairing errors, improving the implementation of the system unit, and upgrading and adjusting the system as needed.

2.2. Use Case Diagram

A case diagram is used to describe the design of CV Erna Sari Catering. Use Case This diagram is used by 2 actors, namely Admin and Consumers. In this case diagram, each actor pays attention to his duties and roles in the information system that is built. For more details, see Fig. 2 and Tables 1 and 2.

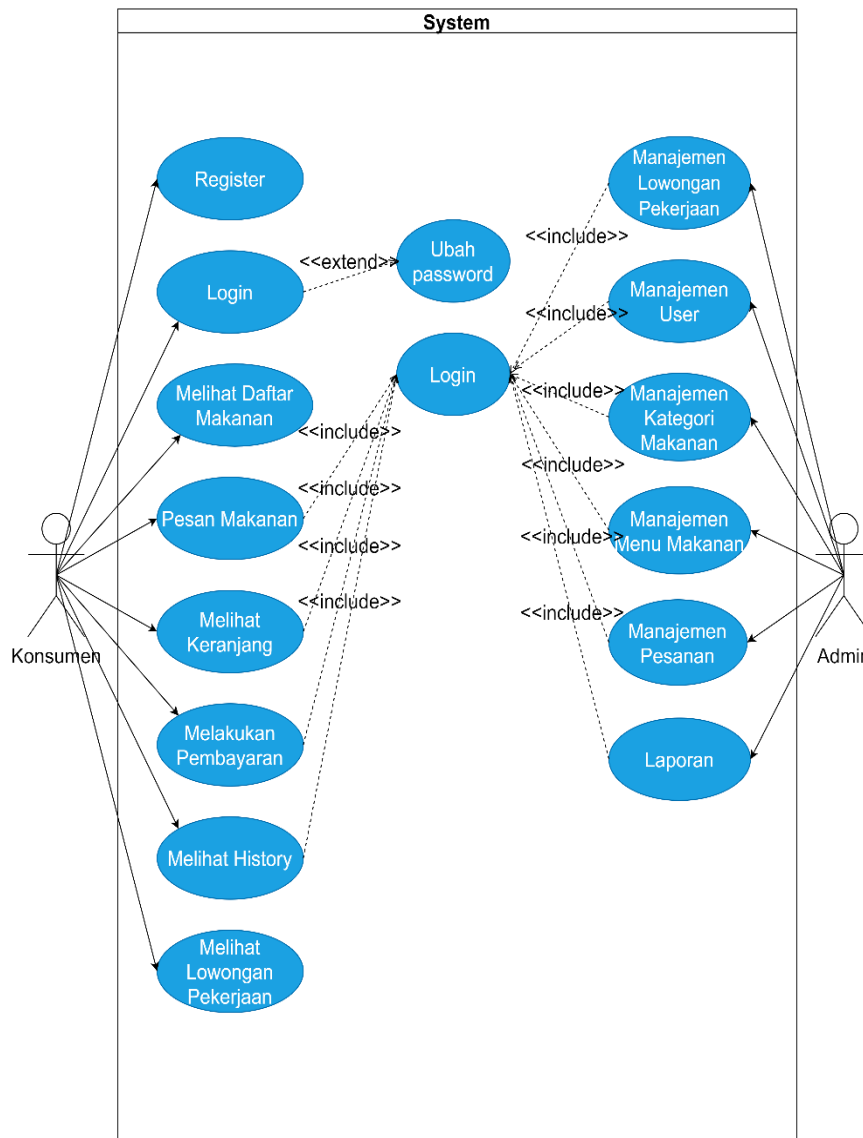


Fig. 2. Use case diagram CV. Erna sari catering.

Table 1. Use case diagram description.

No.	Actor	Description
1	Consumer	This consumer actor can log in, register an account or sign up, view menu lists, order food, make payments, view carts, and view stories.
2	Admin	This admin actor can perform user management processes, food category management, food menu management, order management, job vacancies management, view reports

Table 2. Use case diagram description.

No.	Use Case	Description
1	Register	The system displays a list form page for the user.
2	Login	The system displays the login form page for the user.
3	Viewing the food list	The system displays the food list page.
4	Food order	Users can select the food they want to order, and the system will display the food details along with the quantity input form
5	Cart View	The user goes to the cart page to find out the order details, the user will display a basket page containing details of the user's order
6	Payment	The user goes to the payment page for processing transactions with the transaction method and the system will display the personal data form
7	History	The system displays purchase history
8	Change Password	Users can change the old password to a new one
9	Job Vacancies	The system will display the job vacancies information
10	User management	Admin will manage users and customers
11	Food Category Management	Admin manages food menu categories
12	Food Menu Management	Admin manages the food menu
13	Order Management	Admin manages orders from customers
14	Reports	Admin can view and print the reports
15	Job Vacancies	Admin manages the job vacancies information

2.3. Activity Diagram

The following is the CV. Erna Sari Catering's activity diagram (Figs. 3 and 4):

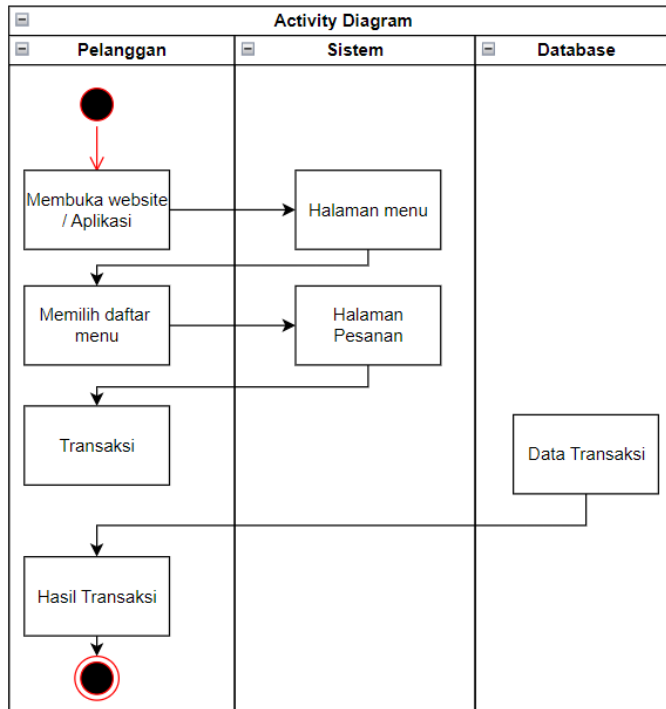


Fig. 3. Activity diagram transactions Manage's admin.

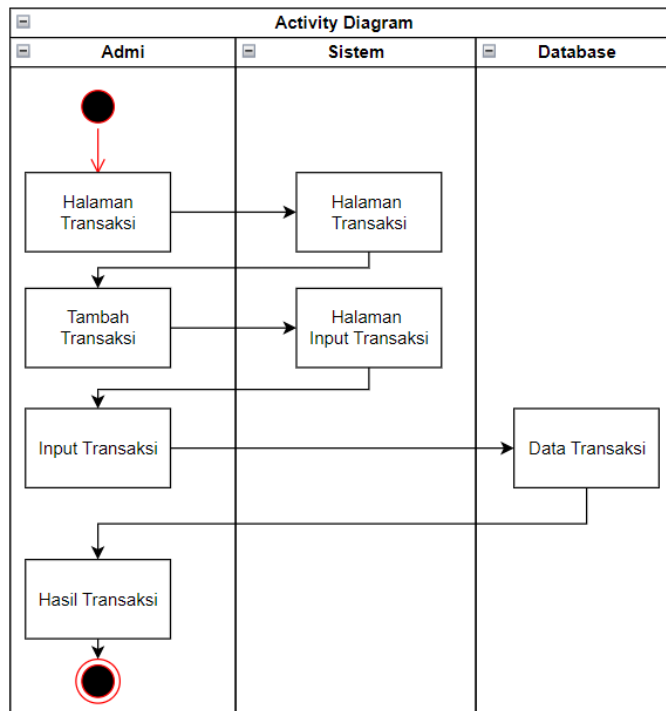


Fig. 4. Activity diagram customer order activity.

3. CV. Erna Sari Catering System Specifications

To ensure the system in the CV. Erna Sari Catering runs optimally, therefore detailed system specifications are needed as information material (Table 3).

Table 3. System specifications.

	Specifications
Web and Mobile Based Application	Laravel dan Web View
Operation System	Windows 10
Mobile Device	Lolipop 5.0
Laravel	9.0
Livewire	2.0

4. Results and Discussion

The results of this study are website-based digital services shown and the user interface and several displays from testing Erna Sari Catering's digital services from the point of view of admins and consumers.

4.1 Application Services for Digital Marketing Strategy

User Interface

User interfaces (UI) are all interactive system components (software or hardware) that provide information and control for users to complete certain tasks with interactive systems [20]. The UI has a function to connect various information between the user and the operating system so that the computer can be used [21]. The following is the interface that is built into the Erna Sari Catering system.

1. Landing Page

This page is the initial view when the website is first opened [22]. Where here customers can see the food menu and start ordering (Fig. 5).

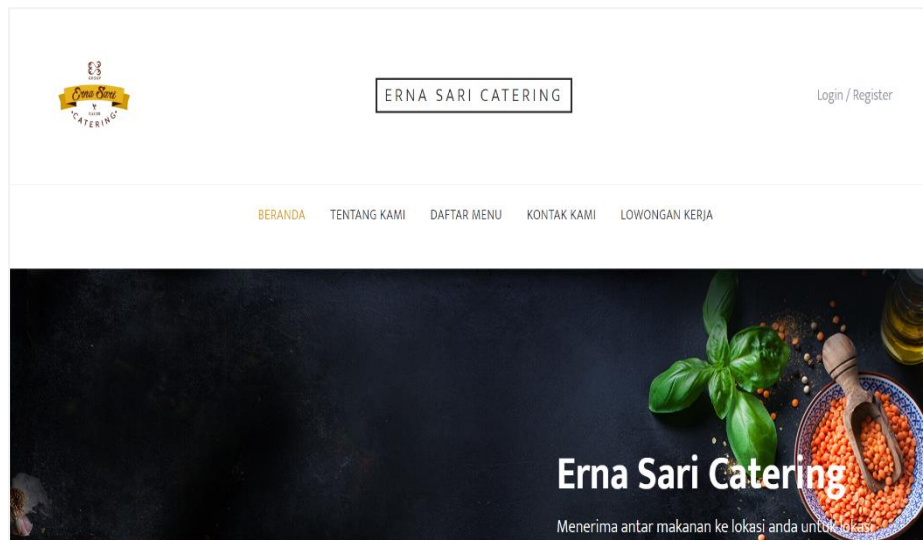


Fig. 5. Landing page.

2. Login Page

The following is the login screen for the Customer and Admin users, which after logging in will be directed to the Customer or Admin page (Fig. 6).

The screenshot shows the login page for ERNA SARI CATERING. At the top left is the company logo. In the center, the name 'ERNA SARI CATERING' is displayed in a box. To the right, there is a 'Login / Register' link. Below this is a navigation bar with links: BERANDA, TENTANG KAMI, DAFTAR MENU, KONTAK KAMI, and LOWONGAN KERJA. The main content area is titled 'Login' and contains two input fields: 'Email Address' and 'Password'. Below the fields are three buttons: a yellow 'MASUK' button, a blue 'LUPA PASSWORD' link, and a blue 'REGISTER' link.

Fig. 6. Login page.

3. Food Menu Page

The following is a Food Menu List page which is divided into several categories such as main menu, unit, and package where customers can choose the available menus (Fig. 7).

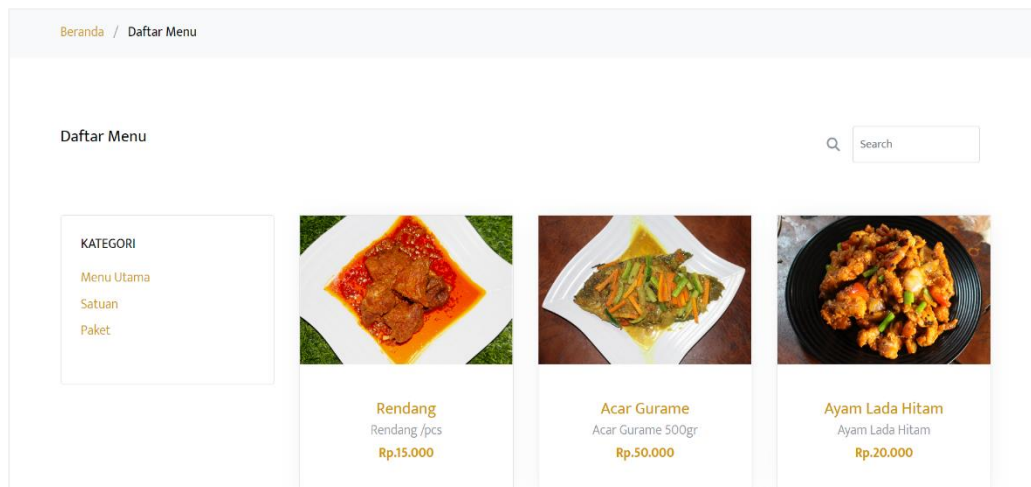


Fig. 7. Food menu list page.

4. Order Page

After the customer selects the food menu to be ordered, the customer will be directed to the following screen where the customer can enter the number of orders selected for the food (Fig. 8).

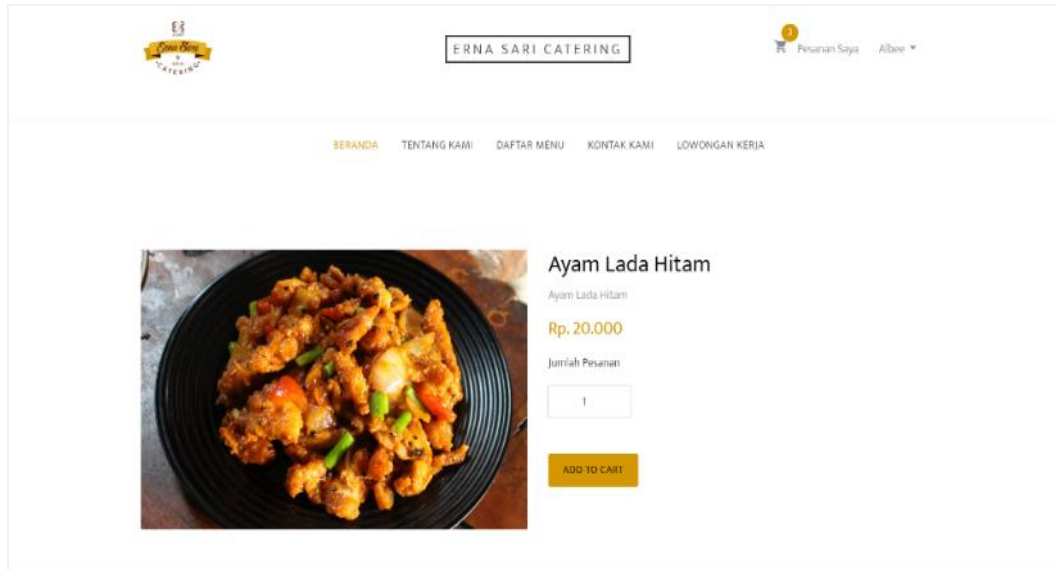


Fig. 8. Food menu order page.

5. Cart Page

On this page, the system accommodates the ordered food menu into the basket. If the customer wants to add a food menu, there is a "Continue shopping" feature to add the food menu that you want to add (Fig. 9).

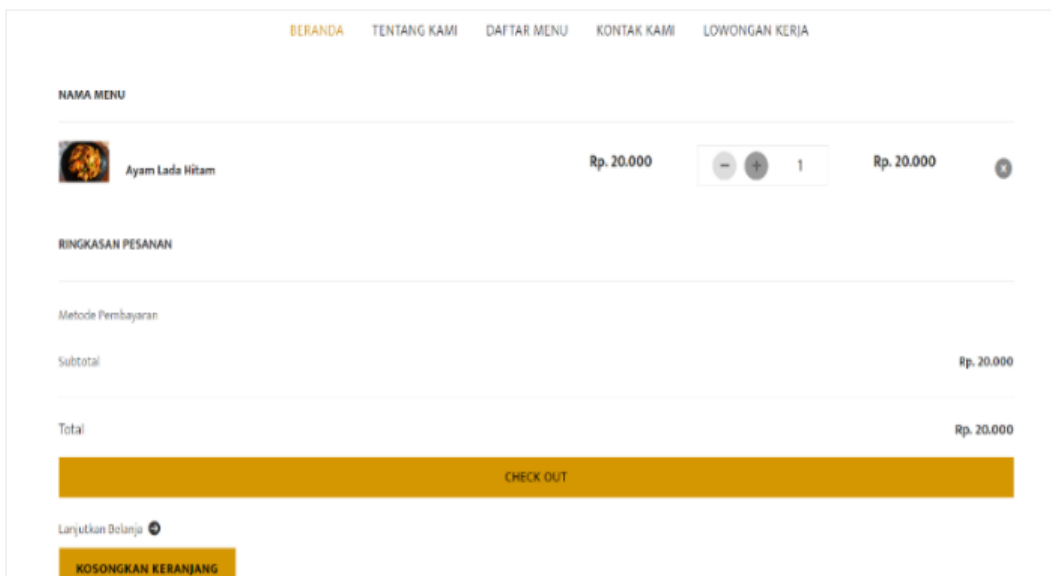


Fig. 9. Cart's page.

6. Checkout Page

The following display is a display for filling in several identities including customer addresses and selecting a payment method that will be processed after the customer makes a payment (Fig. 10).

Fig. 10. Checkout page.

7. Order History Page

This view displays a list of orders that have been ordered by customers (Fig. 11).

No	Order ID	Sub total	Total	Nama Lengkap	Email	No Hp	Alamat	Status	Order Date	Action
1	23	40,000.00	40,000.00	Albee	albee@gmail.com	12345678	Bandung	dipesan	2022-09-07 19:42:17	LIHAT DETAIL

Fig. 11. Order history page.

8. Admin Dashboard Page

This view is the initial view when the admin user logs in. In this view, the admin can see information about the number of food menus, the number of incoming orders, and customers who are registered in the Erna Sari system (Fig. 12).

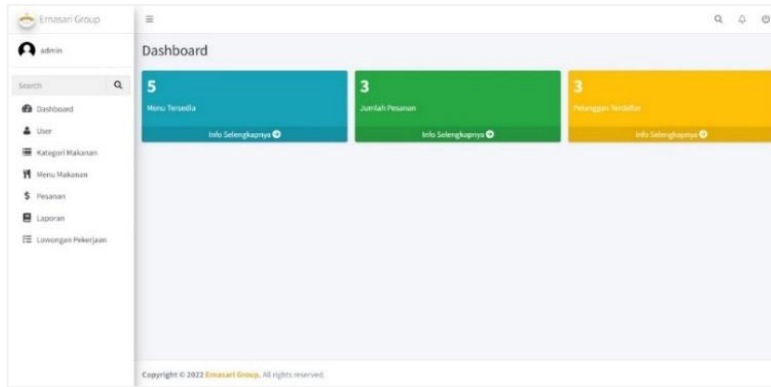


Fig. 12. Admin dashboard Page.

9. User Management Page

In this view, the admin can manage users, either adding admins or adding customers, changing data, and deleting rooms (Fig. 13).

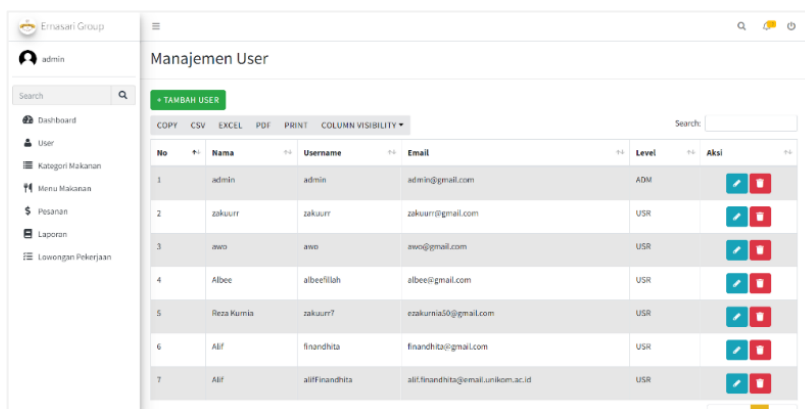


Fig. 13. User management page.

10. Food Category Management Page

In this view, the admin can manage food categories (Fig. 14).

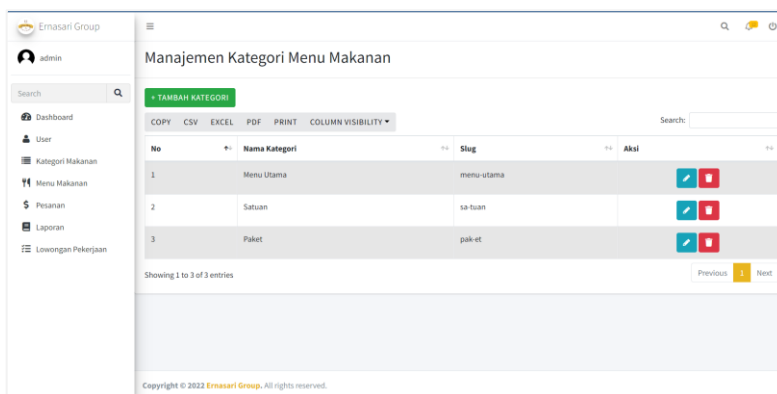


Fig. 14. Food category management page.

11. Food Menu Management Page

On this page, the admin can manage the food menu, either adding, changing, or deleting (Fig. 15).

No	Foto	Nama Menu	Harga	Deskripsi	Stock	Stock Status	Kategori	Aksi
1		Rendang	15000	Rendang /pcs	0	Instock	Menu Utama	LIHAT DETAIL STATUS
2		Acar Gurame	50000	Acar Gurame 500gr	1	Instock	Satuan	LIHAT DETAIL STATUS
3		Ayam Lada Hitam	20000	Ayam Lada Hitam	2	Instock	Satuan	LIHAT DETAIL STATUS
4		Ayam Petis	20000	Ayam Petis	-10	Instock	Satuan	LIHAT DETAIL STATUS
5		Beef Teriyaki	30000	Beef Teriyaki	0	Instock	Satuan	LIHAT DETAIL STATUS

Fig. 15. Food menu's management page.

12. Order List Page

This page displays orders that enter the system which can be managed by the admin to change the processing status until the order is received by the customer (Fig. 16).

No	Order ID	Sub total	Total	Status	Order Date	Action
1	23	40,000.00	40,000.00	dipesan	2022-09-07 19:42:17	LIHAT DETAIL STATUS
2	22	20,000.00	20,000.00	dikirim	2022-08-31 11:05:43	LIHAT DETAIL STATUS
3	21	50,000.00	50,000.00	dipesan	2022-08-31 08:16:03	LIHAT DETAIL STATUS
4	20	200,000.00	210000	dipesan	2022-08-31 03:57:56	LIHAT DETAIL STATUS
5	19	200,000.00	210000	dipesan	2022-08-31 03:34:39	LIHAT DETAIL STATUS
6	18	20,000.00	30000	dipesan	2022-08-31 03:33:02	LIHAT DETAIL STATUS
7	17	20,000.00	30000	dipesan	2022-08-31 03:27:08	LIHAT DETAIL STATUS
8	16	250,000.00	260000	dipesan	2022-08-31 03:25:49	LIHAT DETAIL STATUS
9	15	40,000.00	40,000.00	dipesan	2022-08-31 03:21:59	LIHAT DETAIL STATUS

Fig. 16. Order list page.

13. Report Page

On this page, the admin can print or view sales recap reports and income reports (Fig. 17).

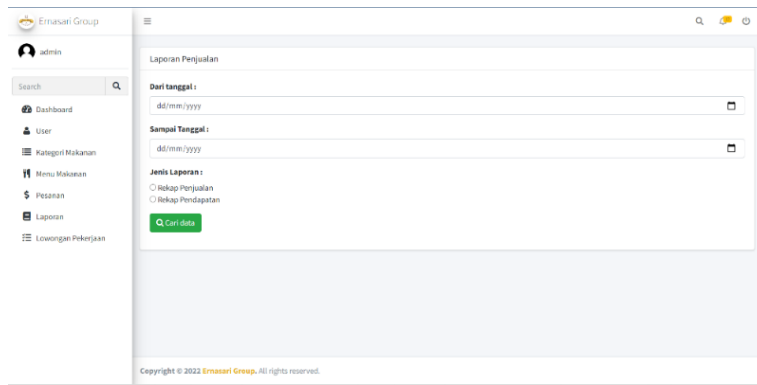


Fig. 17. Report's page.

4.2 Digital Marketing Strategy Application Services for Job Vacancies

The following is a display of information on Job Vacancies at Erna Sari. This view can be accessed by all users even though they are not registered with Erna Sari customers (Fig. 18).

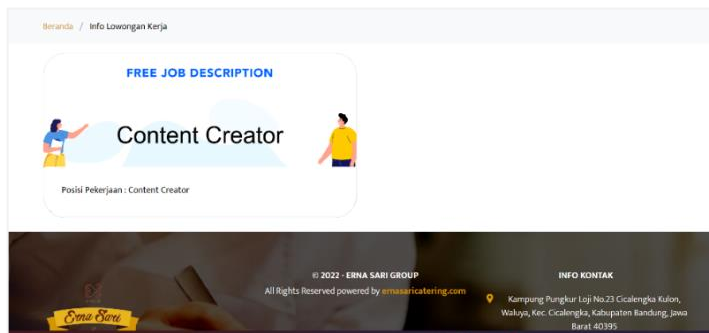


Fig. 18. Job vacancies information service.

Job Vacancies Information Service

The following is a display for managing job vacancies managed by admins where admins can add, change and delete job vacancies data in Erna Sari (Fig. 19).

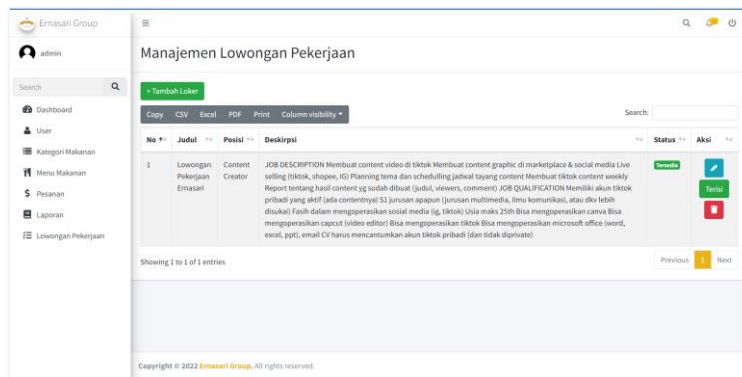


Fig. 19. Job vacancies management page.

5. Conclusions

The information system design that's carried out at the early stages of development will determine the success of the application because it can avoid errors from business processes, systems, and programs before reaching the implementation stage.

The implementation of digital business strategy services can help market products and provide information, especially bestselling products, so that Erna Sari Catering can get product ordering information through digital business, in addition to being able to reach businesses further through website services and other digital services in the form of job vacancy information that can be accessed, through *ernasaricatering.com* which is useful for providing information for people who are looking for work, especially as a content creator.

Based on the results of research and after creating digital services, it will provide benefits and added value for customers and Erna Sari Catering. This digital marketing service is also an innovation because the system is integrated with job information services. Furthermore, it will be easier for customers to make purchases and Erna Sari Catering will also be helped to deal with problems during this pandemic for the government, the availability of job vacancy information services helps in reducing unemployment.

Acknowledgement

Thanks to the Director General of Research, Technology and Higher Education for funding through the LPDP in the 2021 Scientific Research Grant. Thanks also to the Rector of Universitas Komputer Indonesia, Prof. Dr. H. Eddy Soeryanto Soegoto, MT, and the Vice Rector Prof. Dr. Hj. Umi Narimawati, Dra., S.E., M.Si, the Director of Research, Community Service, and Community Empowerment (DP3M) of Universitas Komputer Indonesia Dr. Wendi Zarman, S.E., M.Si, the Head of Management Study Program Dr. Linna Ismawati, S.E., M.Sc., the Head of the Accounting Study Program Dr. Surtikanti, S.E., M.Si, who has supported this research. We also thank Erna Sari Catering for being a partner in this research.

References

1. Suraya, I.; Nurmansyah, M.I.; Rachmawati, E.; Al Aufa, B.; and Koire, I.I. (2020). The impact of large-scale social restrictions on the incidence of covid-19: a case study of four provinces in indonesia. *Kesmas: Jurnal Kesehatan Masyarakat Nasional (National Public Health Journal)*, 15(2), 49-53
2. Bufquin, D.; Park, J.Y.; Back, R.M.; de Souza Meira, J.V.; and Hight, S.K. (2021). Employee work status, mental health, substance use, and career turnover intentions: an examination of restaurant employees during covid-19. *International Journal of Hospitality Management*, 93, 102764.
3. Kraus, S.; Palmer, C.; Kailer, N.; Kallinger, F.L.; and Spitzer, J. (2018). Digital entrepreneurship: a research agenda on new business models for the twenty-first century. *International Journal of Entrepreneurial Behavior & Research*. Res., 25(2), 353-375.
4. Bican, P.M.; and Brem, A. (2020). Digital business model, digital transformation, digital entrepreneurship: is there a sustainable "digital"? *Sustainability*, 12(13), 5239.

5. Manic, M. (2015). Marketing engagement through visual content. *Bulletin of the Transilvania University of Brasov. Economic Sciences. Series V*, 8(2), 89.
6. Dewi, N.P.R.C. (2020). Digital marketing strategy on travel tourism businesses in marketing 4.0 era. *International Research Journal of Management, IT & Social Sciences*, 7(3), 58-64.
7. Bizhanova, K.; Mamyrbekov, A.; Umarov, I.; Orazymbetova, A.; and Khairullaeva, A. (2019). Impact of digital marketing development on entrepreneurship. *E3S web of conferences*, 135, 04023. EDP Sciences.
8. bt Mohd, N.A.; and Zaaba, Z.F. (2019). A review of usability and security evaluation model of ecommerce website. *Procedia Computer Science*, 161, 1199-1205.
9. Justitia, A.; Werdiningsih, I.; Effendy, F.; and Taufik, T. (2021). Pelatihan dan pendampingan digital marketing bagi umkm jasa laundry menuju umkm go digital. *Jurnal Nasional Pengabdian Masyarakat*, 2(2), 60-72.
10. Aryanto, G.E.; and Victor, R. (2019). Penggunaan digital marketing pada jasa usaha fotografi "x". *Jurnal STRATEGI-Jurnal Maranatha*, 1(2), 411-425.
11. Rapisari, D. (2016). Digital marketing berbasis aplikasi sebagai strategi meningkatkan kepuasan pelanggan. *Cakrawala*, 10(2), 107-112.
12. Hanim, L.; Sopyonyono, E.; and Maryanto, M. (2021). Pengembangan umkm digital di masa pandemi covid-19. In *Prosiding Seminar Nasional Penelitian Dan Pengabdian Kepada Masyarakat*, 2(1), 30-39.
13. Suzanti, L.; Anardani, S.; and Nugrahanti, F. (2019). Sistem informasi manajemen jasa wedding organizer berbasis web pada Nana wedding organizer madiun. In *Prosiding Seminar Nasional Teknologi Informasi dan Komunikasi (SENATIK)*, 1(1), 161-167.
14. Su, S.H.; Lee, H.L.; Chou, J.J.; and Chen, H. (2020). Effects of risk-based bank rating on profit growth of rural bank: an empirical study in indonesia. *International Journal of Business Management and Economic Review*, 3(02), 137-150.
15. Lp2m. (2022). Metode waterfall - definisi dan tahap-tahap pelaksanaannya. Retrieved September 11, 2022, from <https://lp2m.uma.ac.id/2022/06/07/metode-waterfall-definisi-dan-tahap-tahap-pelaksanaannya/>
16. Daru, A.F.; and Adhiwibowo, W. (2021). Penerapan metode rapid application development untuk mengembangkan sistem informasi stok barang menggunakan livewire laravel. *Jurnal teknologi informasi dan komunikasi*, 12(2), 48-57.
17. Husniah, L.; Saputro, F.; and Cahyono, E.B. (2016). Interaktif augmented reality untuk katalog penjualan rumah berbasis android. *Kinetik*, 1(1), 33-38.
18. Wicaksono, E.A.; and Pakereng, M.A.I. (2020). Implementation of laravel framework in the development of library information system (study case: smk PGRI 2 salatiga). *Jurnal Pilar Nusa Mandiri*, 16(2), 261-270.
19. Susila, P.A. (2020). *Perancangan sistem informasi restoran berbasis web (studi kasus: hilur fried chicken)* (Doctoral dissertation, UPN Veteran Jawa Timur).
20. Rianingtyas, A.K.; and Wardani, K.K. (2019). Perancangan user interface aplikasi mobile sebagai media promosi digital umkm tour dan travel. *Jurnal Sains dan Seni ITS*, 7(2), 118-123.
21. Febriyansyah, R.; Negara, A.B.P.; and Safriadi, N. (2017). Rancang bangun aplikasi pemesanan menu di restoran berbasis web. *JUSTIN (Jurnal Sistem dan Teknologi Informasi)*, 5(3), 191-195.

22. Rakhmah, S.N.; Reza, R.; and Novel, K. (2019). Aplikasi delivery order makanan dan minuman berbasis web pada restoran mang kabayan. *Jurnal Teknik*, 11(2), 1109-1116.
23. Laravel. (2022). The php framework for web artisans. Retrieved August 20, 2022, from <https://laravel.com/>
24. Lavarel. (2022). Introduction | laravel jetstream. Retrieved August 20, 2022, from <https://jetstream.laravel.com/1.x/introduction.html/>

Appendix A

Information Systems

A. 1. System Description

The system that we built is an online catering ordering system based on websites and mobile phones. For websites, the technology used is the Framework, HTML5, CSS3, and Livewire, which are libraries to build reactive and dynamic interfaces to enable single-page applications [23, 24]. The DBMS used is MySQL. For mobile, it uses Web View technology (Fig. A-2).

A.2. Business Process

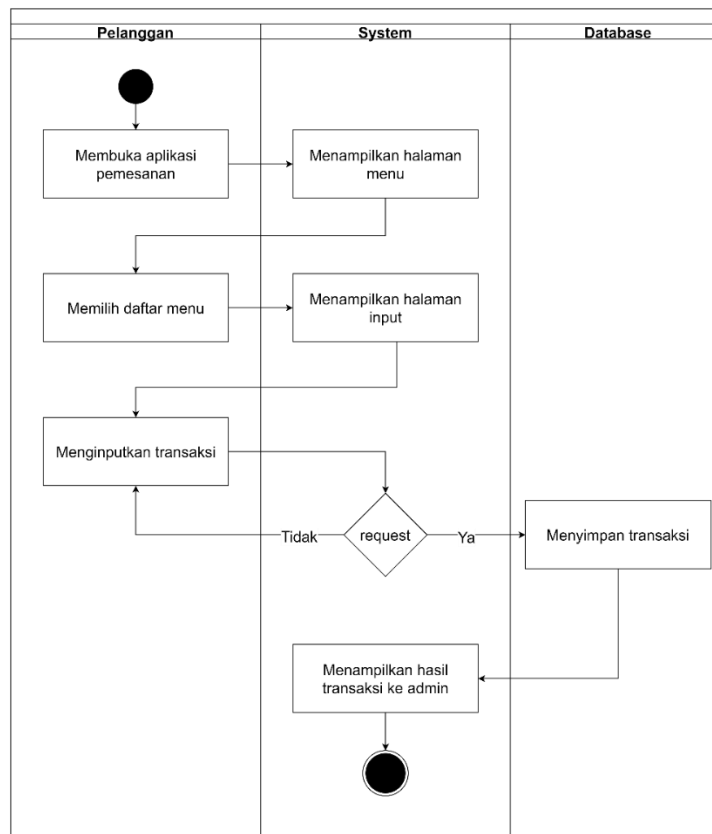


Fig. A-2. Business process.