Journal of Physics: Conference Series

Table of contents

Open all abstracts

OPEN ACCESS   011001
Preface Annual Conference on Science and Technology Research (ACOSTER) 2020
+ Open abstract   ▤ View article   🗎 PDF

OPEN ACCESS   011002
Peer review declaration
+ Open abstract   ▤ View article   🗎 PDF

Papers

OPEN ACCESS   012001
Effect of Different Solvents On The Phytochemical Compounds of *Sargassum* sp. From Yogyakarta and East Nusa Tenggara
Dheasy Herawati and Pratiwi Pudjiastuti
+ Open abstract   ▤ View article   🗎 PDF

OPEN ACCESS   012002
Radical catcher activities free of methanol fruit leather and pomegranate seeds (*punica granatum. L*)
Vina N Van Harling
+ Open abstract   ▤ View article   🗎 PDF

OPEN ACCESS   012003
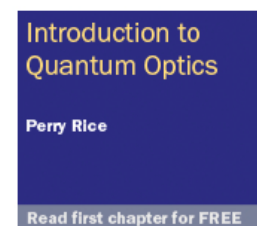### Concentration Effect of Ethanol Extract *Pinus merkusii* Leaves Litter on *Zea mays* L. Seed Germination
Mita Dewi Retnoningrum and Mohammad Arfi Setiawan
+ Open abstract   ▤ View article   🗎 PDF

OPEN ACCESS   012004
Identifications of Polyphenols and α-Amylase Inhibitory Activity of Multi herbal Formulation:

Cocoa Beans (*Theobroma cocoa*), Buni (*Antidesma bunius L. Spreng*) and Cinnamons (*Cinnamomum cassia*)

Muhammad Yusuf, Pirman, UA Nur Fitriani, Ibrahim Amri and A Ita Juwita

+ Open abstract   ▤ View article   🔼 PDF

OPEN ACCESS   012005

The Profile of Delay Erasure Time and Imaging Plate Sizes to Dark Noise Evaluation in Carestream Computed Radiography System

Agung Nugroho Setiawan, Ney Da Onney, Marichatul Jannah and Agustina Dwi Prastanti

+ Open abstract   ▤ View article   🔼 PDF

OPEN ACCESS   012006

Development of Macromedia Flash-Based Mathematics Learning for Elementary School Students

Maulana Rais Mahendra, Supriansyah and Zulherman

+ Open abstract   ▤ View article   🔼 PDF

OPEN ACCESS   012007

Augmented reality application: What are the constraints and perceptions of the students during the covid 19 pendemic's 3D geometry learning process?

Sudirman, Poppy Yaniawati, Mellawaty and Rully Indrawan

+ Open abstract   ▤ View article   🔼 PDF

OPEN ACCESS   012008

Forecasting Unemployment in North Sumatra Using Double Exponential Smoothing Method

Havid Syafwan, Mahdhivan Syafwan, Elvathna Syafwan, Aulia Fitrul Hadi and Pristiyanilicia Putri

+ Open abstract   ▤ View article   🔼 PDF

OPEN ACCESS   012009

Fountains Height Measurement Accuracy With Mamdani Fuzzy Inference System Algorithm

Retno Devita, Ruri Hartika Zain and Ipriadi

+ Open abstract   ▤ View article   🔼 PDF

OPEN ACCESS   012010

Employee Performance Analysis using Analytical Hierarchy Process and Weighted Product Combinations Algorithm

Raja Tama Andri Agus, Muhammad Ardiansyah Sembiring, Mustika Fitri Larasati Sibuea, Mardalius and Andri Nata

+ Open abstract   ▤ View article   🔼 PDF

OPEN ACCESS   012011

Decision Support System Using Fuzzy Logic Method of Tahani Model for Student Selection

Rizaldi, Dewi Anggraeni, Arridha Zikra Syah, Abdul Kholiq and Raja Tama Andri Agus

+ Open abstract   ▤ View article   🔼 PDF

OPEN ACCESS   012012

Application of data mining techniques using the K-Means Method on Unmet Need of Health Services by Province in Indonesia

W Wahidin, M Mugihartadi, Tri Hasanah Bimastari Aviani, Heny Pratiwi, Yusup Indra Wijaya, A Andie, Agus Perdana Windarto and Ari Waluyo

+ Open abstract   ▤ View article   🔼 PDF

OPEN ACCESS   012013

The Implementation of Fuzzy C-Means to Categorize Poverty Data in Riau Province

The Implementation of Fuzzy-C Means to Categorize Poverty Data in Riau Province

Mustakim, Hadi Eka Saputa, Mutasir, Nuryanti and Salmiah

+ Open abstract   🗎 View article   📄 PDF

          012014

Analysis of Data Mining in the Group of Water Pollution Areas using the K-Means Method in Indonesia

Hendra Jatnika, Miftahul Huda, Ria Rizki Amelia, Melda Agnes Manuhutu, Agus Perdana Windarto,

Pipin Sumantrie and Ari Waluyo

+ Open abstract   🗎 View article   📄 PDF

          012015

Application of the Simple Multi Attribute Rating Technique (SMART) Method in the selection of thrush medicine products based on consumers

Mulyanto Darmowiyono, Wakhid Yuliyanto, Kardianto Indra Purnomo, Wenny Marlini, Heny Pratiwi,

Agus Perdana Windarto and Harma Oktafia Lingga Wijaya

+ Open abstract   🗎 View article   📄 PDF

          012016

Clustering of Public Opinion on Natural Disasters in Indonesia Using DBSCAN and K-Medoids Algorithms

Mustakim, Muhammad Zakiy Fauzi, Mustafa, Assyari Abdullah and Rohayati

+ Open abstract   🗎 View article   📄 PDF

          012017

Analysis of Decision Support System with Analytical Hierarchy Process Method

Ahmad Zaelani Adnan, Moh. Hidayatul Holili, Bisma Indrawan, Sri Wahyuningsih, Sri Heneng Prasastono,

Agus Perdana Windarto and Ari Waluyo

+ Open abstract   🗎 View article   📄 PDF

          012018

The Implementation of Probabilistic Neural Network Algorithm for Classification of Family Hope Program in Pekanbaru City

Rice Novita, Qumfa Anzir, Mustakim, Nur Alhidayatillah and Julis suriani

+ Open abstract   🗎 View article   📄 PDF

          012019

Application of Analytical Hierarchy Process Method for SQM on Customer Satisfaction

Ramayani Yusuf, Fenny Damayanti, P Purnomo, Aep Tata Suryana, Dewi Kartikaningsih, Agus Perdana Windarto and Ari Waluyo

+ Open abstract   🗎 View article   📄 PDF

          012020

The Classification Status of River Water Quality in Riau Province Using Modified K-Nearest Neighbor Algorithm with STORET Modeling and Water Pollution Index

Mustakim, Rosdina, Dian Ramadhani, M. Afdal and Medyantiwi Rahmawita

+ Open abstract   🗎 View article   📄 PDF

          012021

University Level Management Toward Industrial Revolution 4.0 using COBIT 5 Framework

Seri Hartati, Amir Syamsuadi and Diki Arisandi

+ Open abstract   🗎 View article   📄 PDF

012022

Development of Radio Frequency Identification (RFID) in the Campus Parking System based on Microcontroller

Rahmad Hidayat, Rushendra, Salamatul Afiyah, Rosyidin Sufyani and Farhan Adani

+ Open abstract   View article   PDF

012023

QoS Analysis on Campus Building Network Infrastructure with WDS Technique using PCQ Method

Givy Devira Ramady, Griffani Megiyanto Rahmatullah, Martin Clinton Tosima Manullang, Andry Fajar Zulkarnain, Rosyidin Sufyani and Rahmad Hidayat

+ Open abstract   View article   PDF

012024

Technology of Auto Teller Machine Interface: Accessibility for Bank Customer with Visual Impairments

Priyo Subekti, Hanny Hafiar and Yanti Setianti

+ Open abstract   View article   PDF

012025

Implementation of PROMETHEE Method for Employee Performance Assessment System

Leni Natalia Zulita, Tengku Mohd Diansyah and Rachmat Aulia

+ Open abstract   View article   PDF

012026

System Development Management E-School as a Students Information Media

Febrianty, Hendra Hadiwijaya and D. Tri Octafian

+ Open abstract   View article   PDF

012027

COVID-19 Cases and Deaths in Southeast Asia Clustering using K-Means Algorithm

Juniar Hutagalung, Ni Luh Wiwik Sri Rahayu Ginantra, Gita Widi Bhawika, Wayan Gede Suka Parwita, Anjar Wanto and Pawer Darasa Panjaitan

+ Open abstract   View article   PDF

012028

Sieve Diagram For Data Exploration of Instagram Usage Habit Obtained From Indonesia Questioner's Sample

Reko Syarif Hidayatullah, Wahyu Nur Cholifah, Erlin Windia Ambarsari, Nunu Kustian and Siti Julaeha

+ Open abstract   View article   PDF

012029

Why is the Application Programming Interface the backbone of a Smart City?

Fitria Wahyuni and Rachma Fitriati

+ Open abstract   View article   PDF

012030

Prediction System of Facility Maintenance using Weight Product (WP) Algorithm

Sofika Enggari, Larissa Navia Rani, Hari Marfalino and Deri Marse Putra

+ Open abstract   View article   PDF

012031

Consumption Analysis of Caffeine Using Mobile Application

I Nyoman Yudi Anggara Wijaya, I Made Artana, Nyoman Ayu Nila Dewi, A.A. Istri Ita Paramitha and Ni Made Estiyanti

+ Open abstract   📄 View article   📄 PDF

    012032

Mask R-CNN for Indonesian Shadow Puppet Recognition and Classification

Ida Bagus Kresna Sudiatmika, Made Artana, Nengah Widya Utami, Made Adi Paramartha Putra and Eka Grana Aristyana Dewi

+ Open abstract   📄 View article   📄 PDF

    012033

Rainbow Coloring of Three New Graph Classes

Ketut Queena Fredlina, A.N.M. Salman, I Gede Putu Krisna Julihara, Komang Tri Werthi and Ni Luh Putu Ning Septyarini Putri Astawa

+ Open abstract   📄 View article   📄 PDF

    012034

Optimization of Unsupervised Learning in Machine Learning

Hidayatus Sibyan, Wildan Suharso, Edi Suharto, Melda Agnes Manuhutu and Agus Perdana Windarto

+ Open abstract   📄 View article   📄 PDF

    012035

Utilization of the field of data mining in mapping the area of the Human Development Index (HDI) in Indonesia

Adi Rahmat, H Hardi, Febrizal Alfarasy Syam, Z Zamzami, Bayu Febriadi and Agus Perdana Windarto

+ Open abstract   📄 View article   📄 PDF

    012036

Application of Backpropagation Algorithm for Handwriting Recognition

Sustin Farlinda, Muhammad Yunus, Mudafiq Riyan Pratama, Bakhtiyar Hadi Prakoso, Angga Rahagiyanto, Dyah Susilowati, Ni Gusti Ayu Dasriani, Lukmanul Hakim and Khairil Anam

+ Open abstract   📄 View article   📄 PDF

    012037

A Technology Acceptance Framework Inside the Indonesian Online Learning Platform

Yuda Dian Harja, Rita Ambarwati and Gogor Arif Handiwibowo

+ Open abstract   📄 View article   📄 PDF

    012038

Implementation of TOPSIS Algorithm for Selection of Prominent Student Class

Victor Marudut Mulia Siregar, Sahat Sonang, Arifin Tua Purba, Heru Sugara and Nancy Florida Siagian

+ Open abstract   📄 View article   📄 PDF

    012039

The Mamdani Fuzzy Logic Engineering Analysis for Determining Weather Forecast

Aris Munandar Harahap, Saib Suwilo and Rahmat Widia Sembiring

+ Open abstract   📄 View article   📄 PDF

    012040

Automobile Insurance Processing using Deep Convolutional Networks

R. Rajkumar, Ronhit Neema, N. Chaitanyanathreddy, G. Varun and K. Govinda

+ Open abstract   📄 View article   📄 PDF

012041

Login Security Using One Time Password (OTP) Application with Encryption Algorithm Performance

Dwi Ely Kurniawan, Mohd Iqbal, John Friadi, Fendi Hidayat and Ririt Dwiputri Permatasari

+ Open abstract   ▤ View article   ▯ PDF

012042

Evaluating the effectiveness of information security based on the calculation of information entropy

Akmaral Imanbayeva, Yerlan Tursynbek, Rabiga Syzdykova and Aigerim Mukhamedova

+ Open abstract   ▤ View article   ▯ PDF

012043

Integrating Social Commerce Constructs into Mobile Application Service; A Structural Equation Model

Muhammad Ashoer, Imaduddin Murdifin, Jafar Basalamah, Ajmal As'ad and Andika Pramukti

+ Open abstract   ▤ View article   ▯ PDF

012044

Remote Control Target Tracking Using GPS / INS-IMU

R Syafruddin, Givy Devira Ramady, YS Herawati, Andrew Ghea Mahardika, Ninik Sri Lestari and Rahmad Hidayat

+ Open abstract   ▤ View article   ▯ PDF

012045

Comparing Freeman Chain Code 4 Adjacency Algorithm and LZMA Algorithm in Binary Image Compression

Resdiansyah, Justin Darmawan, Adrian Hartanto Wijaya, Lukman Hakim and Hendy Tannady

+ Open abstract   ▤ View article   ▯ PDF

012046

Web-Based Online Study Plan Card Application Design

Ninik Sri Lestari, Givy Devira Ramadi, Andrew Ghea Mahardika, Herawati and Herlina

+ Open abstract   ▤ View article   ▯ PDF

012047

Image Processing Identifacation for Indonesian Cake Cuisine using CNN Classification Technique

Dian Ade Kurnia, Andi Setiawan, Dita Rizki Amalia, Rita Wahyuni Arifin and Didik Setiyadi

+ Open abstract   ▤ View article   ▯ PDF

012048

Floor Cleaning Robot Control System with Android Based Voice Command

Ruri Ashari Dalimunthe, Maulana Dwi Sena and William Ramdhan

+ Open abstract   ▤ View article   ▯ PDF

012049

Comparison of Knowledge-Based Reasoning Methods to Measure the Effectiveness of Diagnostic Results

Puji Sari Ramadhan, Marsono, Juniar Hutagalung and Yohanni Syahra

+ Open abstract   ▤ View article   ▯ PDF

012050

Venn Versus Relation Diagram Models For Database Relation in SQL Command Line

Nunu Kustian, Siti Julaeha, Dudi Parulian, Noni Selvia and Erlin Windia Ambarsari

+ Open abstract   📄 View article   📕 PDF

    012051

Developing Smart Campus Readiness Instrument Based on Pagliaro's Smart Campus Model and Smart City Council's Readiness Framework

Wisnu Hidayat, Mokhamad Hendayun, Ashwin Sasongko Sastrosubroto, Rahmad Hidayat and Samun Haris

+ Open abstract   📄 View article   📕 PDF

    012052

MSME Development Strategy for Providing Information through Central Banking Microsite Web Based

Deni Danial Kesa and Diaz Pranita

+ Open abstract   📄 View article   📕 PDF

    012053

Application of Certainty Factor Method to Identify Pests in Crystal Jamboo Plants

Hendry Fonda, Yulanda, Muhammad Ikhsanudin, Muhardi and Yuda Irawan

+ Open abstract   📄 View article   📕 PDF

    012054

Increasing the Higher of Think through Moodle Application: The Effects of Learning Procees in the Higher Education System

Elihami Elihami, Musdalifah Musdalifah and Hasan Hasan

+ Open abstract   📄 View article   📕 PDF

    012055

Tensile Strength and Absorption Analysis of Hybrid High Quality Concrete Using Cement Replacement Additives Substitution, Aggregate Substitution and Nanomaterial Iron Ore

A Dwinta, TB Aulia and M Hasan

+ Open abstract   📄 View article   📕 PDF

    012056

Current development of geopolymer cement with nanosilica and cellulose nanocrystals

Cut Rahmawati, Sri Aprilia, Taufiq Saidi and Teuku Budi Aulia

+ Open abstract   📄 View article   📕 PDF

    012057

Pole Placement Based State Feedback for DC Motor Position Control

Iswanto, Nia Maharani Raharja, Alfian Ma'arif, Yogi Ramadhan and Phisca Aditya Rosyady

+ Open abstract   📄 View article   📕 PDF

    012058

Solar-Cell Implementation for Supporting Tourist Facilities and Tourism Promotion Media

H. Hendri, H. Awal and Mardison

+ Open abstract   📄 View article   📕 PDF

    012059

Voltages Transient Analysis in Electric Grounding Systems

R Syafruddin, Hetty Fadriani, Salamatul Afiyah, Givy Devira Ramady and Rahmad Hidayat

+ Open abstract   📄 View article   📕 PDF

012060

3 Phase Ac Servomotor Switching System

R Syafruddin, Rosyidin Sufyani, Salamatul Afiyah, Mohammad Chusnul Azhari and Givy Devira Ramady

+ Open abstract   🗐 View article   📄 PDF

012061

Dropped voltage analysis on 20 KV distribution network

M Tri Wahyu Sinaga, Y Wahyu Pambudi, Desy and S Suherman

+ Open abstract   🗐 View article   📄 PDF

012062

Event Based Surveillance using WiMAX

Suherman, Marwan Al-Akaidi, Al-Khowarizmi and Yulianta Siregar

+ Open abstract   🗐 View article   📄 PDF

012063

Impact encryption algorithm used in three pass protocol for securing WiMAX link

Suherman

+ Open abstract   🗐 View article   📄 PDF

012064

Impact humidity monitoring based watering to planted tomatoes

N Mubarakah, U Kalsum, S Suherman, Soeharwinto and A H Rambe

+ Open abstract   🗐 View article   📄 PDF

012065

Impact of queue tree and layer 7 filtering combination to bandwidth management in 802.3 Network

Aulia Ichsan, Suherman, B Nababan Erna and Marwan Al-Akaidi

+ Open abstract   🗐 View article   📄 PDF

012066

Intermittent versus continuous social media exposure for energy consumption and human eye health

S Suherman, Yulianta Siregar and A-Khowarizmi

+ Open abstract   🗐 View article   📄 PDF

012067

The LCL filter design for three phase DC-AC voltage converter

S Hasan, Suherman, D P Saragi, Y Siregar and M Al-Akaidi

+ Open abstract   🗐 View article   📄 PDF

012068

Video streaming application with post-decoding concealment technique

Suherman, Marwan Al-Akaidi and Yulianta Siregar

+ Open abstract   🗐 View article   📄 PDF

012069

Loading Capacity Calculation of Integrated Precast Slab and Column Panel Using Cold-formed Steel

Sutanto Muliawan, Anis Saggaff, Tahir Mahmood, Saloma, Muhammad Firdaus and KM Aminuddin

+ Open abstract   🗐 View article   📄 PDF

012070

Study the electrical, thermal behaviour of (glass/jute) fibre hybrid composite material

Zahra K. Hamdan, Ahmed Ali Farhan Ogaili, Zaineb w. metteb and Fadhel Abbas Abdulla

+ Open abstract   🗐 View article   📄 PDF

012071

The Effect of River Meanders on River Morphology

Mangambit Juliandar, Budi Nuryono, Yakub Siahaan, Didik Trimo and Andrew Ghea Mahardika

+ Open abstract   🗐 View article   📄 PDF

012072

Analysis of Groundwater Quality in Dusun Salam and Randuacir, Argomulyo District

N Vina, Van Harling and Markus Dwiyanto Tobi

+ Open abstract   🗐 View article   📄 PDF

012073

Compressive Strength, Permeability and Porosity Analysis of Pervious Concrete by Variation of Aggregate and Compacting Method

Nico Sanjaya, Saloma, Hanafiah, Ika Juliantina and Siti Aisyah Nurjannah

+ Open abstract   🗐 View article   📄 PDF

012074

Prototype Design of Wireless Electric Energy Transmission System and Distance Electric Recording Record System Using PZEM004T and NRF24L01 Module

Markus Dwiyanto Tobi and Vina N Van Harling

+ Open abstract   🗐 View article   📄 PDF

012075

Transient Voltage Programming in Electric Power Grounding System

R Syafruddin, YS Herawati, Givy Devira Ramady, Wisnu Hidayat, Ninik Sri Lestari and Anung

+ Open abstract   🗐 View article   📄 PDF

012076

Development of Automatic Oil Refueling System Model based on Internet of Things

Givy Devira Ramady, Ninik Sri Lestari, Andrew Ghea Mahardika, Hetty Fadriani, Purwadi Budi Santoso and Rahmad Hidayat

+ Open abstract   🗐 View article   📄 PDF

012077

Physical and Mechanical Properties of Self-Compacting Concrete (SCC) with Pineapple Leaf Fibre and Polypropylene

Hanoora Sarah Anindita Hendrian, Saloma, Hanafiah, Maulid M. Iqbal and Ika Juliantina

+ Open abstract   🗐 View article   📄 PDF

012078

Quality Control of Frame Production Using DMAIC Method in Plastic PP Corrugated Box Manufacturer

Hendy Tannady and Edi Purwanto

+ Open abstract   🗐 View article   📄 PDF

012079

Effect of temperature variation on the fluctuation of a sessile bubble rising in a stagnant medium

A M E D Faik and A A Mohammed

+ Open abstract   🗏 View article   🔴 PDF

             012080

Practically Examining the Effect of Thermal Loads on Curved Tubes Made of Different Natural Composite Materials

Riyadh Fakher Jassim and Fadhel Abbas Abdulla

+ Open abstract   🗏 View article   🔴 PDF

             012081

Compressive Strength and Microstructural of Palm Oil Fuel Ash-Fly Ash Based Geopolymer Mortar

Muhammad Dwi Caesar Humaedi, Saloma, Hanafiah and Maulid M. Iqbal

+ Open abstract   🗏 View article   🔴 PDF

             012082

Evaluate the Performance of *Jalan Otista Bandung* with on-Street Parking

Hetty Fadriani, Salamatul Afiyah, Yakob Liklikwatil, Samun Haris, Iman Hidayat and Rahmad Hidayat

+ Open abstract   🗏 View article   🔴 PDF

             012083

BCM PIN Read Conversion Application on Intelligent key Vehicle registration on Android Based

Ahmad Sujana, Andrew Ghea Mahardika, Herawati, Muntiyono, Salamatul Afiyah and Rahmad Hidayat

+ Open abstract   🗏 View article   🔴 PDF

             012084

Transmission Coefficient Testing on Sweatbatching Model with Artificial Reef Brick-1 Armor

Andrew Ghea Mahardika and Givy Devira Ramady

+ Open abstract   🗏 View article   🔴 PDF

             012085

Optimization of Normalized Least Mean Square Algorithm of Smart Antenna Beamforming for Interference Mitigation

Rahmad Hidayat, Givy Devira Ramady, Ninik Sri Lestari, Andrew Ghea Mahardika and Hetty Fadriani

+ Open abstract   🗏 View article   🔴 PDF

             012086

The Relationship Between the Electromagnetic Field Amplitude and its Frequency in a Single Photon

Stephanus Ivan Goenawan

+ Open abstract   🗏 View article   🔴 PDF

             012087

Role of using some Hybrid Nano-Fillers on the Strength and Creep Resistance of Fiberglass/Epoxy Composit

Raad Abd AL-Hassan, Ehsan Sabah Al-Ameen and Layla M. Nassir

+ Open abstract   🗏 View article   🔴 PDF

             012088

Compared with Angle –ply and Cross-ply Natural Fiber Orientation Pipe under Thermal Load

Fadhel Abbas abdulla and Sura Thaar Bader

On Vertice and Edge Regular Anti Fuzzy Graphs

Toto Nusantara, Desi Rahmadani, Mochammad Hafiizh, Elita Dia Cahyanti and Abdullah Bin Gani

+ Open abstract   📄 View article   📄 PDF

     012099

From recursive to dynamic: An algorithm for dealing with a problem

Mahyuddin K M Nasution, J T Tarigan and I Jaya

+ Open abstract   📄 View article   📄 PDF

     012100

Model of Truck Travel Timeliness Based on Driver Environment Psychology and Technical Factor: A Warp.PLS-SEM Approach

D Yuniar, L Djakfar, A Wicaksono and A Efendi

+ Open abstract   📄 View article   📄 PDF

     012101

Exploring the computational thinking of our pre-service mathematics teachers in prepare of lesson plan

Swasti Maharani, Toto Nusantara, Abdur Rahman As'ari and Abd Qohar

+ Open abstract   📄 View article   📄 PDF

     012102

Reflective Thinking of Mathematics Prospective Teachers' for Problem Solving

Muhammad Noor Kholid, Sekar Telasih, Lingga Nico Pradana and Swasti Maharani

+ Open abstract   📄 View article   📄 PDF

     012103

Improving Students' Mathematical Argumentation Skill Through Infusion Learning Strategy

Lia Budi Tristanti and Toto Nusantara

+ Open abstract   📄 View article   📄 PDF

     012104

Comic Mathematics: A bridge to understanding the concept of social arithmetic for secondary school students

Nedia Rose, Farid Gunadi, Rosyadi, Nandang and Sudirman

+ Open abstract   📄 View article   📄 PDF

     012105

Analysis of Reflective Student Analogy Reasoning in Solving Geometry Problems

Diyah Ayu Rizki Pradita, Maswar Maswar, Mohammad Tohir, Junaidi Junaidi and Dwi Nur Hadiyansah

+ Open abstract   📄 View article   📄 PDF

     012106

DNA Amplification of Methanogenic Bacteria from The Sewage of Coconut Water by Specific Primer 16S rRNA and Specific Methanogenic Gene

Ardi Kapahang, Maria Bintang and Dedy D Solihin

+ Open abstract   📄 View article   📄 PDF

     012107

Analysis of Intensity, Duration, and Frequency Rain Daily of Java Island Using Mononobe Method

Faradiba

+ Open abstract   📄 View article   📄 PDF

012108

Problem Based Learning using Open Educational Resources to enhance Higher Order Thinking Skills in Physics Learning

Dwi Sulisworo, Fakhrunisyah and Khusnul Basriyah

+ Open abstract   🔲 View article   📄 PDF

012109

The role of information technology on the online learning success based on self-regulated learning data

Dwi Sulisworo, Ika Maryani and Dian Artha Kusumaningtyas

+ Open abstract   🔲 View article   📄 PDF

012110

Effectiveness of E-Learning Approach to Contextual Teaching and Learning in Improving Students 'Ability

Zulfi Azhar, Suparno, Kasman Rukun, Jalius Jama, Hansi Effendi and Mukhlidi Muskhir

+ Open abstract   🔲 View article   📄 PDF

012111

Gamification in Learning using Quizizz Application as Assessment Tools

Wiwin Handoko, Eva Mizkat, Auliana Nasution, Hambali and Juna Eska

+ Open abstract   🔲 View article   📄 PDF

012112

Face to Face Learning vs Blended Learning vs Online Learning (Student Perception of Learning)

Awal Kurnia Putra Nasution, Andika Hariyanto Surbakti, Rahmanita Zakaria, Sungkawati Kardi Wahyuningsih and Leni Agustina Daulay

+ Open abstract   🔲 View article   📄 PDF

012113

The development of blended media learning through google classroom to support teaching and learning in IAIN Takengon

Leni Agustina Daulay, Rahmanita Zakaria, Andika Hariyanto Surbakti, Awal Kurnia Putra Nasution and Sungkawati Kardi Wahyuningsih

+ Open abstract   🔲 View article   📄 PDF

012114

Development of Smart Card Media for Elementary Students

Cita Audia, Ika Yatri, Aslam, Sri Mawani and Zulherman

+ Open abstract   🔲 View article   📄 PDF

012115

The Use of the Powtoon Application in Learning Videos for Elementary School Students

Melly Siska Pratiwi, Zulherman and Gufron Amirullah

+ Open abstract   🔲 View article   📄 PDF

012116

Animated Video Media Based on Adobe After Effects (AEF) Application: An Empirical Study for Elementary School Students

Nova Dwi Rahayu, Zulherman and Ika Yatri

+ Open abstract   🔲 View article   📄 PDF

Mellawaty and Mochammad Taufan

+ Open abstract   📄 View article   📄 PDF

    012127

Media Information Communication and Technology (ICT) Development Strategy in Education Learning

Achmad Yusuf, Munif, Mochamad Hasyim, Asrul Anan and Muhammad Nur Hadi

+ Open abstract   📄 View article   📄 PDF

    012128

e-Learning Development on Basic Chemical Law Materials in Senior High School (SMA/MA) to Improve High Order Thinking Skill Ability

Trayda Afrianti and Rahadian Zainul

+ Open abstract   📄 View article   📄 PDF

PAPER • OPEN ACCESS

Web-Based Online Study Plan Card Application Design

To cite this article: Ninik Sri Lestari *et al* 2021 *J. Phys.: Conf. Ser.* **1783** 012046

View the article online for updates and enhancements.

Web-Based Online Study Plan Card Application Design

Ninik Sri Lestari[1], Givy Devira Ramadi[1], Andrew Ghea Mahardika[1], Herawati[1], Herlina[1]

[1]Informatics Department, STT Mandala Bandung Indonesia

*ninik4lestari@gmail.com

Abstract. Filling in the Study Plan Card (KRS) is a part that plays an important role in the academic system. The KRS filling system that has been running so far is still using the manual system. The development of a web-based online KRS application aims to replace the manual KRS system that is running so that later lecture activities can run smoothly. The system development method used is WebE, the system design method uses UML (unified modeling language), and the system test uses a black box system. This application is made with the programming language PHP and MySQL as a database. The results of this study indicate that the application of web-based online KRS applications can make it easier for students to fill in KRS compared to manual filling. This application can also assist the campus in managing data on the number of students who are active in the current semester. However, it is necessary to develop the system that has been made to become a better and perfect system, such as adding the KRS menu for short semesters so that this system makes it easier for students.

1. Introduction

Development The demand for the development of information that is so fast and easy eventually brings human life to a more advanced and modern era, due to the increasing need for information. To meet the needs of information ultimately encourages human thinking to develop technology so as to provide convenience in human life [1] Web-based services, an online application can be made to help facilitate students in the process of filling in the Study Plan Card, wherewith this system, the process of filling in the Study Plan Card can be made better and more efficient [2].

The development of the world of technology, especially the internet, is now progressing rapidly.[3] The internet can provide a variety of information, ranging from information for tourist attractions, shopping centers to the world of education. In the world of education, the process of filling out the Study Plan Card is a routine activity that is always carried out every semester. Since the beginning, filling out the Study Plan Card uses a manual system, especially at the STT Mandala Bandung Campus where students must take the form in the education section, then fill in the form manually. [4] The students felt that this process was time-consuming because students had to queue, this was quite felt, especially for students who were already working, because it required a lot of time and besides that students became tired.

2. Methodology

This research is action research. Action research is a research method that is a scientific way of obtaining data with specific purposes and uses. Action research is research that aims to develop the

most efficient work method so that production costs can be reduced and institutional productivity can increase. Action research is a process through which individuals or groups require changes in certain situations to test procedures that are expected to result in these changes and then, after a concluding.

The method of system development with the Web Engineering (WebE) system is a process used to create high-quality web-based applications. [5] The basic concepts and principles of WebE in general are not much different from Software Engineering. In general, the stages of the web-based software development process with the WebE process model consist of 5 stages, namely:

1. Formulation / Business Analysis

    The formulation is the stage of finding all the needs of the WebApp and involving all stakeholders, aims to explain the problems that must be resolved by the WebApp with the information on available needs. Business Analysis defines the context of business for the WebApp, namely identifying stakeholders, predicting WebApp needs, databases, defining functions.

2. Planning

    The planning stage for the WebApp where planning contains a definition of each job, then a schedule of the projected timeframe for incremental WebApp development.

3. Modeling

    Conventional software engineering design and analysis are adapted to the WebApp development process, combined and then integrated at this modeling stage. This stage aims to produce an analysis and design of a model that has been defined on the requirements.

4. Construction

    The implementation stage, where tools and techniques are applied to build a WebApp that has been previously modeled. After that, the WebApp that has been built is gradually tested to find errors that occur at the design stage (content, architecture, interface).

5. Deployment

    The WebApp is configured, released to the user, and an evaluation stage is carried out. At this stage, user feedback is used as a reference for the next stage of development. The five WebE process flows were applied repeatedly and gradually as in the illustration below.
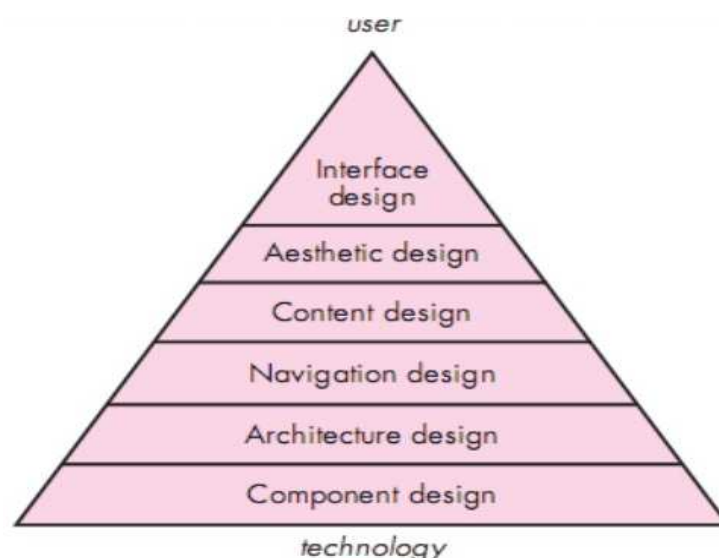

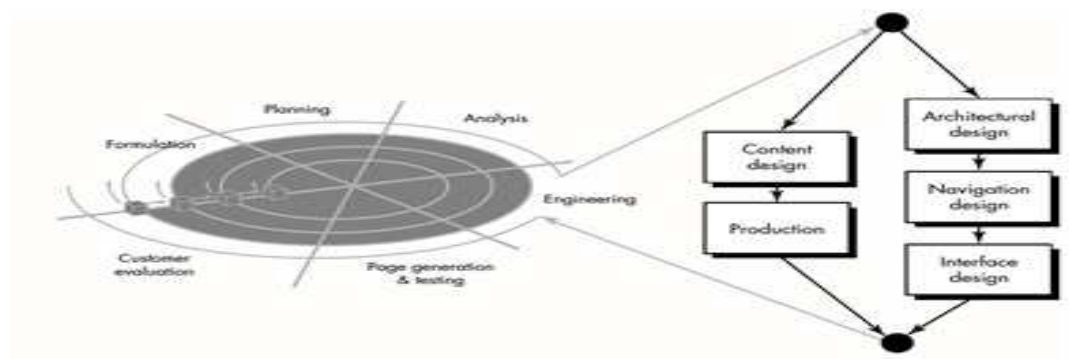**Figure 1.** A design pyramid for webapp

Figure 2. Analysis and design model webApp

The component-level design occurs after the first iteration of the architectural design. The objective of component-level design is to create a model design from architectural analysis and modeling. [6] This is useful for finding errors that are difficult to find and fix later (reduces time wasted on debugging). Component level design can be represented using graphics, tables, or text which can be translated into source code. The design of data structures, interfaces, and algorithms must adhere to existing guidelines to help avoid errors.[7]

Table 1. Webapps category

Category	Research Question (RQ)
Informational	The web that is only for reading and providing information
Download	Web for users to download information
Customizable	Users customize content for their purpose
Interaction	Communication within the user community in the form of chatrooms, instant messages, etc.
User input	Form base on input for a mechanism to communicates needs
Transaction oriented	User makes a request that is fulfilled by the web app
Service-oriented	Applications provide services to users
Database access	The user performs database queries and gets information
Data warehousing	User query many large databases and extract information

3. Result and Discussion

Current system research results, the process of filling in student KRS in the current system is quite time-consuming. Students who can complete KRS that meet the financial requirements specified by the STT Mandala campus, students who have met the requirements can take the KRS filling form in the finance section by bringing proof of payment slip and students take a schedule in the academic section then students fill out the KRS form and adjust to that schedule. After filling in the KRS form, students carry out the guardianship process by visiting the guardian lecturer to be approved by the KRS that has been filled in. After being approved, students submit the KRS form to the general section for further processing. The process of filling in student KRS in the system proposed by the author, students only need to log in to the KRS Online application by entering their username and password then selecting the KRS menu to fill in KRS and choosing courses to be taken regardless of the schedule because the schedule has been written on the course. However, it is the same as the current system, where students who do not meet the financial requirements cannot fill in KRS. If the system that the author proposes is implemented, it will be more effective and efficient for student and lecturer guardians that can be done online and can be done anywhere.[8]

Table 2. Design Technology

Hardware	Software
Processor Intel(R) Core (TM) i3-7100u	Operating systems Windows10 Pro
RAM 4GB DDR 3	
HDD 464 GB	Programming language PHP
Monitor	
	Browser Mozilla Firefox

The design of this interface is the main design that will be used by the application and serves to design the appearance of the application form and layout designs that are designed simply.
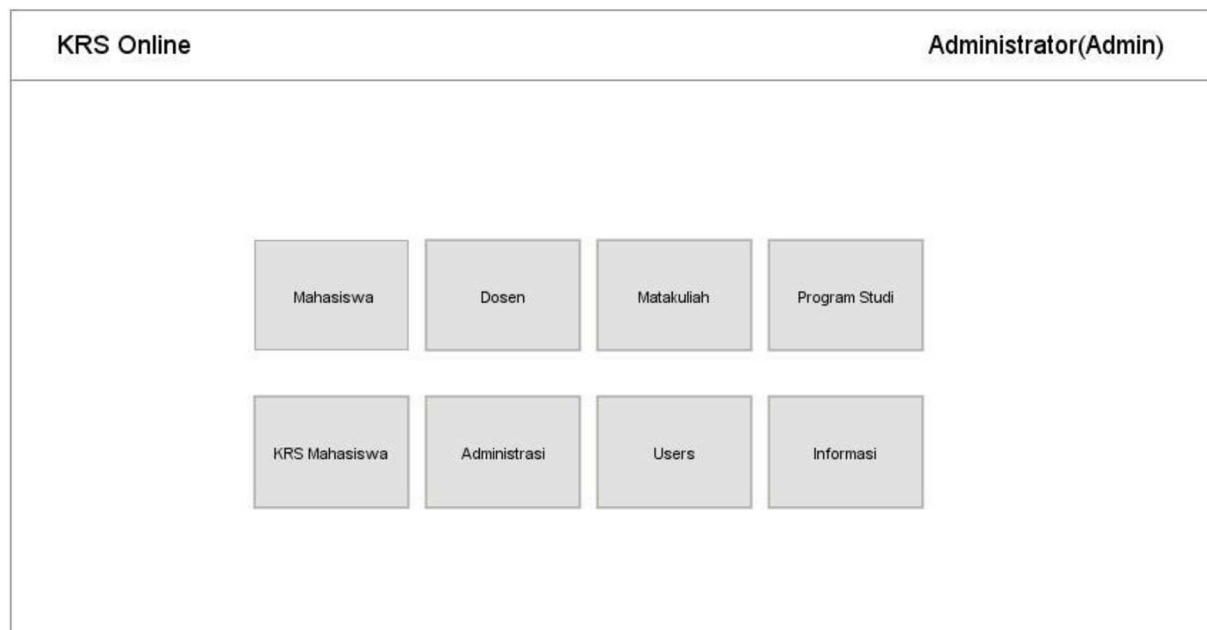

Figure 3. Display login page

Figure 4. Admin user main page display

Testing is an important part of the software creation or development cycle. Tests are carried out to ensure quality and also to find out the weaknesses of the software. Black box testing tries to find errors in categories of functions that are incorrect or missing, interface errors, error accessing external databases, performance errors, and initialization.[9]
.

4. Conclusion

The process of filling out the Study Plan Card can be done faster than the old manual filling system for the Study Plan Card. With this application, it can facilitate students in the process of filling in KRS, without having to come to the campus. This application also helps the campus in managing data on the number of students who are active in the current semester. In this application, it is necessary to develop a system that has been created to become a better and perfect system, as well addition of the short semester KRS menu so that the application makes it easier for students.

References

[1] N. S. Lestari, Herlina, Sukirno, T. Rahman, A. Wirjawan, and R. Hidayat, "Development of E-Learning Application using Web-Based Tools to Improve Learning Effectiveness (Case Study: STT Mandala Bandung)," 2019, DOI: 10.1088/1742-6596/1179/1/012041.

[2] N. Sri Lestari, A. Ghea Mahardika, A. Sujana, N. Riztria Adinda, and I. D. Lie, "Strategic Planning Information System Using Ward and Peppard Method with Anita Cassidy Method," *J. Phys. Conf. Ser.*, vol. 1424, p. 012024, Dec. 2019, DOI: 10.1088/1742-6596/1424/1/012024.

[3] Creswell, "Research Design, Pendekatan Kualitatif, Kuantitatif, dan Mixed.," *Yogyakarta, Pustaka Pelajar*, 2010. https://www.google.com/search?client=firefox-b-d&q=Creswell%2C+John+W+%282010%29.+Research+Design%2C+Pendekatan+Kualitatif%2C+Kuantitatif%2C+dan+Mixed.+Yogyakarta+%3A+Pustaka+Pelaja (accessed Jul. 10, 2020).

[4] Ninik Sri Lestari, "Pengembangan Aplikasi E Learning Berbasis WEB Untuk Meningkatkan Efektifitas Pembelajaran | Jurnal Online Sekolah Tinggi Teknologi Mandala," *Jurnal Isu Teknologi*, 2019. http://www.ejournal.sttmandalabdg.ac.id/index.php/JIT/article/view/143

(accessed Sep. 17, 2020).

[5] A. Biørn-Hansen, T. A. Majchrzak, and T.-M. Grønli, "Progressive Web Apps: The Possible Web-native Unifier for Mobile Development," 2017, DOI: 10.5220/0006353703440351.

[6]   I. Malavolta, "Beyond Native Apps: Web Technologies to the Rescue! (Keynote)," in *Mobile! 2016 - Proceedings of the 1st International Workshop on Mobile Development, co-located with SPLASH 2016*, Oct. 2016, pp. 1–2, DOI: 10.1145/3001854.3001863.

[7]   A. W. H.-155410117 Hibatullah, "Implementasi PWA (Progressive Web Apps) Pada Sistem Informasi Pembelajaran Tata Surya Berbasis WEB Mobile," Feb. 2020.

[8]   L. Adi, "Platform E-Learning Untuk Pembelajaran Pemrograman Web Menggunakan Konsep Progressive Web Apps," 2017.

[9]   S. Nidhra and J. Dondeti, "Black Box And White Box Testing Techniques A Literature Review," *Int. J. Embed. Syst. Appl.*, vol. 2, no. 2, 2012, DOI: 10.5121/ijesa.2012.2204.