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UPN VETERAN JATIM

BALI  **tech**
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BALI INTERNATIONAL SEMINAR
on Science and Technology



UDAYANA UNIVERSITY

PROCEEDINGS

Bali International Seminar on Science and Technology

FACULTY OF INDUSTRIAL TECHNOLOGY - UPN "VETERAN" JATIM
CHEMISTRY DEPARTMENT, BIOMEDICINAL POSTGRADUATE PROGRAM

UDAYANA UNIVERSITY

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PROCEEDINGS



Bali International Seminar on Science and Technology

*"Strengthening Basic Sciences and
Technology For Industrial Sustainability"*

"Organized by :
FACULTY OF INDUSTRIAL TECHNOLOGY
UPN "VETERAN" JAWA TIMUR
AND
CHEMISTRY DEPARTMENT, BIOMEDICINAL POSTGRADUATE PROGRAM
UDAYANA UNIVERSITY



PREFACE

Faculty of Industrial Technology of Universitas Pembangunan Nasional "Veteran" Jawa Timur in collaboration with Chemical Department and Biomedicinal Postgraduate Study Program of Udayana University are organizing an international seminar entitled: Bali International Seminar on Science and Technology , BISSTECH 2011

Total Participants more than 200 people in which 100 are paper and poster presenters, 17 papers are international from Malaysia, Canada and Australia while the rests of the papers are domestic from all over Indonesia.

We wish to thanks reviewers, plenary Speakers, keynote Speakers, and session moderators for their cooperation and valuable suggestions. We would like to extend our appreciation to members of organizing committees of all events during this seminar.

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BISSTECH 2011*



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1	Catalytic Degradation of Glycerol in Subcritical and Supercritical Water Media	Mahfud, Yuyun Yuniati, and Sumarmo	Sepuluh Nopember Institute of Technology Surabaya, Indonesia
2	Effect of Molecular Weight and Contents of Polyethylene Glycol on Crystallization of Polylactic Acid/Talc	Wisaroot Payubnop, Sirijutaratana Covavisaruch, and Nukul Euaphantasate	Chulalongkorn University, Bangkok, Thailand
3	Study on Important Parameters Affecting The Soxhlet Extraction of Lempuyang Oil Production	Nur Hidayah Binti Mohmed Isa, Fethie Binti Ahmad Zakil, and Izirwan Bin Izhah	Universiti Malaysia, Pahang, Malaysia
4	Synthesis of MCM-48 Mesoporous Materials From The Dieng Wonosobo Geothermal Sludge	Maria Christina Prihatiningsih, Imam Prasetyo, Rochmadi, and Wiratni	Gajahmada University, Yogyakarta, Indonesia
5	Optimization of Epoxidation Reaction of Palm Oil Methyl Ester Using Response Surface Methodology	Edy Purwanto, Emma Savitri, Dimas Febrian Saputra, and Didik Setianto	University of Surabaya, Surabaya, Indonesia
6	A Study on The Kinetics Parameters for A Continuous Flow Activated Sludge Process in Wastewater of Textiles	Judy R Witono, Adrian, and Fenny Yoswara	Parahyangan Catholic University, Bandung, Indonesia
7	Numerical Prediction of Hydrodynamic effect on Biohydrogen Production in Stirred Tank	Tantular Nurtono, Wa Ode Cakra Nirwana, Arif Widjaja, Nadiem Anwar, and Sugeng Winardi	Sepuluh Nopember Institute of Technology Surabaya, Indonesia
8	The Potential of Phytoremediation Using Duckweed (<i>Lemna minor</i>) for Wastewater Treatment	Tuani Lidiawati S	Surabaya University, Surabaya, Indonesia
9	Production of Sodium Lignosulphonate From Lignin Isolate of Empty Fruit Bunches as Dispersant of Gypsum Paste	Ismiyati	Muhammadiyah University of Jakarta, Jakarta, Indonesia
10	Simulation and Experimental System Terner Aseton-Butanol-Ethanol With Batch Distillation	Ni Ketut Sari	UPN "Veteran" University, Surabaya, Indonesia



Class Room A2

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2	Sustainability of Information and Communication Technology Projects for Rural Development and Empowerment in Developing Countries – Evidence From India (2000-2010)	Siva Prasad Ravi	School of Buisness and Economics Thompson Rivers Univerity, Kamloops, British Columbia, Canada
3	The Analysis and Characterization of <i>Xylocarpus Moluccensis</i> Mangrove Fruit Seeds	Setiyo Gunawan, R. Darmawan, Aliwafa, Miranti Nanda H, Akhmad Dhika S, and Hamzah Fansuri	Sepuluh Nopember Institute of Technology, Surabaya, Indonesia
4	Reaction Kinetics of Magnesium Compound Recovery From Bittern Using Slake Lime Continuousley	Sutyono, and Pratiwi	UPN "Veteran" University, Surabaya, Indonesia
5	Biohydrogen Production from Cane Molasses by Muttated Enterobacter aerogenes ADH43 in Continous Stirred Tank Reactor System With Varying Dillution Rate and its Application into Fuel Cell for Generating Electricity	Yusnita Liasari, Mahyudin Abdul Rachman, Harijono, and Agustin Krisna Wardana	Surabaya University, Surabaya, Indonesia
6	Bio-Lubricants Development : Reducing Wear Scar Diameters Using Ashless additives	Dicky Darmawan, Dyah setyo Pertiwi, Achmad Siddik and Sayd Rachadiyan Pahlevi	National Institute of Technology (ITENAS) Bandung, Indonesia
7	Hydroctacking Palm Oil on NI-Mo Catalyst	Erlan Rosyadi, Nyoman Puspa Asri, Santi Diah Savitri, Ignatius Gunadi, and Achmad Roesyadi	Sepuluh Nopember Institute of Technology Surabaya, Indonesia
8	Elimination of Phenol by Adsorption Process Using Natural and Modified Zeolite As Adsorbents	Yunus Fransicus, Andre Oentoro and Lidya Jonatan	Surabaya University, Surabaya, Indonesia
9	The Effect of Methanol Concentration On Production of Methyl Ester Using Palm Oil as Substrate in A Stirred Tank Reactor	Jafri N, Abdullah N, and Mohd Ghazi T I	Universiti Putra Malaysia, Selangor, Malaysia
10	Adsorption of Blue Methylene by Cow Bone Char Activated With Sodium Hydroxide and Coated With Aluminium Oxide	E Suprihatin, I Nengah Simpen, Wahyu Dwijani, and I Made Swarjana	Udayana University, Denpasar, Indonesia

Class Room B1

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2	Social Networking Website As A Communication Media : Study Case Ptra Christian University Library	Lily Puspa Dewi, Iwan N Sandjaja, and Leonard C Tali	Petra Christian University, Surabaya, Indonesia
3	Design and Implementation of Payroll Information System in PT. Karya Tama Rimba Cemerlang	Agustinus Noertjahyana, Felix Montana, and Arlinah Imam Rahardjo	Petra Christian University, Surabaya, Indonesia
4	Integrating Fast-Ica and MFCC Methods for Voice Recognition With Noise Splitter	Lina, Arlends Chris, and Felicia Ilona	Tarumanagara University, Jakarta, Indonesia
5	Online monitoring System at The Green House Plant Growth Based Mobile Technology	M Syahrul Munir, and I Gede Susrama Masdiyasa	UPN "Veteran" University, Surabaya, Indonesia
6	Weather Sensor Data Acquisition Using Delay Tolerant Networking	Justinus Andjarwirawan, Budi Darmawan, and Andreas Handojo	Petra Christian University, Surabaya, Indonesia
7	Application Program Design Base on Text Data Security by Means of The Base-64 Algorithm and The QR-CODE Image Transformation	Wasino, Tumpal Pandiangan and Putra Kema	Tarumanagara University, Jakarta, Indonesia
8	The Design and Prototyping of Solar Cell Based Mobile Phone Charger	Bagus Arthaya, and Irfan A Nuswantoro	Parahyangan University, Bandung, Indonesia
9	The Design and Development of Administrative Web-Based Information System With COGS Calculation	Ibnu Gunawan, Yulia Kendengis, and Roy Philip Stanley	Petra Christian University, Surabaya, Indonesia
10	An Integrated Modular Design and Life Cycle Design for Manufacturing Industry : A Critical Review	Dira Ernawati, I Nyoman Pujawan, I Made Londen Batan, and Maria Anityasari	UPN "Veteran" University, Surabaya, Indonesia



Class Room B2

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2	Comparing of demosaicing Algorithm with Constant Hue-based interpolation, Bilinier Interpolation, and Edge-Sensing Interpolation Methods.	Kartika Gunardi, Liliana, Yongnardi, and stephen	Petra Christian University, Surabaya, Indonesia
3	Web Based Register and Vendor Evaluation System for PT. Garuda Indonesia	Jurike V. Moniaga ¹ , Ageng Purnomosidi, Trias Fikriansyah, Wahyudi	Bina Nusantara University, Jakarta, Indonesia
4	Alignment Measurement of SOA Benefits in ERP Implementation using Partial Least Square	Abdul Rozaq ¹ , Riyanarto Sarno ²	State Polytechnic of Banjarmasin, Banjarmasin, Indonesia
5	Remote Monitoring of Soil Quality by Using IDAS (Internet-Based Data Acquisition System) and SMS Gateway Technology	Basuki Rahmat, Purnomo Edi Sasongko, and Wanti Mindari	UPN "Veteran" University, Surabaya, Indonesia
6	Internet Banking : The Roles and Responsibilities to Safety Risks of Customer Funds	Budi Nugroho	UPN "Veteran" University, Surabaya, Indonesia
7	Content Based Image Retrieval Using Rotated Wavalet Transform and Canberra Distance	Ricky Eka Putra ¹ , Nanik Suciati ² , Arya Yudhi Wijaya	Informatics Department, Faculty of Information Technology, Institut Teknologi Adhi Tama Surabaya ¹
8	Designing and Developing Camelot Restaurant Information System in Ordering With Web Based Mobile Device	Alexander Setiawan, Justinus Andjarwirawan, and Andrew Brian	Petra Christian University, Surabaya, Indonesia
9	Calculate Similarity of Document Using Word Count and Cosine Similarity	Wahyu S.J Saputra,	UPN "Veteran" University, Surabaya, Indonesia

Class Room C1

No	Paper Title	Presenter	Institution
1	Global Requirements of Chitosan for Medical and Food Applications	Natalia Suseno, Emma Savitri, and Claudia Windasari	Surabaya University, Surabaya, Indonesia
2	Effect of Chitosan to The Quality of Pharmaceutical Waste Product	Henny Rachdiati, Padmono Citroreksoko, and Syamsul Anwar	Universiti Kuala Lumpur, Malaysia
3	Purification of Recombinant Cyclodextrin Glucanotransferase (CGTase) Using Mixed-Mode Adsorption Chromatography	Margaret Sivapragasam, Raha Abdul Rahim, and Norhafizah Abdullah	Universiti Putra Malaysia, Serdang, Malaysia
4	Kombucha Tea As A Potensial Inhibitor of Free Radical	Suyono, Leny Yuanita	State University of Surabaya, Surabaya, Indonesia
5	Optimization of The Extraction's Condition of Eugenia Polyanta (Wight)Walp.) Leaves Powder Predried With Instantaneous Controlled Pressure-Drop ((DIC)(1,9 bar; 10,86 sec.)) and of The DIC's Cycles	Indrajati Kohar, Soediatmoko Soediman, Karim Allaf, and Niken Ariestanti	University of Surabaya, Surabaya, Indonesia
6	Struture-Based Approaches for New Antimalarial Drug Design	Lim Kok Keong, Chan Kit Lam, and Habibah A Wahab	University Science Malaysia, Pulau Pinang, Malaysia
7	Formulation and Physicochemical Stability of 20% Glycolic Acid Creams Using Sepigel *305 and Combination of Sepigel *305-Montanov	Ni Luh Dewi Aryani, Nani Parfati, Rica Marlia Swandayani and Angelina Haliem	Surabaya University, Surabaya, Indonesia
8	Primers pncAF and pncAR Amplified The pncA Gene of MDR <i>Mycobacterium Tuberculosis</i> Isolate R7 Related to Pyrazinamide Resistance	Rahmaniar Mulyani, and Achmad Saifuddin Noer	Achmad Yani University, Bandung, Indonesia
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10	Struture-Based Virtual Screening of Malaysia Natural Product Toward Discovery of Potent Ppar Agonist	Lee Guan Sheng, Tengku Sifzizul Tengku Muhammad and Habibah A Wahab	University Science Malaysia, Pulau Pinang, Malaysia
11	Design of Monitor Tools For CO2 Gas on Medical Anesthesia Machine	Anwar Budiarto, Toto Trikasjono, and Anggiat Winner OS	Polytechnic Institute of Nuclear Technology-BATAN
12	Potential Neuraminidase Influenza A (H5N1 and H1N1) Inhibitor of Brucea Javanica (L.) Merr	Neny Purwitasari, Noernisah Muhamed, Hibibah A Wahab, and Nurkusairi Khairul Ikram	Universiti Sains Malaysia, Penang, Malaysia

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2	Evaluation of Butanol-Water Distillation Column With Heat Integration to Obtain a Minimum Total Annual Cost (TAC)	Satrio Pamungkas, Tri Hartanto, Musfil Ahmad Syukur, and Renanto Handogo	Sepuluh Nopember Institute of Technology, Surabaya, Indonesia
3	Mechanism and Reaction Kinetics of Peat Decomposition	Edi Mulyadi and Nurul Wiji Triana	UPN "Veteran" University, Surabaya, Indonesia
4	Biodegradation of Organic Material from Produce Water Using Consortium Microorganism With Step Aeration Processing	Rudy Laksmono W, Tuhu Agung Rachmanto, Edison Effendy, and Q Helmi	UPN "Veteran" University, Surabaya, Indonesia
5	Exploiting From Industry Bioethanol	Ni Ketut Sari, Komang Yudhi Dharmawan, and Gitawati	UPN "Veteran" University, Surabaya, Indonesia
6	Computational Fluid Dynamic (SFD) Study of Aerosol Separation in Electrostatic Precipitator	Tantular Nurtono, Widyastuti, Suci Madhania, and Sugeng Winardi	Sepuluh Nopember Institute of Technology, Surabaya, Indonesia
7	Mechanical Properties and Biological Degradation of Injection Molded Poly (vinyl alcohol)-Cassava Starching	Nor Sarizal Nor Hassan, Wan Aizan Wan Abdul Rahman	Universiti Teknologi Malaysia, Johor, Malaysia
8	Thermal and Rheological Properties of Polypropylene/Carbon Nanotubes Nanocomposite	Katabongkot Phetsang, Sirijutaratana Covavisaruch ¹ and Nawadon Petchwattana ²	Chulalongkorn University, Payathai Road, Patumwan, Bangkok
9	PP/RS Biocomposite Foam : Effect of Different Compatibilizer Loading	<u>Nazuha Binti Tugiman</u> , Zurina Binti Mohamad ² , and Wan Aizan Wan Abdul Rahman ³	Universiti Teknologi Malaysia, 81310 Skudai, Johor, Malaysia

Class Room A4

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2	Influences of Xylanase Enzym in Bleaching Pulp Result of Delignification The Rind of Cocoa	Susilowati, Nurul Faizah and Ni Made	UPN "Veteran" University, Surabaya, Indonesia
3	Recovery of Oleic Acid Ethyl Ester Compound After Solid Phase Extraction Purification	Ni Made Suaniti	Udayana University, Denpasar, Indonesia
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8	Binding Of Bile Acids by Functional Groups of Yard - Long Bean Dietary Fiber on Total Cholesterol Decrease	Leny Yuanita, Tjandra kirana, Suyono.	Department of chemistry, State University of Surabaya
9	Waste Oil Purification With Ultrafiltration Membrane	Sri Redjeki	UPN "Veteran" University, Surabaya, Indonesia
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Class Room B3

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6	Circular Construction of Iris Feature Vectors For Iris Recognition System	Lina, Danu Widatama, Tony Mulia, and Benyamin Kusumoputro	Tarumanagara University, Jakarta, Indonesia
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8	Neuro-Fuzzy-Based Real Time Flood Disaster Early Warning System	Basuki Rahmat, Mohamad Irwan Afandi, and Rizky Parluka	UPN "Veteran" University, Surabaya, Indonesia
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Class Room B4

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3	Feedback Fuzzy Control Design of Power System Stabilizer (PSS) for Single Machine Infinite Bus (SMIB)	Tarmaji, and Imam Robandi	Sepuluh Nopember Institute of Technology Surabaya, Indonesia
4	Expert System Mobile for Identification Pest for Manggo	Asti Dwi Irfianti	UPN "Veteran" University, Surabaya, Indonesia
5	Ontology-Based Information Technology Skills Management	Doddy Ridwandono, and Bayu Utomo	UPN "Veteran" University, Surabaya, Indonesia
6	Implementation of Executive Information System Motor Cycle Sales in PT.X	Syurfah Ayu Ithriah, and Nurcahyo Wibowo	UPN "Veteran" University, Surabaya, Indonesia
7	Application Control Robot Using Remote TV Sony	Tri Puji Rahayu, Yakub, and Candika Sindoro	STMIK Dharma Putra, Tangerang, Indonesia



Class Room C2

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3	Rice Bran Oil Production by Fermentation Using The Yeast	Dwi Suhartanti, and Endang Sulistiawati	Ahmad Dahian University, Yogyakarta, Indonesia
4	Antibacterial Activity of Aromatherapy Essential Oils of Eucalyptus (<i>Eucalyptus globules</i>), Mint (<i>Mentha piperita</i>), and Bergamot (<i>Citrus bergamia</i>)	Insan Sunan K, Dewi Rusmiati, and Yeza Anadra	Padjadjaran University, Bandung, Indonesia
5	Tempe Increases Total Antioxidant Capacity (TAC) and Reduce Malondialdehyd (MDA) in Rats Irradiated With Ultraviolet Ray	Siti Maryam	Ganesha University of Education, Singaraja, Indonesia
6	The DNA Isolation of Menoreh Kuning Durian (<i>Durio Zibethinus Murr</i>) Cultivar Using Detergent and Commercial Kit	Tara Puri Ducha Rahmani and Budi S Daryono	Gajahmada University, Yogyakarta, Indonesia
7	Influenza A Viruses in Malaysia	Ten Ban Hong, and Habibah A Wahab	University Science Malaysia, Pulau Pinang, Malaysia
8	Antibacterial Activities Test of Leaf Sengani Infusa On Shigella Flexneri	Dwi Suhartanti, Trianik Widyaningrum, and Ratnawati	Ahmad Dahlan University, Yogyakarta, Indonesia
9	Mutation Analysis of Mitochondrial DNA Fragmen D-Loop in Human Mesodem Layer	Unwakoly S, Noer S	Pattimura University Ambon
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11	Sdc Fabrication As Cathode Materials In Solid Oxide Fuel Cell (Sofc)	Abraham. Mariwy ¹ , Bambang , Prijamboedi ² , And Ismunandar ²	1.Chemistryeducation Study Program, Faculty Of Education And Teacher Training Pattimura University, Ambon Indonesia 2.Inorganic Chemistry Division, Faculty Of Mathematics And Natural Science Bandung Institute Of



			Technology, Bandung Indonesia
12	The Schlieren Effect In Iodine Analysis By Used Spectrophotometry Method Based Flow Injection Analysis	Yeanchon H. Dulanlebit ¹ and M. Bachri Amran ²	¹ Chemistry Study Program, Faculty of Teacher and Education Sciences Pattimura University – Ambon ¹ ² Chemistry Department, Faculty of Mathematics and Natural Sciences Institut Teknologi Bandung ²



Class Room D

No	Paper Title	Presenter	Institution
1	Adsorption of Pb in Electroplating Waste Water By Moringa Seeds Powder	Caecilia Pujiastuti, Erwan Adi Saputro	Chemical Engineering Department, UPN "Veteran" Jawa Timur, Surabaya, Indonesia.
2	Effectiveness of soy sauce fractions using coconut sugar and sucrose as an antioxidant	Dedin F. Rosida, Wijaya CH, Apriyantono Aand Zakaria FR	Departemen of Food Technology, UPN "Veteran" Jawa Timur Departemen of Science and Food Technology, IPB
3	Waste Utilization Of Jackfruit As Materials For Making Alcohol	DwiHery A.	Chemical Engineering Department, UPN "Veteran" Jawa Timur, Surabaya, Indonesia.
4	Utilization Of Solid Waste In Making Palm Shell Fertilizer Liquid Potassium Sulphate	Ely Kurniati	Department of Chemical Engineering, Faculty of Industrial Technology, UPN "Veteran" East Java, Surabaya, Indonesia
5	Application Of Lean Thinking Concept Analysis To Reduce The Level Waste (Waste) On The Bottle Glass Products Polos "Medium Weight" In The Production Floor PT. Iglas Gresik	Endang P.W.	Industrial Engineering Department, Faculty of Industrial Technology, UPN "Veteran" Jawa Timur, Surabaya, Indonesia.
6	Process Measurement Capabilities Making The Instant Noodles in PT. Heinz Suprama Sidoarjo	Enny Ariyani	Industrial Engineering Department, Faculty of Industrial Technology, UPN "Veteran" Jawa Timur, Surabaya, Indonesia.
7	Indonesian Text Conversion Application To Japanese (Hiragana And Katakana) And Using Prosody Mbrola Synthesizer	Kartini, Ferry S.A	Department of Informatics Engineering, Faculty of Industrial Technology, UPN "Veteran" Jawa Timur, Indonesia
8	Study Kinetics of The Enzyme Urease From Soybeans	Lilis Siti Aisyah ¹ , Rahmaniar Mulyani ¹ , Harliansyah ² , Agung Sadeli ²	¹ Faculty of Mathematics and Natural Sciences, UNJANI, Cimahi ² Faculty of Medicine University Yarsi, Jakarta Pusat
9	Making of Ethanol From Rice Straw	Lucky Indrati Utami	Chemical Engineering Department, Faculty of Industrial Technology, UPN "Veteran" Jawa Timur, Surabaya, Indonesia.
10	Making Ethanol From Tapioca Starch Liquid Waste By Hydrolysis And Fermentation	Luluk Edahwati	Chemical Engineering Department, Faculty of Industrial Technology, UPN "Veteran" Jawa Timur,



11	Biotic Index To Mapping of Water Quality In Confluence River	Minarni N.T. ¹ , Novirina H. ²	Civil Department ¹ , Development Engineering Department ² , UPN "Veteran" Jawa Timur.
12	Analysis of Lean Thinking to Minimize Waste in Diesel Engine's Production Process in PT. Tri Ratna Diesel Indonesia, Gresik.	MT Safirin	Industrial Engineering, UPN "Veteran" Jawa Timur, Surabaya, Indonesia.
13	Comparative Performance Of Nutrient Sources in Bioremediation Of Crude Oil Contamination: In-Situ Test In Coastal Environment Using Biostimulation Method	Munawar ¹⁾ and Mukhtasor ²⁾	¹⁾ Environmental Engineering Department, UPN "Veteran" Jawa Timur, Surabaya, Indonesia, ²⁾ Department of Ocean Engineering, Institute of Technology Sepuluh Nopember (ITS) Surabaya, Indonesia,
14	Utilization of Sidoarjo Mud As The Raw Material Of Making Portland Cement	Nana Dyahsiswati, Yoni Dwi P, Citra Ika L	Chemical Engineering Department, UPN "Veteran" Jawa Timur, Surabaya, Indonesia.
15	Coal Pyrolysis in Inert Condition	Novel Karaman, Mu'tasim Billah, And L. Urip Widodo	Chemical Engineering Department, UPN "Veteran" Jawa Timur, Surabaya, Indonesia.
16	Manufacture The Framework For Library Applications	Nur Cahyo Wibowo, Chrystia Aji Putra, and Yudha Baskoro Utomo	Department of Informatics Engineering, Faculty of Industrial Technology, UPN "Veteran" Jawa Timur, Indonesia
17	Utilization of Milk With Penicillin Antibiotic Residues By Yogurt Fermentation	Ratna Yulistiani	Study Program of Food Technology, Faculty of Industrial Technology, UPN "Veteran" Jawa Timur, Surabaya, Indonesia.
18	Addition of Chitosan and Time Deposition on Antioxidant Activity Pomegranate Juice (<i>Punicagranatum L.</i>)	Rudi Nurismanto, Sudaryati HP, Syirhan Anas Bobsaid	Departement of Food Technology, Faculty of Industrial Technology, UPN "Veteran" Jawa Timur, Surabaya, Indonesia.
19	Application of Fuzzy Multi-Objective Linear Programming in Production Planning	Sartin	Industrial Engineering, UPN "Veteran" Jawa Timur, Surabaya, Indonesia.
20	Effect Of Katalis On Making Marble Synthetic	Sintha Soraya Santi	Chemical Engineering Department, Faculty of Technology Industry UPN "Veteran" Jawa Timur

21	Production of Amorphous Silica From Geothermal Sludge of Dieng Indonesia	Srie Muljani ¹ , HeruSetyawan ² , KetutSumada	¹ Chemical Engineering Department, Faculty of Industrial Technology, UPN "Veteran" JawaTimur, Surabaya, Indonesia
22	Manufacturing of Edible Film From Kimpul (<i>Xanthosoma Sagittifolium</i> Schott) Starch	SudaryatiHp, Tri Mulyani, FitrianaFebriningrum	Departement of Food Technology, Faculty of Industrial Technology, UPN "Veteran" JawaTimur, Surabaya, Indonesia.
23	Removal of Seawater Hardness Contain Ca ²⁺ Ion Using Natural Zeolite As Adsorbition	Suprihatin	Chemical Engineering Departement, Faculty of Industrial Technology, Upn "Veteran" East Java
24	The Effect of Sodium Alginate And Coconut Oil Addition to Cowpea's Milk Pavevine Quality	Titi Susilowati, Enny Karti, B And Rizki Indah Pravianti	UPN "Veteran" JawaTimur, Surabaya, Indonesia.
25	Study OnThe Use ofActivated CarbonAnd Zeolite As Adsorbent In Purification Process ofKapok Seeds CrudeOil	TjatoerWelasih, Nurhapsari	Chemical Engineering Department, Faculty of Industrial Technology, UPN "Veteran" JawaTimur, Surabaya, Indonesia.
26	Beneficial of Yam Tuber (<i>Pachyrrhizuserosus</i>) As Synbiotik Drink	Tri Mulyani, Sudayati, AgusSusanto.	Departement of Food Technology, Faculty of Industrial Technology, UPN "Veteran" JawaTimur, Surabaya, Indonesia.
27	PerformanceAnalysis SupplyChainOperationReference(Scor) InPT. BayerIndonesia-Bayer CropsienceSurabaya	Tri Susilo	Industrial Engineering Department, Faculty of Industrial Technology, UPN"Veteran" Jawa Timur, Surabaya, Indonesia
28	Effect of Frying Temperature On Sweet Potato To The Formation Of Acrylamide Using High Performance Liquid Chromatographi (HPLC) Method	Yusi Fudiesta	University of General AchmadYani (UNJANI)
29	Production Capacity Planning Method With Rough Cut Planning Capacity (RCCP)	YustinaNgatilah	Industrial Engineering, UPN "Veteran" JawaTimur, Surabaya, Indonesia.
30	Kinetic Reaction of Cyanide Degradation by Using Hydrogen Peroxide	Isni Utami	Chemical Engineering Department of UPN 'Veteran' Jawa Timur



31	Planning And Scheduling Activities Of Fishery Products Distribution Requirement Planning (Drp)	Sumiati	Industrial Engineering, UPN “Veteran” Jawa Timur, Surabaya, Indonesia.
32	Reaction Kinetics of Oxalic Acid Production From Palm Fiber With H ₂ O ₂	Retno Dewati, Erwan Adi Saputra, Nurul Novita	Chemical Engineering Department, UPN “Veteran” Jawa Timur, Surabaya, Indonesia.
33	Information System Strategic Planning at PuSDeHAM (Center for Study of Democracy and Human Right) Surabaya	Mohamad Irwan Afandi, Ajeng Putri Abdini	Information System Department, UPN “Veteran” Jawa Timur, Surabaya, Indonesia.
34	Promising lines of investigation for theorists of urban and regional development	Niniek Anggriani	Enviromental Engineering Department, UPN “Veteran” Jawa Timur, Surabaya, Indonesia,

DESIGNING AND DEVELOPING CAMELOT RESTAURANT INFORMATION SYSTEM IN ORDERING WITH WEB BASED MOBILE DEVICE

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Abstract

Camelot Restaurant is a restaurant located at Ciputra, Surabaya, which offers western food dishes such as steak and pasta, and also offers Japanese cuisine. In the current manual system is used so that the ordering of food or beverage is still done manually, making it less efficient. Based on background issues, the author designed the information system of reservations that can be opened through a mobile device that has a Wifi connection. Applications are also made at the cashier and the kitchen to be able to accept orders via the web-based mobile devices. Making these applications using Visual Basic programming language in 2005 as a cashier and kitchen, ASP. NET on the web booking restaurants and SQL Server 2005 as its database. Results obtained from applications that have been made, ordering information system that better and more efficient, via mobile device that has Wifi connection, such as Blackberry and Iphone, food stock calculation system based on the available ingredients, cost of sales reports, and statements of income. Based on the experiment, 60% of the correspondence explain features on the application are good to support the company's need, but 40% of the said it adequate.

Keywords: Cost of Goods Sold, Mobile device, WiFi

1. INTRODUCTION

Together with the development of technology, the requirement would information became increasingly high, and this development has been influential to all the fields, both that in the science field, and in the business field. In this time, was needed by the presentation of the data quickly that could help the restaurant in order to be able to compete with the other restaurant.

Therefore, then the Camelot Restaurant needed an application system that could facilitate the restaurant in carrying out the registration against order food, the report on supplies that could help in decisive was not him a food or the drink. The registration order was carried out with mobile device that was based web, that had the superiority multi the platform, or could be undertaken in various sorts of the operation system in mobile device provided that having the Wifi connection. Yang Including mobile device was the mobile phone, smartphone or PDA that had Wifi, and had browser that could be opened web the ordering that dimikili the restaurant. With the existence of this application system was expected to be able to help facilitated in carrying out the ordering of food that is could be recorded quickly and the mistake on the ordering for food that was finished not happening but also could monitor stock of the material, food and the drink that were available, so to be commemorated if stock of a material, food and the drink has almost been finished to could do the increase in stock.

2. FOUNDATION OF THEORY

2.1 MOBILE DEVICE

Mobile devices are wireless devices that can be used for data communication, eg, PDAs, and cell phones. Data communication can occur with the help of WiFi or GSM network connection. WiFi is a standard used for Wireless Local Networks (Wireless Local Area Networks – WLANs) based on IEEE 802.11 specification, which allows anyone with a computer with a wireless card (wireless card) or personal digital assistants and smartphones to connect to the internet using access point (otherwise known as hotspots) nearby. While the GSM or stands for Global System for Mobile Communication is a mobile communications technology that is digital. GSM technology widely applied in mobile communications, especially mobile phones. This technology utilizes the microwave and signal transmission is divided by time, so that the signal information sent will arrive at the destination. Used as the global GSM standard for mobile communications as well as mobile technology the most widely used of people around the world. Mobile devices are widely used by businesspeople to help solve their needs such as creating dokuman, email client and also for browsing. Mobile devices can be used as a tool to be used as a device to interact with the Internet (Fitzek, 2007).

2.2 Cost of Good Sold

That was meant by sale cost price to be all the cost that was spent to receive the thing that will be sold (Weygandt, 2008). The benefit from sale cost

price: as the standard to determine the selling price and to know the profit that was wanted by the company. If the selling price bigger than sale cost price, then will be received the profit, vice versa if the selling price smaller than sale cost price, then will be received by the loss.

3. THE ANALYSIS AND THE DESIGN OF THE SYSTEM

The steps in the execution of the research (Whitten, 2004):

1. The study of literature
 - Studied the Visual Basic .NET programming language to be integrated with Microsoft SQL Server.
 - *Studied the production method web in mobile device.*
2. The Technic that was used in gathering the data was:
 - The interview
Carried out the process of the interview in receiving information concerning the system of the process of process information pengorderan and the material regulation to the Camelot restaurant
 - The documentation
The data collection by means of seeing and recording the menus to the Camelot restaurant.
 - Observation
Entered to the field and studied the system system that was owned by this restaurant directly.
3. Carried out the Analysis and the design of the Program
 - In this stage will be carried out by the process of the analysis and the design to the database that in part.
 - The structure of the database that was used in the production of the table table, like: the stock table of the material, the table order, the table reservasi, and the other table table that was needed.
 - Merancang sistem dengan menggunakan *Data Flow Diagram (DFD) dan Entity Relational Diagram (ERD)*.
 - Carried out the normalisation when necessary, that is did minimalisasi to the database, so that the data that redundancy could be avoided.
 - The development of the program. In this stage, after the process of the analysis and the design were carried out, then the structure of the database that was produced in the process of the analysis and the design were applied in the production of the program, where in this stage the program immediately could access to the table table that was connected with each other available in the database.

4. The testing of the Program

- In this stage was carried out by the testing towards the program that was made, what was the program that was made could present the data that was needed well and accurately in accordance with this restaurant wish.

The ordering system to this Camelot restaurant was not more maximal and rather cause difficulties for because of the attendant must check whether having the table that was available on the upper floor, if the guest wanted the table that above. In his ordering system, the attendant must go to the kitchen to give the ordering of this guest, afterwards must head the cashier, to be carried out by the registration. If this restaurant in the busy condition, then extravagance of time and the efficient shortage will happen that could cause old or the delay of time in providing food.

Web based on results of the analysis of the problem of the ordering system of the Camelot restaurant, then could be learnt that the attendant needed the better and efficient ordering system. Needed by the system that automatically could give the suggestion and informed the place that was available in choosing the table for the guest in accordance with the floor wish how many and the number of guests. In the ordering, that was needed was the system that directly could distribute the order to the kitchen and at the same time to the cashier, to increase service efficiency, but also to cut time. Also could know how many menus that were available and that not, if being available could know how many of them.

Web based on results of the analysis of the problem of the ordering system of the Camelot restaurant, then could be learnt that the attendant needed the better and efficient ordering system. With the existence of the automation system, then was hoped time that was needed when someone came, ordered food, to food was presented to the guest became shorter.

The Context Diagram design from the system of ordering information to the restaurant camelot could be seen in the Picture 3.2. In context this diagram, was gotten four external entity that gave input and output to the system, that is:

- a. Supplier received order the purchase from the Camelot Restaurant. The material that was bought was put into the system.
- b. Customer carried out the ordering of the menu was put into the system. But also could do reservasi that was kept in the system.
- c. The owner asked for available reports from the system.

The official was responsible to the process of inputting the menu could be seen in the Figure 1.

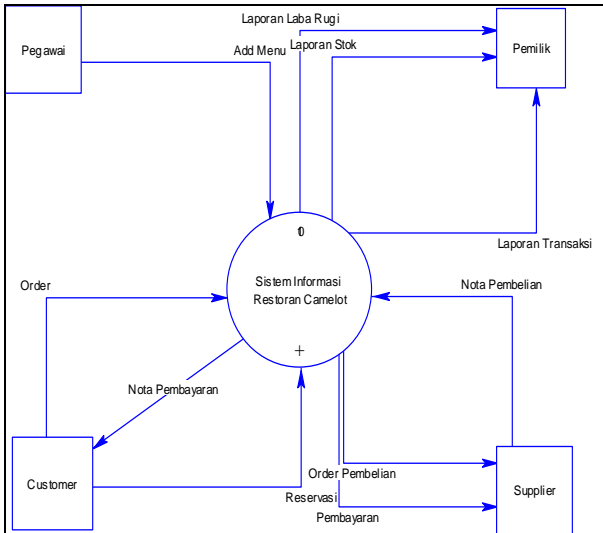


Figure 1. Context Diagram Restaurant Information System

The Data Flow Diagram design from the system of ordering information to the restaurant camelot could be seen in the Figure 2. In DFD Level 0 this was gotten by four processes, that is : Purchasing, Sales, Add Menu and Creating Report.

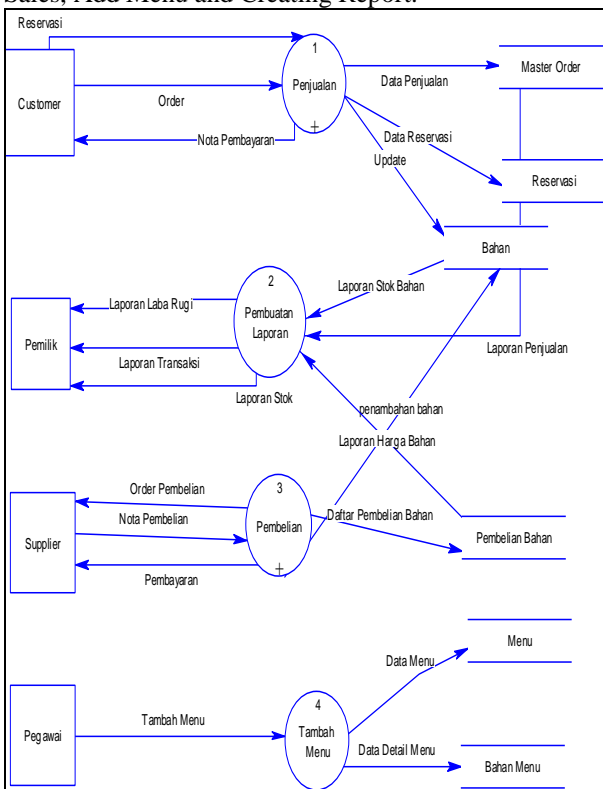


Figure 2. DFD Level 1

Entity Relationship Diagram (ERD) is a method of designing a database that is often used in designing an effective database system. With the ERD can be seen clearly required tables in the system and also the relationship that formed between these tables in an application made. ERD for Conceptual Data Models can be seen Figure 3.

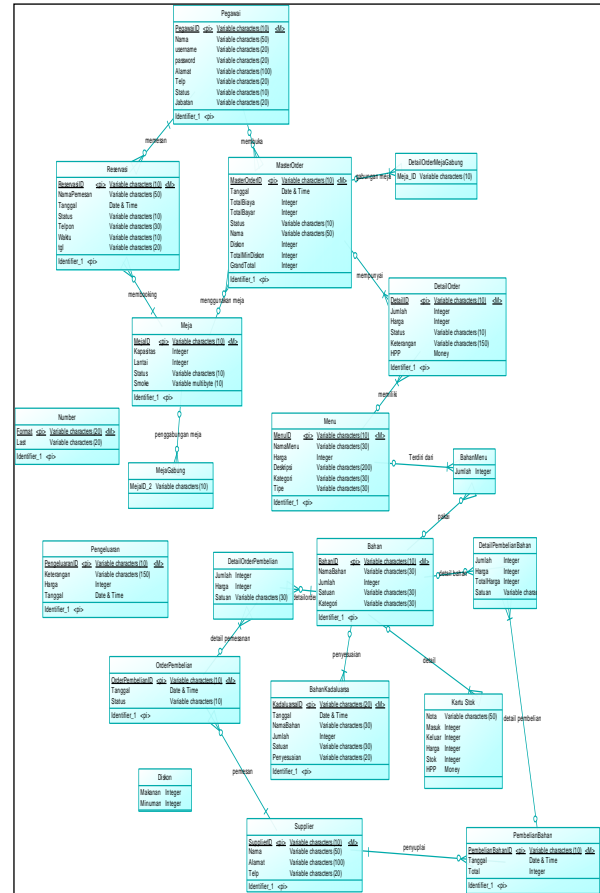


Figure 3. Entity Relationship Diagram Restaurant Information System

4. RESULTS AND DISCUSSIONS

This page explained concerning the testing of the system and the operation from the program that was made. The testing was carried out to the page or the available menu to know the appropriateness of the program to be used can be seen Figure 4. Form Login and Figure 5. Form Login Mobile Device to be able to access this application, the user must put the username and password.



Figure 4. Form Login



Figure 5. Form Login Mobile Device

After the user succeeded in entering, then will enter into Form Main Menu can be seen Figure 6.

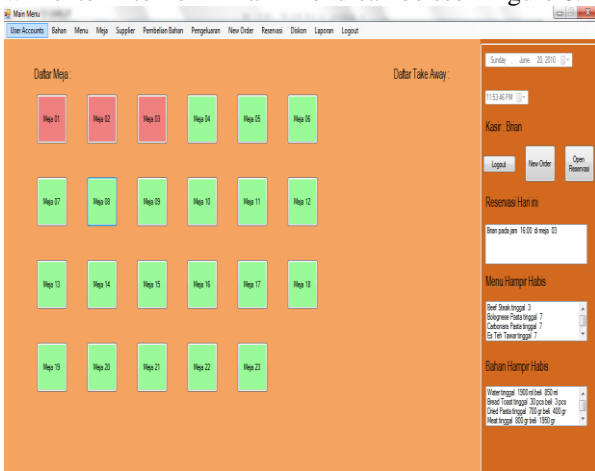


Figure 6. Form Main Menu

After the process of the purchase of the material of succeeding in eating the purchase of the material will enter in the stock card, can be seen Figure 7.

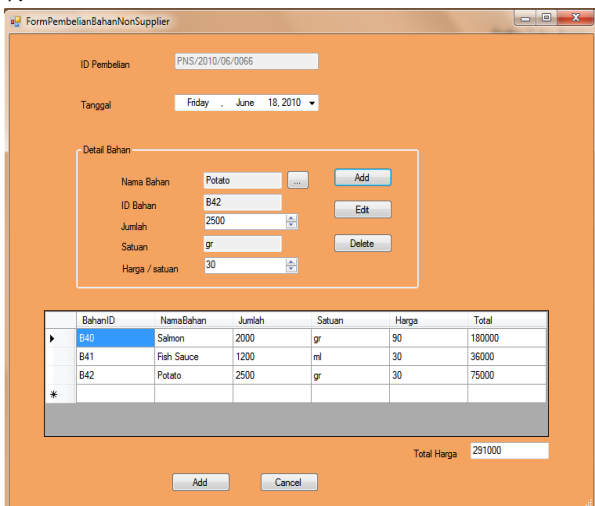


Figure 7. Form Purchase of Materials

To carry out the ordering, ate was chosen the menu add order the purchase, was filled up in accordance with the requirement. The data filling order the purchase could be seen in the Figure 8.

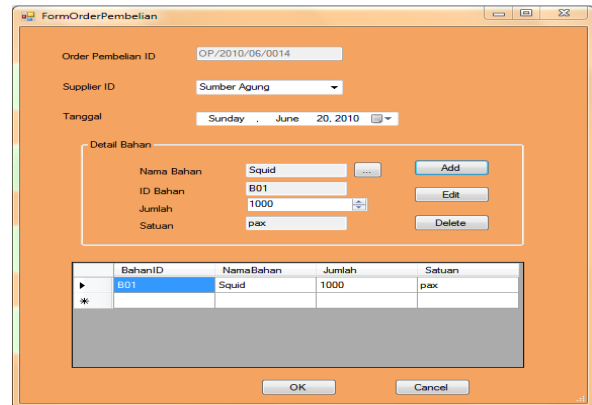


Figure 8. Form Purchase Order

The testing was carried out to the Calamari Rings menu. Calamari Rings had the recipe that consisted of Squid totalling 120 gram, Tar Tar Sauce totalling 50 ml and Steam Rice totalling 1 pax. The Calamari Rings recipe could be seen in the Figure 9. and View Menu Calamari Rings from Mobile Device can be seen in Figure 10.

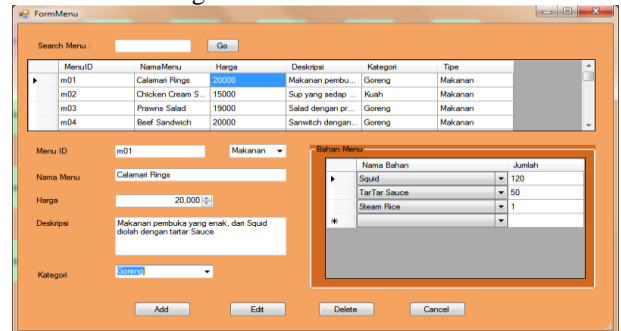


Figure 9. Form Menu Calamari Rings

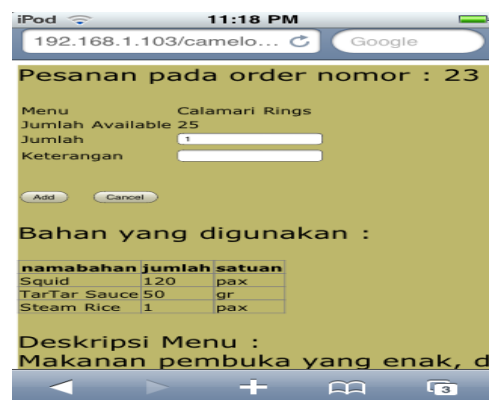


Figure 10. Form Menu Order Mobile Device

Cost price could be per the material that was needed to cook Calamari Rings seen in the Figure 11., Figure 12, and the Figure 13.

Camelot Restaurant
 Laporan Kartu Stok 6/18/2011

Nota	Tanggal	Masuk	Keluar	Harga	Stok	HPP
PNS/2010/06/0058	6/18/2010 1:22:05AM	2,000	0	75.00	2,000	75.00

Figure 11. Report Stock Card Squid

Camelot Restaurant
Laporan Kartu Stok

6/18/2011

Nota	Tanggal	Masuk	Keluar	Harga	Stok	HPP
PNS/2010/06/0058	6/18/2010 1:22:05AM	2,000	0	80.00	2,000	80.00

Figure 12. Report Stock Card TarTar Sauce

Camelot Restaurant
Laporan Kartu Stok

6/18/2011

Nota	Tanggal	Masuk	Keluar	Harga	Stok	HPP
PNS/2010/06/0062	6/18/2010 1:30:06AM	30	0	1,000.00	30	1,000.00

Figure 13. Report Stock Card Steam Rice

5. CONCLUSIONS

From the design and manufacture of Camelot restaurant reservation information system with a web-based mobile devices can be drawn some conclusions as follows :

- With this application, can assist in making restaurant reservations food or beverage orders more quickly and efficiently, it takes a little more.

- With this application, the amount of stock foods and beverages can be known easily.

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