

ABSTRAK

Dewasa ini, pengelolaan sistem kerja yang efektif dan efisien sangat dibutuhkan oleh perusahaan berkembang seperti PT. Rumah Contoh yang bergerak di bidang percetakan (*offset*). Hal ini dapat berarti migrasi dari sistem kerja manual menjadi sistem kerja yang terkomputerisasi agar mendapatkan performa yang baik dalam melakukan kegiatan bisnis. *Offset Compact Application* merupakan aplikasi atau *software* yang dapat memenuhi kebutuhan pada divisi percetakan yang dapat menangani pencatatan order (pesanan), pemeriksaan persediaan logistik, perhitungan harga order, pengelompokan pelanggan berdasarkan prioritas, dan melakukan pelayanan pada pelanggan (customers service) pada bagian ekspedisi. Dalam laporan tugas akhir ini dibahas mengenai pembuatan program “*Offset Compact Application* PT. Rumah Contoh” yang dibangun menggunakan bahasa pemrograman Delphi dan Database SQL Server. Pembahasan dimulai dari melakukan analisa sistem yang sedang berjalan, membuat perancangan desain dan diagram yang diperlukan untuk membangun sistem, perancangan algoritma, tahap pemeriksaan *error* atau *error checking* sampai dengan tahap evaluasi akhir.

Kata kunci: pencatatan order, pemeriksaan logistik, perhitungan harga, pengelompokan pelanggan, pelayanan pelanggan, Delphi dan SQL Server.

ABSTRACT

Nowadays, an efficient and effective working system management is needed in a growing company like PT. Rumah Contoh which run offset and printing services as the frontline of company business. It could be a working system migration from manual to the computerized one to gain the best performance when doing business activities. Offset Compact Application, a software that could handle the needs in printing and offset division . This application could handle these activities which are, to note the order data into database, logistic stock checking, order price calculation, customers management, customers care service management. This final examination report will discussed every step of "Offset Compact Application PT. Rumah Contoh" software developing using Delphi proggamming language and SQL Server Database. This final examination report will be discusing every steps from analyzed the currently working system, diagram and design planning, designing the algorithm, error checking to the final evaluation phase.

Keywords: *to note the order data into database, stock checking, order price calculation, customers management, customers care service management, Delphi and SQL Server.*

DAFTAR ISI

KATA PENGANTAR	i
SURAT PERNYATAAN ORISINALITAS KARYA.....	ii
ABSTRAK.....	i
<i>ABSTRACT</i>	iv
DAFTAR ISI.....	v
DAFTAR GAMBAR	vii
DAFTAR TABEL	ix
DAFTAR LAMPIRAN	xiii
BAB I PENDAHULUAN.....	1
I.1 Latar Belakang.....	1
I.2 Rumusan Masalah.....	2
I.3 Tujuan Pembahasan.....	3
I.4 Ruang Lingkup Kajian.....	3
I.5 Sumber Data.....	5
I.6 Sistematika Pengajian	5
BAB II KAJIAN TEORI	7
II.1 Borland Delphi	7
II.2 SQL Server	8
II.3 Pemodelan Data	9
II.3.1 ERD	9
II.3.2 DFD (Data Flow Diagram)	13
II.3.3 Data Dictionary (Kamus Data)	19
II.3.4 Process Specification (PSPEC / (Spesifikasi Proses))	20
II.4 Proses Bisnis	22
BAB III ANALISIS DAN RANCANGAN SISTEM	24
III.1 Proses Bisnis	24
III.1.1 Perhitungan Potongan Harga Pelanggan.....	24
III.1.2 Perhitungan Harga dan Pencatatan Pesanan.....	24
III.1.3 Pemeriksaan Persediaan Logistik	26
III.1.4 Proses Bisnis Aplikasi	26
III.2 Perancangan Sistem	27
III.2.1 <i>Entity Relationship Diagram (ERD)</i>	27
III.2.2 Diagram E – R ke Tabel.....	28
III.3 <i>Data Flow Diagram (DFD)</i>	37
III.3.1 DFD Level 0	37
III.3.2 DFD Level 1	38
III.3.3 DFD Level 2	39
III.3.4 DFD Level 3	40
III.4 Kamus Data	45
III.5 PSPEC	54
III.5.1 Proses 1 – Login	54
III.5.2 Proses 2.1 – Manage Data Category	54
III.5.3 Proses 2.2 – Manage Data Customer	55
III.5.4 Proses 2.3 - Manage Data Purchashing.....	56
III.5.5 Proses 2.4 - Manage Data Logistic	58
III.5.6 Proses 2.5 - Manage Data Order.....	59
III.5.7 Proses 3 – Choose Report.....	65
III.5.8 Proses 4 – Manage UserAccount.....	65
III.5.9 Proses 5 – Show Calendar and Memo.....	66

III.6 Desain Antar Muka	67
III.6.1 Form Login	67
III.6.2 Form Main	67
III.6.3 Form Category	68
III.6.4 Form Customer	69
III.6.5 Form Logistic.....	69
III.6.6 Form Buy.....	70
III.6.7 Form Order , Form Order Detail dan Form Makloon.....	71
III.6.8 Form Print.....	74
III.6.9 Form UserAccount.....	75
BAB IV HASIL PENELITIAN.....	76
IV.1 Login Form	76
IV.2 Main Form	76
IV.3 Category Data Form	77
IV.4 Customer Data Form	78
IV.5 Logistic Data Form.....	78
IV.6 Purchasing Data Form.....	79
IV.7 Order Data Form.....	80
IV.8 Report.....	84
IV.9 User Account.....	86
BAB V PEMBAHASAN DAN UJI COBA HASIL PENELITIAN	87
V.1 Pengujian Sistem Terimplementasi.....	87
BAB VI SIMPULAN DAN SARAN	xii
VI.1 Kesimpulan	xii
VI.2 Saran-saran	xii
DAFTAR PUSTAKA.....	xiv

DAFTAR GAMBAR

Gambar 1 Notasi Entitas	10
Gambar 2 Notasi Atribut	10
Gambar 3 Contoh Penggunaan Atribut	11
Gambar 4 Notasi Relasi.....	12
Gambar 5 Satu ke Satu	12
Gambar 6 Satu Ke Banyak	12
Gambar 7 Banyak ke Satu.....	13
Gambar 8 Banyak ke Banyak	13
Gambar 9 Simbol pada Komponen DFD.....	14
Gambar 10 Simbol Terminator	14
Gambar 11 Jenis - Jenis Terminator	15
Gambar 12 Jenis Terminator	15
Gambar 13 Jenis – Jenis Proses.....	16
Gambar 14 Simbol <i>Data Store</i>	16
Gambar 15 Implementasi <i>Data Store</i>	17
Gambar 16 Simbol <i>Data Flow</i>	17
Gambar 17 Desain E – R.....	27
Gambar 18 DFD Level 0	37
Gambar 19 DFD Level 1	38
Gambar 20.1 DFD Level 2	39
Gambar 20.2 DFD Level 2 (lanjutan).....	40
Gambar 21 DFD Level 3 Proses 2.1	40
Gambar 22 DFD Level 3 Proses 2.2	41
Gambar 23 DFD Level 3 Proses 2.3	42
Gambar 24 DFD Level 3 Proses 2.4	42
Gambar 25.1 DFD Level 3 Proses 2.5	43
Gambar 25.2 DFD Level 3 Proses 2.5 (lanjutan)	44
Gambar 26 DFD Level 2 Proses 4.1	45
Gambar 27 Desain Form Login	67
Gambar 28 Desain Form Main Menu	68
Gambar 29 Desain Form Category	68
Gambar 30 Desain Form Customer	69
Gambar 31 Desain Form Logistic	69

Gambar 32 Desain Form Buy (Master Data).....	70
Gambar 33 Desain Form Buy (Detail Data)	70
Gambar 34 Desain Form Order (Master)	71
Gambar 35 Desain Form OrderDetail (Detail).....	71
Gambar 36 Desain Form Makloon (Detail).....	72
Gambar 37 Desain Form Finishing.....	73
Gambar 38 Desain Form Service	73
Gambar 39 Desain Form Report	74
Gambar 40 Desain Form Report	74
Gambar 41 Desain Form User Account	75
Gambar 42 Form Login.....	76
Gambar 43 Form Login.....	77
Gambar 44 Form Category.....	77
Gambar 45 Form Customer.....	78
Gambar 46 Form Logistic	78
Gambar 47 Form Buy Master	79
Gambar 48 Form Buy Detail	80
Gambar 49 Form Order Master	81
Gambar 50 Form Order Detail	81
Gambar 51 Form Order Makloon.....	82
Gambar 52 Form Finishing Order Detail	82
Gambar 53 Form Finishing Order Makloon.....	83
Gambar 54 Form Service Order Detail	83
Gambar 55 Form Service Order Makloon	84
Gambar 56 Form Report Order	84
Gambar 57 Form Report Order Detail	85
Gambar 58 Form Report Order Makloon.....	85
Gambar 59 Form Report Purchasing	86
Gambar 60 Form User Account.....	86

DAFTAR TABEL

Tabel 1 Simbol – Simbol pada Kamus Data.....	20
Tabel 2 Contoh Kamus Data	20
Tabel 3 Contoh PSPEC	22
Tabel 4 tb_BuyDetail.....	28
Tabel 5 tb_BuyDetailPlate	28
Tabel 6 tb_BuyMaster	29
Tabel 7 tb_Category.....	29
Tabel 8 tb_ColorIndicatorGeneral.....	29
Tabel 9 tb_ColorIndicatorSpecific.....	29
Tabel 10 tb_Customer	30
Tabel 11 tb_FinishingMakloon.....	30
Tabel 11 tb_FinishingMakloon (lanjutan).....	31
Tabel 12 tb_FinishingOrderDetail	31
Tabel 12 tb_FinishingOrderDetail (lanjutan).....	32
Tabel 13 tb_FinishingPrice	32
Tabel 14 tb_Goods.....	33
Tabel 15 tb_MakloonColor.....	33
Tabel 16 tb_MakloonDrugPrice	33
Tabel 17 tb_MakloonPlatePrice	33
Tabel 18 tb_Order.....	34
Tabel 19 tb_OrderDetail.....	34
Tabel 19 tb_OrderDetail (lanjutan)	35
Tabel 20 tb_OrderMakloon	35
Tabel 21 tb_Plate	36
Tabel 22 tb_ServiceMakloon	36
Tabel 23 tb_ServiceOrderDetail	36
Tabel 24 tb_UserAccount	37
Tabel 25 dt_account.....	45
Tabel 26 dt_category	45
Tabel 27 dt_customer	46
Tabel 28 dt_buyMaster	46
Tabel 29 dt_buyDetail	46
Tabel 29 dt_buyDetail (lanjutan)	47

Tabel 30 dt_buyDetailPlate.....	47
Tabel 31 dt_goods	47
Tabel 32 dt_plate	47
Tabel 32 dt_plate (lanjutan)	48
Tabel 33 dt_order.....	48
Tabel 34 dt_orderDetail	48
Tabel 34 dt_orderDetail (lanjutan)	49
Tabel 35 dt_orderMakloon.....	49
Tabel 36 dt_finishingOrderDetail	49
Tabel 36 dt_finishingOrderDetail (lanjutan)	50
Tabel 37 dt_finishingMakloon	50
Tabel 37 dt_finishingMakloon (lanjutan).....	51
Tabel 38 dt_serviceOrderDetail	51
Tabel 39 dt_serviceMakloon.....	51
Tabel 39 dt_serviceMakloon (lanjutan).....	52
Tabel 40 dt_finishingPrice.....	52
Tabel 41 dt_colorIndicatorGeneral	52
Tabel 42 dt_colorIndicatorSpecific	52
Tabel 42 dt_colorIndicatorSpecific (lanjutan)	53
Tabel 43 dt_makloonColor.....	53
Tabel 44 dt_makloonDrugPrice	53
Tabel 45 dt_makloonPlatePrice	53
Tabel 46 PSPEC Proses 1.....	54
Tabel 47 PSPEC Proses 2.1.1	54
Tabel 48 PSPEC Proses 2.1.2	54
Tabel 48 PSPEC Proses 2.1.2 (lanjutan)	55
Tabel 49 PSPEC Proses 2.2.1	55
Tabel 50 PSPEC Proses 2.2.2	55
Tabel 50 PSPEC Proses 2.3.1	56
Tabel 51 PSPEC Proses 2.3.2	56
Tabel 52 PSPEC Proses 2.3.3	56
Tabel 52 PSPEC Proses 2.3.3 (lanjutan)	57
Tabel 53 PSPEC Proses 2.3.4	57
Tabel 54 PSPEC Proses 2.3.5	57
Tabel 54 PSPEC Proses 2.3.5 (lanjutan)	58

Tabel 55 PSPEC Proses 2.4.1	58
Tabel 56 PSPEC Proses 2.4.2	58
Tabel 57 PSPEC Proses 2.4.3	59
Tabel 58 PSPEC Proses 2.5.1	59
Tabel 59 PSPEC Proses 2.5.2	59
Tabel 59 PSPEC Proses 2.5.2 (lanjutan)	60
Tabel 60 PSPEC Proses 2.5.3	60
Tabel 61 PSPEC Proses 2.5.4	60
Tabel 62 PSPEC Proses 2.5.5	61
Tabel 63 PSPEC Proses 2.5.6	61
Tabel 64 PSPEC Proses 2.5.7	61
Tabel 64 PSPEC Proses 2.5.7 (lanjutan)	62
Tabel 65 PSPEC Proses 2.5.8	62
Tabel 66 PSPEC Proses 2.5.9	62
Tabel 67 PSPEC Proses 3.5.10	63
Tabel 68 PSPEC Proses 2.5.11	63
Tabel 69 PSPEC Proses 2.5.12	63
Tabel 69 PSPEC Proses 2.5.12 (lanjutan)	64
Tabel 70 PSPEC Proses 2.5.13	64
Tabel 71 PSPEC Proses 2.5.14	64
Tabel 72 PSPEC Proses 3.1	65
Tabel 73 PSPEC Proses 3.2	65
Tabel 74 PSPEC Proses 4.1	65
Tabel 75 PSPEC Proses 4.2	66
Tabel 76 PSPEC Proses 4.3	66
Tabel 77 PSPEC Proses 7.2	66
Tabel 75 Pengujian Login Form.....	87
Tabel 76 Pengujian Main Form.....	88
Tabel 77 Pengujian Category Form.....	89
Tabel 78 Pengujian Customer Form.....	90
Tabel 79 Pengujian Logistic Form	91
Tabel 79 Pengujian Logistic Form (lanjutan)	92
Tabel 80 Pengujian Purchasing Form	92
Tabel 80 Pengujian Purchasing Form (lanjutan 1)	93
Tabel 80 Pengujian Purchasing Form (lanjutan 2)	94

Tabel 81 Pengujian Order Master Form	94
Tabel 81 Pengujian Order Master Form (lanjutan).....	95
Tabel 82 Pengujian Order Detail Form.....	95
Tabel 82 Pengujian Order Detail Form (lanjutan)	96
Tabel 83 Pengujian Order Form (Makloon)	96
Tabel 83 Pengujian Order Makloon Form (lanjutan)	97
Tabel 83 Pengujian Order Makloon Form (lanjutan)	98
Tabel 84 Pengujian Finishing Form.....	98
Tabel 85 Pengujian Service Form	99
Tabel 86 Pengujian Order Report Form	99
Tabel 87 Pengujian Purchasing Report Form	100
Tabel 88 Pengujian User Account Form.....	100
Tabel 89 Pengujian User Account Form (lanjutan)	101

DAFTAR LAMPIRAN

Lampiran A Questioner	A-1
Lampiran B Curriculum Vitae	B-1