

ABSTRAK

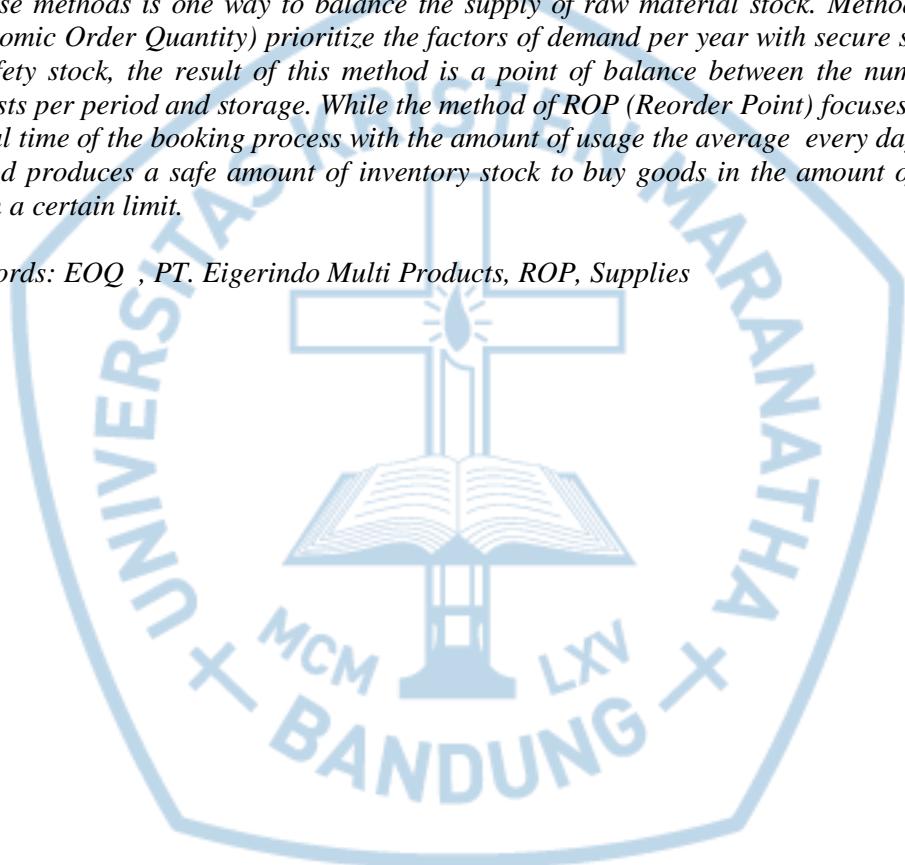
PT. Eigerindo Multi Produk merupakan perusahaan yang bergerak dalam bidang produksi tas dan perlengkapan petualangan. PT Eigerindo Multi Produk memiliki beberapa brand ternama seperti Eiger, Export, Body pack. Dalam proses produksi barang, perusahaan membuat jadwal produksi dengan periode tertentu untuk memenuhi permintaan pasar. Produk di jual di setiap outlet yang tersebar di seluruh Indonesia. Untuk melancarkan proses produksi , pengiriman serta pembelian barang, perusahaan harus memiliki suatu metode yang tepat dalam menyimpan persediaan barang yang berupa material yang merupakan salah satu faktor untuk produksi barang. Teknik penyimpanan stok yang tepat dalam periode tertentu memudahkan perusahaan dalam menentukan titik seimbang antara permintaan dan jumlah stok untuk produksi. Teknik penyimpanan stok dihitung dalam metode EOQ (*Economic Order Quantity*) dan ROP (*Reorder Point*). Kedua metode tersebut merupakan salah satu cara untuk menyeimbangkan persediaan stok bahan baku. Metode EOQ (*Economic Order Quantity*) menitikberatkan kepada faktor permintaan per tahun dengan penyimpanan aman atau *safety stock*, hasil dari metode ini adalah sebuah titik kesimbangan antara jumlah permintaan per periode dan penyimpanan. Sedangkan metode ROP (*Reorder Point*) menitikberatkan waktu kedatangan pada proses pemesanan dengan jumlah pemakaian rata – rata perhari , metode ini menghasilkan jumlah stok persediaan aman untuk membeli barang pada jumlah stok dalam batas tertentu.

Kata kunci: EOQ , PT. Eigerindo Multi Produk, Persediaan, ROP

ABSTRACT

PT. Eigerindo Multi Products is a company engaged in the production of bags and adventure's gear. PT Eigerindo Multi Products has several brand names such as Eiger, Export, Body pack. In the process of production of goods, the company makes the production schedule with a specific period to meet market demand. Products are sold in all outlets throughout Indonesia. To expedite the process of production, delivery and purchase of goods, companies must have an appropriate method of storing inventory in the form of material that is one factor for the production of goods. Proper storage techniques stock within a certain period to facilitate the company in determining the point of balance between demand and the number of stocks for production. Storage techniques stock is calculated in a method of EOQ (Economic Order Quantity) and ROP (Reorder Point). Both of these methods is one way to balance the supply of raw material stock. Method EOQ (Economic Order Quantity) prioritize the factors of demand per year with secure storage or safety stock, the result of this method is a point of balance between the number of requests per period and storage. While the method of ROP (Reorder Point) focuses on the arrival time of the booking process with the amount of usage the average every days, this method produces a safe amount of inventory stock to buy goods in the amount of stock within a certain limit.

Keywords: EOQ , PT. Eigerindo Multi Products, ROP, Supplies



DAFTAR ISI

LEMBAR PENGESAHAN	i
PERNYATAAN ORISINALISTAS LAPORAN PENELITIAN	ii
PERNYATAAN PUBLIKASI LAPORAN PENELITIAN.....	iii
PRAKATA	iv
ABSTRAK	vi
ABSTRACT	vii
DAFTAR ISI	viii
DAFTAR GAMBAR	xi
DAFTAR TABEL	xv
DAFTAR NOTASI/ LAMBANG	xviii
DAFTAR SINGKATAN	xx
BAB 1 PENDAHULUAN	1
1.1 Latar Belakang	1
1.2 Rumusan Masalah	2
1.3 Tujuan Pembahasan.....	2
1.4 Ruang Lingkup.....	3
1.5 Sumber Data	4
1.6 Sistematika Penyajian.....	4
BAB 2 KAJIAN TEORI	6
2.1 Sistem Informasi	6
2.2 Pembelian	6
2.3 Penjualan	7
2.4 Proses Bisnis	7
2.5 Inventori.....	7

2.6 Decision Support System (DSS)	8
2.7 Economic Order Quantity (EOQ)	8
2.8 Reorder Point (ROP)	10
BAB 3 ANALISIS DAN RANCANGAN SISTEM.....	11
3.1 Proses Bisnis	11
3.1.1 Pembelian Barang.....	11
3.1.2 Produksi Barang	13
3.1.3 Pengiriman Barang	14
3.2 Analisis Decision Support System	17
3.3 Entity Relationship Diagram (ERD)	20
3.4 Relational Database.....	21
3.5 Data Flow Diagram (DFD)	28
3.5.1 Level 0	29
3.5.2 Level 1	33
3.5.3 Level 2	36
3.5.3.1 Level 2 Proses 2.....	36
3.5.3.2 Level 2 Proses 3.....	40
3.5.3.3 Level 2 Proses 4.....	41
3.5.4 Level 3 Proses 2.1	44
3.5.4.1 Level 3 Proses 2.1.....	44
3.5.4.2 Level 3 Proses 2.2.....	47
3.5.4.3 Level 3 Proses 2.3.....	48
3.5.4.4 Level 3 Proses 2.4.....	49
3.5.4.5 Level 3 Proses 2.5.....	51
3.5.4.6 Level 3 Proses 2.6.....	54
3.5.4.7 Level 3 Proses 2.7.....	55

3.5.4.8 Level 3 Proses 2.8.....	56
3.5.4.9 Level 3 Proses 2.9.....	57
3.6 Process Specification (PSPEC).....	59
3.7 Kamus Data.....	72
3.8 Rancangan Desain User Interface	81
BAB 4	91
IMPLEMENTASI.....	91
4.1 Hasil Implementasi Program	91
4.1.1 Koordinator Bagian Produksi.....	114
4.1.2 Koordinator Bagian Pengiriman.....	122
4.1.3 Koordinator Bagian Pembelian	130
BAB 5 PENGUJIAN	139
5.1 Tabel Pengujian Black Box	139
BAB 6 SIMPULAN DAN SARAN.....	152
6.1 Simpulan.....	152
6.2 Saran.....	152
DAFTAR PUSTAKA	154

DAFTAR GAMBAR

Gambar 3.1 Flow Chart Pembelian Barang	12
Gambar 3.2 Flow Chart Produksi Barang	14
Gambar 3.3 ERD (Entity Relational Diagram)	20
Gambar 3.4 DFD Level 0.....	29
Gambar 3.5 DFD Level 1	34
Gambar 3.6 DFD Level 2 Proses 2	38
Gambar 3.7 DFD Level 2 Proses 3	40
Gambar 3.8 DFD Level 3 Proses 2.1	46
Gambar 3.9 DFD Level 3 Proses 2.2	47
Gambar 3.10 DFD Level 3 Proses 2.3.1	48
Gambar 3.11 DFD Level 3 Proses 2.3.2	49
Gambar 3.12 DFD Level 3 Proses 2.4.1	50
Gambar 3.13 DFD Level 3 Proses 2.4.2	51
Gambar 3.14 DFD Level 3 Proses 2.5.1	52
Gambar 3.15 DFD Level 3 Proses 2.5.2	53
Gambar 3.16 DFD Level 3 Proses 2.6.1	54
Gambar 3.17 DFD Level 3 Proses 2.6.2	55
Gambar 3.18 DFD Level 3 Proses 2.7	56
Gambar 3.19 DFD Level 3 Proses 2.8	57
Gambar 3.20 DFD Level 3 Proses 2.9	58
Gambar 3.21 User Login.....	82
Gambar 3.22 Template Add	82
Gambar 3.23 Add Employer	83
Gambar 3.24 View Employer.....	84
Gambar 3.25 View Material	85
Gambar 3.26 Add Material.....	86
Gambar 3.27 Add Product Detail	87
Gambar 3.28 View Product.....	88
Gambar 3.29 Add Product.....	89
Gambar 3.30 UI Home	90

Gambar 4.1 Halaman Login	91
Gambar 4.2 Halaman Login Gagal	92
Gambar 4.3 Tampilan Menu Navigasi	92
Gambar 4.4 Halaman Add Product.....	93
Gambar 4.5 Halaman View Product	93
Gambar 4.6 Edit Product.....	94
Gambar 4.7 Delete Product	94
Gambar 4.8 Add Category Product.....	95
Gambar 4.9 Add Category Product Fail.....	95
Gambar 4.10 Delete Category	96
Gambar 4.11 Category After Delete	96
Gambar 4.12 View Material.....	97
Gambar 4.13 New Material Add With Purchase	98
Gambar 4.14 Purchase Add Alert.....	98
Gambar 4.15 Material Add Form	99
Gambar 0.16 Material Added Result	99
Gambar 4.17 View New Material.....	99
Gambar 4.18 Add EOQ (Economic Order Quantity)	100
Gambar 4.19 Form Add EOQ (Economic Order Quantity).....	101
Gambar 4.20 Add EOQ (Economic Order Quantity) Alert	101
Gambar 4.21 View EOQ After Insert	102
Gambar 4.22 Delete EOQ	102
Gambar 4.23 Delete EOQ Result.....	103
Gambar 4.24 Edit Data EOQ.....	103
Gambar 4.25 Form Edit Data EOQ	104
Gambar 4.26 Add ROP (Reorder Point)	104
Gambar 4.27 Form ROP (Reorder Point).....	105
Gambar 4.28 Alert ROP.....	105
Gambar 4.29 View Reorder Point	106
Gambar 4.30 Edit ROP (Reorder Point)	106
Gambar 4.31 Form ROP (Reorder Point).....	107
Gambar 4.32 Add Production Detail	107

Gambar 4.33 Add Product Detail Success Alert	108
Gambar 4.34 Material Product Detail Result	108
Gambar 4.35 Alert Delete Product Detail	109
Gambar 4.36 View Product Detail.....	109
Gambar 4.37 Alert Delete Material Detail	110
Gambar 4.38 Delete Product Detail Result	110
Gambar 4.39 Form Add Employer	111
Gambar 4.40 View Employer.....	111
Gambar 4.41 Edit Employer.....	112
Gambar 4.42 Form Edit Employer	112
Gambar 4.43 Edit Employer Result	113
Gambar 4.44 Delete Employer Alert	113
Gambar 4.45 Delete Employer Result	114
Gambar 4.46 Add Production Menu.....	115
Gambar 4.47 Form Add Production	115
Gambar 4.48 View Production	116
Gambar 4.49 Delete Production	116
Gambar 4.50 Delete Production Result.....	117
Gambar 4.51 Add Production Detail	117
Gambar 4.52 Form Add Production Detail	118
Gambar 4.53 Demo Production Detail.....	118
Gambar 4.54 Sucess Alert Add Production Detail	119
Gambar 4.55 Danger Alert Production Detail	120
Gambar 4.56 Form Production Detail.....	120
Gambar 4.57 Delete Alert Production Detail	121
Gambar 4.58 Sucess Alert Production Detail.....	121
Gambar 4.59 Production Status	122
Gambar 4.60 Add Shipping.....	123
Gambar 4.61 Status Shipping	123
Gambar 4.62 Delete Shipping	124
Gambar 4.63 Delete Shipping Result.....	124
Gambar 4.64 Add Shipping Detail	125

Gambar 4.65 Sucess Allert Shipping	125
Gambar 4.66 Driver Form.....	126
Gambar 4.67 Shipping Status.....	126
Gambar 4.68 Receive Button	127
Gambar 4.69 Shipping Status After Received.....	127
Gambar 4.70 Form Received.....	128
Gambar 4.71 Form Received.....	128
Gambar 4.72 Sending Status	129
Gambar 4.73 Delete Alert	129
Gambar 4.74 Delete Result	130
Gambar 4.75 Purchase Navigation	131
Gambar 4.76 Add Purchase.....	131
Gambar 4.77 Succes Alert Purchase	131
Gambar 4.78 View Purchase	132
Gambar 4.79 Delete Purchase	132
Gambar 4.80 Add Purchase Detail	133
Gambar 4.81 Purchase Detail Report.....	133
Gambar 4.82 View Purchase	134
Gambar 4.83 Print Report	134
Gambar 4.84 Arrived Button.....	135
Gambar 4.85 View Production Detail Form	135
Gambar 4.86 Insert Material Succes Alert	136
Gambar 4.87 View Status Purchase.....	136
Gambar 4.88 Delete Alert Purchase	137
Gambar 4.89 Deleter Purchase Result	137
Gambar 4.90 Add Retur Purchase	138
Gambar 5.1 Pengujian Form Product.....	140

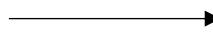
DAFTAR TABEL

Table 3.1 Employer.....	21
Table 3.2 EOQ (Economic Order Quantity)	21
Table 3.3 Material.....	22
Table 3.4 Material Category.....	22
Table 3.5 Material Product Detail	22
Table 3.6 Material Satuan	23
Table 3.7 Position	23
Table 3.8 Product.....	23
Table 3.9 Production.....	23
Table 3.10 Production Detail.....	24
Table 3.11 Production Detail By Product Id	24
Table 3.12 Product Category.....	25
Table 3.13 Purchase	25
Table 3.14 Retur	25
Table 3.15 Retur Purchase Detail	26
Table 3.16 Reorder Point	26
Table 3.17 Shipping	27
Table 3.18 Shipping Detail.....	27
Table 3.19 Suplier.....	27
Table 3.20 User.....	28
Table 3.21 Holding Cost	28
Table 3.22 PSPEC Login	59
Table 3.23 PSPEC Cetak Laporan Pembelian.....	59
Table 3.24 PSPEC Cetak Laporan Pengiriman	60
Table 3.25 PSPEC Cetak Laporan Produksi	60
Table 3.26 PSPEC Cetak Laporan Retur	61
Table 3.27 PSPEC Tambah Material	61
Table 3.28 PSPEC Ubah Material	62
Table 3.29 PSPEC Hapus Material.....	62
Table 3.30 PSPEC Tambah Produk.....	62

Table 3.31 PSPEC Ubah Produk	63
Table 3.32 PSPEC Hapus Produk.....	63
Table 3.33 PSPEC Tambah Produksi	64
Table 3.34 PSPEC Ubah Produksi.....	64
Table 3.35 PSPEC Hapus Produksi	65
Table 3.36 PSPEC Tambah Pengiriman	65
Table 3.37 PSPEC Ubah Pengiriman.....	65
Table 3.38 PSPEC Hapus Pengiriman	66
Table 3.39 PSPEC Tambah Retur	66
Table 3.40 PSPEC Ubah Retur.....	66
Table 3.41 PSPEC Hapus Retur	67
Table 3.42 PSPEC Tambah Pembelian.....	67
Table 3.43 PSPEC Ubah Pembelian	68
Table 3.44 PSPEC Hapus Pembelian.....	68
Table 3.45 PSPEC Tambah Pegawai	68
Table 3.46 PSPEC Ubah Pegawai	69
Table 3.47 PSPEC Hapus Pegawai.....	69
Table 3.48 PSPEC Tambah Suplier	70
Table 3.49 PSPEC Ubah Suplier	70
Table 3.50 PSPEC Hapus Suplier.....	70
Table 3.51 PSPEC Tambah User.....	71
Table 3.52 PSPEC Ubah User	71
Table 3.53 PSPEC Hapus User	72
Table 3.54 Kamus Data Product.....	72
Table 3.55 Kamus Data Employer.....	72
Table 3.56 Kamus Data EOQ (Economic Order Quantity)	73
Table 3.57 Kamus Data Material.....	73
Table 3.58 Kamus Data Category Material.....	74
Table 3.59 Kamus Data Product Detail	74
Table 3.60 Kamus Data Material Satuan	75
Table 3.61 Kamus Data Production.....	75
Table 3.62 Kamus Data Detail Production.....	76

Table 3.63 Kamus Data Detail Production by Product.....	76
Table 3.64 Kamus Data Kategori Produk	76
Table 3.65 Kamus Data Pembelian.....	77
Table 3.66 Kamus Data Detail Pembelian	77
Table 3.67 Kamus Data Retur	78
Table 3.68 Kamus Data Detail Retur.....	78
Table 3.69 Kamus Data ROP	79
Table 3.70 Kamus Data Shipping	79
Table 3.71 Kamus Data Shipping Detail.....	80
Table 3.72 Kamus Data Suplier.....	80
Table 3.73 Kamus Data User	81
Table 5.1 Pengujian Login	139
Table 5.2 Pengujian Logout	139
Table 5.3 Pengujian Form Product	140
Table 5.4 Pengujian Form Category Product	140
Table 5.5 Pengujian Form Material	141
Table 5.6 Pengujian Form Category Material	142
Table 5.7 Pengujian Form EOQ	143
Table 5.8 Pengujian Form ROP.....	144
Table 5.9 Pengujian Form Production	144
Table 5.10 Pengujian Form Production Detail.....	145
Table 5.11 Pengujian Form Purchase	146
Table 5.12 Pengujian Form Purchase Detail	147
Table 5.13 Pengujian Form Shipping	147
Table 5.14 Pengujian Form Shipping Detail	148
Table 5.15 Pengujian Form User	149
Table 5.16 Pengujian Form Employer	150
Table 5.17 Pengujian Form Suplier	150

DAFTAR NOTASI/ LAMBANG

Jenis	Notasi/ Lambang	Nama	Arti
Flow Chart		Proses	Fungsi proses yang berjalan
		Keputusan Bercabang	Persimpangan arus proses yang di pisah dikarenakan ada perbedaan pengambilan keputusan
		Masukan Non Komputer	Masukan dari proses selain masukan dari proses komputasi
		Dokumen	Aliran proses dokumen
		Database	Penyimpanan data
		Start / End	Titik awal dan akhir proses
DFD (Data Flow Diagram)		Simbol Proses	Proses dalam sistem
		Simbol Entitas	Entitas
		Simbol Penyimpanan	Penyimpanan arus Data
		Simbol Panah Arah Arus Data	Arah Arus Data

Jenis	Notasi/ Lambang	Nama	Arti
ERD (Entity Relational Diagram)		Atribut Tabel	Atribut dari Entitas
		Relasi	Arah Relasi
		Nama Relasi	Nama antara beberapa relasi
		Entitas	Entitas

Referensi:

Notasi/ Lambang DFD dari Critical Systems Analysis and Design: A Personal Framework Approach [1, p. 173].

Notasi/ Lambang ERD dari Documenting Software Architectures: Views and Beyond [2, p. 87].

Notasi/ Lambang Flow Chart dari Modeling Software Behavior: A Craftsman's Approach [3, p. 50] .

DAFTAR SINGKATAN

<i>ERD</i>	<i>Entity Relationship Diagram</i>
<i>SI</i>	<i>Sistem Informasi</i>
<i>DFD</i>	<i>Data Flow Diagram</i>
<i>EOQ</i>	<i>Economic Order Quantity</i>
<i>ROP</i>	<i>Reorder Point</i>

