

UNIVERSITI SAINS MALAYSIA

Peperiksaan Semester Pertama
Sidang 1996/97

Oktober/November 1996

AAW313 - SISTEM MAKLUMAT PERAKAUNAN

Masa: [3 jam]

ARAHAN

Sila pastikan bahawa kertas peperiksaan ini mengandungi **LIMA BELAS (15)** muka surat yang bercetak sebelum anda memulakan peperiksaan.

Jawap **LIMA (5)** soalan sahaja. Semua soalan **MESTI** dijawab di dalam Bahasa Malaysia. Jika pelajar memilih untuk menjawab di dalam Bahasa Inggeris, sekurang-kurangnya **SATU** soalan mesti dijawab di dalam Bahasa Malaysia **KECUALI** pelajar luar negara.

1. Terangkan elemen-elemen di dalam Sistem Maklumat Perakaunan. Berdasarkan pengetahuan perakaunan anda sehingga hari ini, elemen manakah yang anda merasa sangat selesa, dan yang tidak selesa? Terangkan jawapan anda.
Examine the elements of accounting information system. Based on your college education on accounting todate, with which elements are you most comfortable? With which elements are you least comfortable? Explain your answer.

[20 markah]

2. Terangkan bagaimana Sistem Sokongan Pembuatan Keputusan (DSS), Sistem Maklumat Eksekutif (EIS), Sistem Pakar (ES) dan Rangkaian Neutral (NN) boleh membantu pembuat keputusan melakukan tiga langkah di dalam proses membuat keputusan? Bolehkah sistem-sistem ini melakukan mana-mana langkah tersebut secara bebas dari pembuat keputusan manusia.
Explain how a decision support system (DSS), executive information system (EIS), an expert system (ES) and neutral network (NN) can assist a decision maker in performing three steps in decision making? Can these systems perform any of these steps independent of the human decision maker?

[20 markah]

...2/-

3. Terangkan rancangan kawalan berikut bagi sistem talian terus dengan contoh yang bersesuaian yang diambil dari Sistem Maklumat Perakaunan.
Explain the following control plans for online systems with a suitable example drawn from accounting information system.
- (a) Memasukkan data hampir dari sumbernya.
Entry of data close to the source.
 - (b) Skema mengekod.
Coding scheme.
 - (c) Tandatangan digital.
Digital signature.
 - (d) Skema format betul pra.
Preformatted schemes.
 - (e) Pemberitahuan segera talian terus.
Online prompting.
 - (f) Semakan maklumbalas interaktif.
Interactive feedback checks
 - (g) Semakan program pembetulan.
Programmed edit checks.

[20 markah]

4. (a) Penang Hills Bhd. merancang untuk membina Sistem Maklumat Perakaunan. Anda telah diberikan senarai nama-nama akaun urusan yang biasa dijalankan oleh syarikat. Tugas yang anda hadapi ialah untuk mengekod urusan tersebut dengan menggunakan klasifikasi yang bersesuaian, dan mempunyai nombor kod yang bermakna. Berikan alasan untuk jawapan anda.

Nama akaun

Aset
Liabiliti
Ekuiti pemilik
Belanja
Pendapatan

ASET
Aset tetap
Aset semasa
Pelaburan

Aset Tetap

Tanah

- Tanah kilang
- Tanah pejabat pentadbiran

Bangunan

- Bangunan kilang
- Bangunan pejabat pentadbiran

Lebuhraya

- Lebuhraya Utara
- Lebuhraya Selatan

Loji dan mesin

Kenderaan

- Kereta
- Lori
- Van
- Motosikal

Aset Semasa

Tunai di tangan

- Tunai di kilang
- Tunai di pejabat pentadbiran

Tunai dalam bank

- Tunai di Bank Bumiputera
- Tunai di Maybank
- Tunai di Public Bank

Stok dan inventori

- Stok bahan mentah
- Kerja dalam proses
- Stok barangan siap

Penghutang

(Nama pelanggan)

- Sheeba
- Hani
- Amran

Pelaburan

- Bon kerajaan, 6%
- Bon perbendaharaan, 9%

LIABILITI

Liabiliti jangka panjang

Liabiliti semasa

Ekuiti pemilik

Liabiliti jangka panjang

Debentur

Debentur boleh tebus 7%

Debentur tidak boleh tebus 9%

Debentur boleh tukar 1%

Pinjaman 10 tahun dari Public Bank

Liabiliti semasa

Overdraf bank

Overdraf dari Hong Kong Bank

Overdraf dari Bank of Commerce

Overdraf dari BHL Bank

Pemiutang

(Nama Pembekal)

Pan Malaysian Cement Bhd

Nusantara Supplies Bhd

United Book Supplies Bhd

Kedah Steels Sdn. Bhd

Ekuiti pemilik

Modal saham

Saham biasa

Saham keutamaan

Rizab

Rizab am

Rizab modal

Penyata untung rugi

Pendapatan

Jualan

Jualan borong

Jualan runcit

Pulangan belian

Pendapatan dari faedah

Pendapatan dari dividen

Belanja

Belian

Pulangan jualan

Tambang muatan masuk

Tambang muatan keluar

Gaji

Upah

Cukai pintu dan Cukai

Pembaikan dan pembaharuan
Bekalan pejabat
Petrol
Caj elektrik dan lampu
Yuran audit
Iklan
Belanja keraian
Belanja faedah
Susutnilai

Penang Hills Bhd. approaches you to install an accounting information system in their organisation. You have been given a list of accounts for transaction normally carried out by the company. You are facing the task of codifying the transactions by a suitable classification of coding. Codify the following transactions by giving suitable, appropriate and more meaningful code numbers. Give reasons for your answer.

Details of Transactions

*Assets
Liabilities
Owner's equity
Expenses
Income*

*Assets
Fixed assets
Current assets
Investments*

*Fixed Assets
Land
 Factory land
 Administrative office land
Buildings
 Factory buildings
 Administrative office building
Highways
 Southern highways
 Northern highways
Plant and machinery
Vehicles
 Motor cars
 Lorries
 Vans
 Motor cycles*

Current Assets

Cash in hand

Cash in factory

Cash in administrative office

Cash at bank

Cash with Bank Bumiputra

Cash with May Bank

Cash with Public Bank

Stock and inventories

Stock of raw materials

Work in progress

Stock of finished goods

Debtors

(Names of customers)

Sheeba

Hanin

Amran

Investment

6% government bonds

9% treasury bonds

Liabilities

Long term liabilities

Current liabilities

Owner's equity

Long term liabilities

Debentures

7% redeemable debentures

9% non-redeemable debentures

1% convertible debentures

Ten-year loans from Public Bank

Current liabilities

Bank overdraft

Overdraft from Hong Kong Bank

Overdraft from Bank of Commerce

Overdraft from BHL Bank

Creditors

(Names of suppliers)

Pan Malaysian Cement Bhd.

Nusantara Supplies Bhd.

United Book Supplies Bhd.

Kedah Steels Sdn. Bhd.

Owner's Equity
Share capital
 Ordinary shares
 Preference shares
Reserves
 General reserve
 Capital reserve

Profit and loss account

Income
Sales
 Whole sales
 Retail sales
Purchase returns
Interest income
Dividend income

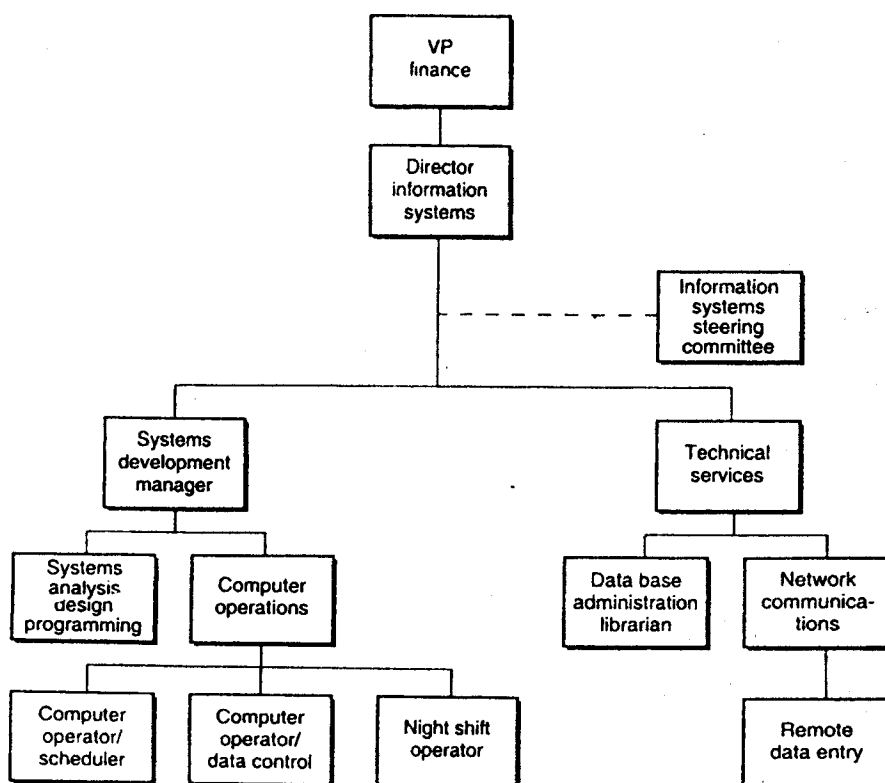
Expense
Purchases
Sales returns
Freight in
Freight out
Wages
Rates and taxes
Repairs and renewals
Office supplies

Fuel
Electricity and lighting charges
Audit fees
Advertisement
Entertainment expenses
Interest expense
Depreciation

[20 markah]

5. Lukis semula carta organisasi di bawah untuk meningkatkan keberkesanan, kecekapan dan kawalan Sistem Maklumat Perakaunan. Pembaharuan anda hendaklah tanpa penambahan di dalam kakitangan. Tandakan di mana perubahan telah dibuat di atas carta. Bincangkan pembaharuan tersebut dan juga perubahan-perubahan yang anda telah fikirkan tetapi tidak boleh anda masukkan di dalam carta ini.

Redraw the following organisation chart to improve efficiency, effectiveness and controls in accounting information system. Your corrections should not require adding any personnel. Indicate on the redrawn chart where you have made improvements. Discuss your improvements and any improvements that you thought of but found you could not incorporate.



[20 markah]

6. Syarikat Azwan Mazwan Insurance Bhd membayar invois pembekal melalui cek. Jabatan Akaun belum bayar akan memulakan prosedur menulis cek dengan mengisikan bahagian atas borang permintaan cek borang CD 930 (amaun cek, nama dan alamat penerima). Nombor pesanan belian dan pusat kos juga dimasukkan ke setiap invois. Kesemua invois yang akan dibayar melalui cek akan dikepilkan dengan borang CD 930, dan kemudiannya akan dihantar ke Analisis belanjawan dan kos (ABK), dua kali sehari.

ABK mengisi bahagian bawah borang permintaan cek dengan mengisi maklumat berikut untuk setiap invois:

- (i) amaun
- (ii) keterangan item
- (iii) kod akaun (belanja)
- (iv) nombor pusat kos

Sekiranya ada invois di dalam borang CD 930 tidak mempunyai nombor pesanan belian atau pusat kos, borang permintaan cek dan kesemua invois terkepil akan dipulangkan semula ke akaun belum bayar untuk disiapkan. Apabila kesemua maklumat telah dimasukkan ke dalam borang permintaan cek, permintaan akan dikelompokkan sebanyak 25 permintaan setiap kelompok. Jumlah kelompok akan diambil dari bahagian atas dan bahagian bawah borang permintaan cek.

ABK akan mengemukakan kelompok ini kepada seksyen kawalan maklumat operasi komputer pada 3.30 petang setiap hari. Kawalan maklumat akan merekodkan kelompok tersebut, dan menghantarnya ke persediaan maklumat, di mana ianya di masukkan secara "key to tape" untuk menyediakan pita fail pengeluaran tunai. Pita pengeluaran tunai (mengandungi kelompok yang permintaan ceknya di luluskan) akan di proses melalui operasi komputer setiap malam pada jam 10.00 untuk mencetak cek untuk vendor, yang kemudiannya akan dikemukakan kepada juruwang keesokan hari. Sebahagian dari operasi komputer akan mengemaskini baki pembekal di dalam fail induk akaun belum bayar (disimpan di dalam pita magnetik). Dua salinan senarai pengeluaran tunai akan disediakan dan akan dihantar ke kawalan data. Kawalan data kemudian memasukkan jumlah pengeluaran di dalam log/rekod kawalan, difailkan satu salinan senarai mengikut tarikh, dan menghantar satu salinan lagi kepada jabatan lejer am.

Dikehendaki

- (a) Sediakan jadual entiti dan aktiviti.
- (b) Sediakan gambar rajah aliran data fizikal.

Azwan Mazwan Insurance Bhd. pays vendor invoices by cheque. The accounts payable department initiates the cheque writing procedures by completing the top portion (cheque amount, payee name, and payee address) of a cheque against form CD 930. They also enter the purchase order number and cost center on each invoice covered by the cheque request. All invoices to be paid by a cheque are attached to form CD 930, and the forms and invoices are sent to budget and cost analysis (BCA) twice a day.

BCA completes the bottom portion of each cheque request by entering the following data for each invoice covered by the cheque:

- (i) amount.*
- (ii) item description.*
- (iii) account (expense) code.*
- (iv) cost center number.*

If any invoice covered by form CD 930 does not have a purchase order or cost center number on it, then the cheque request and all attached invoices are returned to accounts payable for completion. When all the invoice data has been entered on each check request, the requests are batched into groups of 25 and batch totals are taken of the cheque amounts (top portion of form CD 930) and of all invoice amounts (bottom portion of the cheque requests).

BCA forwards the batches to the data control section of computer operations at 3.30 p.m. each day. Data control logs the batches, and forwards them to data preparation, where they are key entered on key-to-tape equipment to create a cash disbursements tape file. The cash disbursements tape (containing accepted batches of cheque requests) is run by computer operations each night at 10.00 p.m. to create the vendor cheque which are forwarded to the cashier the next morning. As part of this run, vendor balances are updated on the accounts payable master file (kept on magnetic disk). Two copies of a cash disbursements listing are also produced and are sent to data control. Data control enters the disbursement totals in its control log, files one copy of the listing (by date), and send the other copy to the general ledger department.

Required:

- (a) Prepare a table of entities and activities.*
- (c) Prepare a physical data flow diagram.*

[20 markah]

7. Lampiran A, menunjukkan gambar rajah aliran data bagi Sistem Pembelian/Akaun Belum Bayar/Pembayaran. Berikut adalah penerangan mengenai proses 1 dari dalam gambar rajah tersebut.

Proses pertama di dalam pemesanan barangan adalah pemilihan pembekal. Seorang pembeli (atau agen pembelian) selalunya akan menyemak fail pembekal untuk mengenalpasti beberapa pembekal. Setelah mereka ini dikenalpasti, pembeli kemudian menilai harga setiap barangan, kualiti, servis, tarikh penghantaran, syarat, kebolehpercayaan dan amaun yang telah dibeli dari setiap pembekal sehingga kini.

Setelah pembekal dipilih, pembeli akan menyediakan pesanan belian, yang kemudiannya akan dihantar kepada pembekal. Salinan pesanan barang (dan juga lain-lain borang notis) dihantar kepada beberapa jabatan sepertimana yang ditunjukkan di dalam aliran data (Lampiran A). Satu salinan pesanan barang akan disimpan di dalam fail pesanan barang induk.

Selepas beberapa hari, notis dari pembekal akan diterima dan akan digunakan untuk mengemaskini data taraf pesanan di dalam fail pesanan barang induk.

Dikehendaki:

Daripada gambar rajah aliran data di lampiran dan penerangan di atas besarkan buih 1.0 yang menunjukkan keterangan lanjut proses tersebut. Bina matrik kawalan yang wujud dan hilang untuk proses ini.

Appendix A is the purchasing/accounts payable/cash disbursements system level 0 DFD. The narrative that follows is description of process 1.0.

The first process in ordering goods involves vendor-selection. A buyer (or purchasing agent) generally consults a vendor file to identify several suppliers. Once several candidates have been identified, the buyer then evaluates each prospective vendor with respect to such factors as unit price, quality, service, promised delivery dates, terms, reliability, and amount purchased from the vendor to date.

After the vendor has been selected, the buyer then prepares a purchase order, which is sent to the vendor. Copies of the purchase order (or some other physical form of notification) are distributed to several departments as shown by the four other data flows in Appendix A. In addition, a copy of the purchase order is usually maintained in a purchase order master file.

Sometimes later, a vendor acknowledgment is received and is used to update the order status data in the purchase order master file.

Required:

From DFD in Appendix A and the narrative description above, explode bubble 1.0 into a lower level diagram showing the details of that process. Build matrix control that existed and missed for this process.

[20 markah]

...12/-

8. Lampiran B menunjukkan jadual bersangkutpaut yang mana nama sifatnya tidak ditunjukkan. Sel yang digelapkan merupakan nama yang telah ditinggalkan. Berikut adalah nama yang ditinggalkan, mengikut susunan abjad.

| Tajuk ditinggalkan | Penerangan |
|--------------------|--|
| Disb_Amt | Jumlah pembayaran |
| Disb_No | No pembayaran (ditinggalkan lebih dari sekali) |
| FOB_Terms | |
| Inv_Amt | Jumlah invoice |
| Inv_No | Nombor invoice pembekal (ditinggalkan lebih dari sekali) |
| PO_Date | Tarikh pesanan belian |
| PO_No | Nombor pesanan belian (ditinggalkan lebih dari sekali) |
| Qty_Ordered | Kuantiti dipesan |
| Qty_Rec'd | Kuantiti diterima |
| Rec_No | Nombor resit (ditinggalkan lebih dari sekali) |
| Ship_Via | |
| Vend_City | |
| Vend_Name | |
| Vend_No | Nombor pembekal (ditinggalkan lebih dari sekali) |

Dikehendaki:

Lengkapkan Lampiran B dengan:

- mengisi setiap sel yang digelapkan dengan tajuk dari senarai di atas.
- membulatkan kolum atau kolum-kolum yang menjadi kunci utama untuk setiap jadual.
- memberi alasan anda memilih sifat di atas sebagai kunci utama.

In Appendix B certain attribute names are removed from the column headings in the relational tables. Cells from which names have been removed are shaded. In alphabetical order, the names omitted are:

| <u>Omitted</u> <u>Heading</u> | <u>Explanation</u> |
|----------------------------------|--|
| <i>Disb_Amt</i> | <i>(disbursement amount)</i> |
| <i>Disb_No</i> | <i>(disbursement number) (omitted more than once)</i> |
| <i>FOB_Terms</i> | |
| <i>Inv_Amt</i> | <i>(invoice amount)</i> |
| <i>Inv_no</i> | <i>(vendor invoice number)(omitted more than once)</i> |

| | |
|--------------------|--|
| <i>PO_Date</i> | <i>(purchase order date)</i> |
| <i>PO_No</i> | <i>(purchase order number)(omitted more than once)</i> |
| <i>Qty_Ordered</i> | <i>(quantity ordered)</i> |
| <i>Qty_Rec'd</i> | <i>(quantity received)</i> |
| <i>Rec_No</i> | <i>(receipt number)(omitted more than once)</i> |
| <i>Ship_Via</i> | |
| <i>Vend_City</i> | |
| <i>Vend_Name</i> | |
| <i>Vend_No</i> | <i>(vendor number)(omitted more than once)</i> |

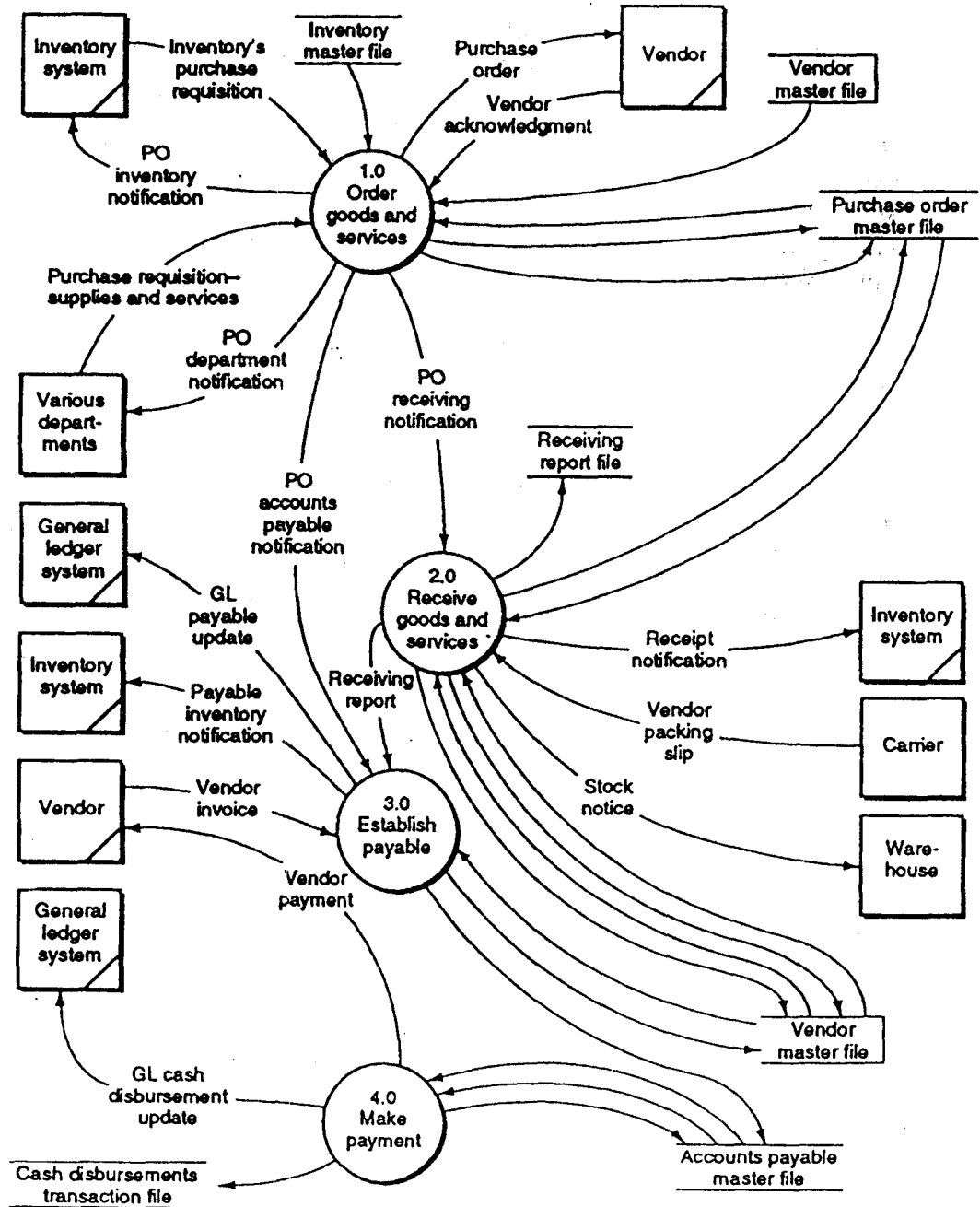
Required:

Complete Appendix B by:

- (a) Filling in every shaded cell with a heading from the first column in the above list.*
- (b) Circling the column (or columns) which is (are) the primary key for each table.*
- (c) Give your reasons for selecting those attributes as the primary key.*

[20 markah]

Lampiran A



LAMPIRAN B

| VENDORS | | Vend_Street | Vend_State | Vend_ZIP | Vend_Tel | Vend_Contact | Credit_Terms | Shp Pt |
|---------|---------------------|-----------------|------------|----------|--------------|--------------|--------------|---------|
| 538 | Ace Widget Co. | 190 Shore Drive | SC | 29918 | 803-885-3784 | S. Emerson | 2/10,n/30 | Shp Pt |
| 540 | Babcock Supply Co. | 22 Fibreut Rd. | SC | 29902 | 803-552-4788 | Frank Roy | n/90 | Death / |
| 541 | Webster Steel Corp. | 49 Abercorn St. | GA | 30901 | 912-433-1760 | Wilbur Cox | 2/10,n/30 | Shp Pt |

| PURCHASE_ORDERS | | Buyer | PO_Status |
|-----------------|--------|-------|-----------|
| 4345 | 941220 | Nancy | Open |
| 4346 | 941220 | Felt | Sent |
| 4347 | 941220 | Julio | Acknow |

| PO line item INVENTORY | | Item_No |
|------------------------|------|---------|
| 4345 | 1005 | 200 |
| 4345 | 1008 | 50 |
| 4345 | 1015 | 25 |

| INVENTORY_RECEIPTS | | Rec'd By | 538 |
|--------------------|--------|----------|------|
| 942944 | 941225 | Max | 4388 |
| 942945 | 941225 | Rodney | 535 |

| INVENTORY line item INVENTORY_RECEIPT | | Item_No | 100 | 50 | 25 |
|---------------------------------------|--------|---------|-----|----|----|
| 1005 | 942946 | 100 | | | |
| 1008 | 942946 | 50 | | | |
| 1015 | 942946 | 25 | | | |

| VENDOR_INVOICES | | Inv_Date | 524 | 515 | 539 |
|-----------------|--------|----------|-----|-----|-----|
| 4388 | 941224 | 2396.95 | 524 | | |
| 92390 | 941223 | 145.33 | 515 | | |
| 535 | 941224 | 1563.50 | 539 | | |

| CASH_DISBURSEMENTS | | Deb_Date | 960125 | 960125 |
|--------------------|-----|----------|--------|--------|
| 9663 | 524 | 2000.00 | 960125 | |
| 9663 | 538 | 2563.50 | 960125 | |

| CASH_DISB pays for VENDOR INVOICE | | Remit_Amt | 1563.50 | 1000.00 |
|-----------------------------------|-----|-----------|---------|---------|
| 9663 | 535 | 1563.50 | | |
| 9663 | 549 | 1000.00 | | |