T Accounts

Very useful to understand how the double-entry system works. They are the basic representations of the accounts and have three parts:

Title of Account	
Debit	Credit

According to the rules of double-entry bookkeeping

For every transaction:

1. at least one account is debited and at least one account is credited
2. the total amount of debits must equal total of credits

Assets = **Liabilities** + **Owner's Equity**

Assets		Liabilities		Owner's Equity	
Debit for Increase	Credit for Decrease	Debit for Decrease	Credit for Increase	Debit for Decrease	Credit for Increase

The following relationship is useful to visualize the rules for Owner's Equity Accounts

Owner's Equity

Decreases (debits)	Increases (credits)

Expenses

Increases (debit)	Decreases (credit)

Withdrawals

Increases (debit)	Decreases (credit)

Revenues

Decreases (debit)	Increases (credit)

Capital

Decreases (debit)	Increases (credit)

Formal process for recording the transactions:

1. Analyze the transactions from the source documents
2. Enter the transactions into the Journal

General Journal					Page 1
Date		**Description**	**Post Ref.**	**Debit**	**Credit**
2007 Jan.	*8*	*Prepaid Insurance*		*480*	
		Cash			*480*

3. Transfer data from journal to the Ledger by debiting and crediting the particular accounts involved (called posting)

General Ledger							
Accounts Payable						**Account No:212**	
			Post			**Balance**	
Date		**Item**	**Ref.**	**Debit**	**Credit**	**Debit**	**Credit**
2007 Jan.	*5*		*J1*		*1,500*		*1,500*
	6		*J1*		*2,600*		*4,100*
	9		*J1*	*1,000*			*3,100*

Timing Issues

It will be easy if we could wait to prepare financial statements until a company ended its operations. Then, its final balance sheet and the amount of lifetime income could be easily determined.

- Unfortunately, all companies find it desirable to report the results of their business activities frequently
- Therefore, accountants divide the economic life of a business into artificial time periods
- This is called a time period assumption
- And time period assumption requires methods to handle the transactions affecting more than one of these arbitrary time periods
- Accounting time periods are usually
  - a year (fiscal year)
  - a month or a quarter (interim periods)
- Fiscal year and calendar year may not be the same

Businesses

- exist to earn income
- activities do not necessarily coincide with standard periods of time
- are required to report income or loss regularly
  - Income Statements at the end of every quarter for investors
  - taxable income reports annually for government

The primary objective of accounting is measuring the net income of the businesses according to the generally accepted accounting principles.

Net Income

- net increase in the owner's equity that results from the operations of the company
- Net Income = revenues - expenses
- If the result is negative, we call it a net loss

Revenues

Simply, equal the price of goods sold and services rendered over a specific period of time. They can be

- Cash
- Money to be received later
  - Notes Receivable
  - Accounts Receivable

Expenses

Simply, are the costs of goods and services used up in the course of generating revenues. They can be

- Salaries
- Rent
- Utilities (Telephone, Electric, Water, etc.)
- Depreciation

Temporary or Nominal Accounts

- used in the calculation of the net income
  1. revenue accounts
  2. expense accounts
- are only needed to accumulate the balances over the accounting period
- the balances are transferred to the owner's equity when accounting period is over
- start each accounting period with zero balance.

Permanent Accounts

- Balance sheet accounts
  - Asset Accounts
  - Liability Accounts
  - Capital Account
- Their balances extend beyond the end of an accounting period

Issues in Calculating Revenues and Expenses

1. The Accounting Period Issue
    - the difficulty of assigning revenues and expenses to a short period of time
    - estimating the number of years an asset will be useful
    - a cost figure associated to each year
2. The Continuity Issue
    - the revenues or expenses needed to be allocated over several accounting periods
    - assume that business will continue to operate indefinitely (ongoing concern)
3. The Matching Issue
    - raises from the rule:
    - Revenues must be assigned to the accounting period in which the goods are sold or the services performed, and expenses must be assigned to the accounting period in which they are used to produce revenue

Cash Basis of Accounting

- the revenues and expenses are accounted for on a cash received or cash paid basis
- mostly the matching rule can not be satisfied

Therefore, the accountants develop:

Accrual Accounting

- record the financial effects in the periods in which the transactions occur
- done by two ways:
  1. by recording revenues when earned and expenses when incurred
  2. by adjusting accounts

We practice the first rule, by recording a revenue earned on credit in the accounts receivable and a expense when billed to the accounts payable.

Consider the end-of period trial balance for John Miller Advertising Company.

John Miller Advertising Company *Trial Balance* *January 31, 2007*		
Cash	$1,720	
Accounts Receivable	2,800	
Art Supplies	1,800	
Office Supplies	800	
Prepaid Rent	800	
Prepaid Insurance	480	
Art Equipment	4,200	
Office Equipment	3,000	
Accounts Payable		$3,170
Unearned Art Fees		1,000
John Miller, Capital		10,000
John Miller, Withdrawals	1,400	
Advertising Fees Earned		4,200
Wages Expense	1,200	
Utility Expense	100	
Telephone Expense	70	
	18,370	18,370

Wrong Balances

- Prepaid Rent of $800
- Rent Expense of $0

Adjustments Needed

- To correct the balances
  - before preparing financial statements
  - starting the new period

Accountants use Adjusting Entries to apply accrual accounting to transactions that span over multiple accounting periods.

The Adjustment Entries

- have at least one permanent account (balance sheet) and at least one temporary account (income sheet)
- never involve cash account
- There are two main types of adjustments:
  1. Deferral is the postponement of the recognition of an expense already paid/incurred or postponement of a revenue already received
     - used in costs or revenues that are recorded but must be proportioned between two or more accounting periods
  2. An Accrual is the recognition of a revenue or expense that has arisen but not yet been recorded
     - when a fee is earned or a wage expense is incurred but not recorded

Deferral of Expenses

Deferral Expenses

- Some expenditures are customarily paid in advance (ex. rent, insurance, supplies)
- Companies often make expenditures that benefit more than one period
- These expenditures generally are debited to an asset account
- At the end of the accounting period, the amount that has been used is transferred from asset account to an expense account
- Examples:
  1. Prepaid expenses
  2. Depreciation of plant and equipment

Deferral of Expenses

Deferral of Prepaid Expenses

- At the end of the accounting period, a portion (or all) of these goods or services will have been used or expired
- The part that has been benefited is treated as an expense at the end of the period.

Adjustment a): John Miller paid 2 months rent, $800 in advance. By January 31, half of it had expired and should be treated as an expense.

Rent Expense	
Jan.31 400	

Prepaid Rent	
Jan.2 800	Jan.31 400

Rules

Decrease in assets is credited to the asset accounts, decrease in owner's equity is recorded as debits.

Deferral of Expenses

Adjustment b): On January 8, John Miller paid for a one-year life insurance policy, $480, with coverage effective January 1. By January 31, one twelfth of it expired and should be recorded as an expense.

Insurance Expense	
Jan.31 40	

Prepaid Insurance	
Jan.8 480	Jan.31 40

Rules

Decrease in assets is credited to the asset accounts, decrease in owner's equity is recorded as debits.

Deferral of Expenses

Adjustment c and d): On January 6, John Miller purchased art supplies costing $1,800 and office supplies, $800. At the end of January, $500 worth of art supplies and $200 worth of office supplies are used, and therefore must be treated as expenses.

Office Supplies

Jan.6	800	Jan.31	200

Office Supplies Expense

Jan.31	200		

Art Supplies

Jan.6	1,800	Jan.31	500

Art Supplies Expense

Jan.31	500		

Rules

Decrease in assets is credited to the asset accounts, decrease in owner's equity is recorded as debits.

Deferral of Expenses

Depreciation of Plant and Equipment

- buys a long-lived asset is prepaying for usefulness at the start of the purchase
- the asset is a deferral of an expense
- must allocate the cost of asset over its useful life
- amount of expense allocated to each accounting period is called the depreciation or depreciation expense.
- the asset accounts are not credited directly.
- Instead, the accumulated depreciation accounts are used
  1. contra-asset accounts and
  2. they are coupled with the corresponding asset accounts
  3. The balance of the contra account is shown in the balance sheet as a deduction from the asset

Deferral of Expenses

Adjustment e): John Miller purchased art equipment, \$4,200, on January 4. Company estimates that the useful life of the art equipment is 5 years (60 months), and will be worthless at the end of its life. Therefore the depreciation cost for a month is 70 (=4,200/60). At the end of January, \$70 of depreciation cost is incurred.

Art Equipment

Debit	Credit
Jan.4 4,200	

Accumulated Depreciation, Art Equipment

Debit	Credit
	Jan.31 70

Depreciation Expense, Art Equipment

Debit	Credit
Jan.31 70	

Rules

Decrease in assets is credited to the asset accounts, decrease in owner's equity is recorded as debits.

Deferral of Expenses

Adjustment f) On January 5, he also purchased office equipment for \$3,000. Again assuming that its life is 5 years, \$50 of depreciation cost is incurred at the end of January.

Office Equipment

Jan.5 3,000	

Accumulated Depreciation, Office Equipment

	Jan.31 50

Depreciation Expense, Office Equipment

Jan.31 50	

Rules

Rules: Decrease in assets is credited to the asset accounts, decrease in owner's equity is recorded as debits.

Deferral of Expenses

Let's see a partial balance sheet for the John Miller's company:

John Miller Advertising Company
Partial Balance Sheet, January 31, 2007

Plant and Equipment		
Art Equipment	$4,200	
Less Accumulated Depreciation	70	4,130
Office Equipment	$3,000	
Less Accumulated Depreciation	50	2,950
Total Plant and Equipment		$7,080

The value of the asset after the accumulated depreciation is subtracted is called the carrying value or the Book Value.

Benefits of usage of contra accounts

1. recognizes that depreciation is an estimate
2. preserves the original asset value.

Deferral of Revenues

Deferral of Revenues

- Just as expenses can be paid in advance, revenues can be received before they are earned
- Revenues received in advance is an obligation for company to deliver the goods or perform services
- Therefore unearned revenues are liabilities accounts
- the proportion of the revenue that is earned must be recorded as revenue

Deferral of Revenues

Adjustment g) On January 15, John Miller accepted an advance fee, \$1000, for artwork to be done. Assume that at the end of January, \$400 of it is earned.

Art Fees Earned

	Jan.31 400

Unearned Art Fees

Jan.31 400	Jan.15 1000

Rules

Increase in owner's equity is credited, decrease in liabilities is recorded as debits.

Accrued Revenues

Adjustment h) On January 31, John Miller earned a fee of $200 for an advertising service on an ongoing project which is not recorded.

Fees Receivable

Debit		Credit
Jan.31	200	

Adv. Fee Earned

Debit	Credit	
	Jan.10	1,400
	Jan.19	2,800
	Jan.31	200

Rules

Increase in owner's equity is credited, increase in assets is recorded as debits. When the project is finished, the customer will be billed, and the account receivable will be debited and Fees receivable will be credited.

Accrued Expenses

Adjustment i) On January 31, assume that John Miller's secretary will have worked three more days after her last paycheck. Let's assume that these three days worth $180.

Wages Payable

Debit	Credit
	Jan.31 180

Wages Expense

Debit	Credit
Jan.12 600	
Jan.26 600	
Jan.31 180	

Rules

Decrease in owner's equity is debited, increase in liabilities is recorded as credits.

John Miller Advertising Company
Adjusted Trial Balance January 31, 2007

Cash	$1,720	
Accounts Receivable	2,800	
Art Supplies	1,300	
Office Supplies	600	
Prepaid Rent	400	
Prepaid Insurance	440	
Art Equipment	4,200	
Accumulated Depreciation, Art Equipment		70
Office Equipment	3,000	
Accumulated Depreciation, Office Equipment		50
Accounts Payable		$3,170
Unearned Art Fees		600
John Miller, Capital		10,000
John Miller, Withdrawals	1,400	
Advertising Fees Earned		4,400
Wages Expense	1,380	
Utility Expense	100	
Telephone Expense	70	
Rent Expense	400	
Insurance Expense	40	
Art Supplies Expense	500	
Office Supplies Expense	200	
Depreciation Expense, Office Equipment	70	
Depreciation Expense, Art Equipment	50	
Art Fees Earned		400
Fees Receivable	200	
Wages Payable		180
	18,870	18,870

The purpose of the accounting system is to treat the business transactions as raw material and develop the finished product of accounting - financial statements - in a systematic way. The steps followed in the accounting cycle are:

1. Transactions are analyzed from the source documents,
2. Transactions are recorded in the journal,
3. Entries are posted to ledger,
4. Accounts are adjusted at the end of the period with the help of work sheet,
5. Financial statements are prepared from work sheet,
6. The accounts are closed to conclude the current period.

We have already learned the first four steps. Now, we will review them in conjunction with work sheet and learn the last two steps.

Work Sheet

- is used as preliminary step in preparation of the financial statements
- lessens the possibility of leaving out an adjustment
- helps checking the arithmetical accuracy of accounts
- facilitates the preparation of financial statements
- is not published, a tool for accountants

Steps in Preparation of Work Sheets

1. Enter and total the account balances in Trial Balance columns
2. Enter and total the adjustments in Adjustment columns
3. Enter the account balances in the adjusted trial balance columns by combining balances in steps 1 and 2 and total the account balances
4. Extend the account balances from adjusted trial balance columns to Income Statement or balance sheet columns
    - all revenue and expense account balances to income statement columns
    - all asset, liability, owner's capital and withdrawal account balances to balance sheet columns
5. Total the income statement columns and the balance sheet columns. Enter the net income (loss) in both pairs of columns as balancing figure, recompute the column totals.

Account Names	Deb.	Cre.	Deb.	Cre.	Deb.	Cre.	Deb.	Cre.	Deb.	Cre.
Cash	$1,720				$1,720				1,720	
Acc. Receivable	2,800				2,800				2,800	
Art Supplies	1,800			(c)500	1,300				1,300	
Off. Supplies	800			(d)200	600				600	
Prepaid Rent	800			(a)400	400				400	
Prepaid Insurance	480			(b)40	440				440	
Art Equipment	4,200				4,200				4,200	
Acc. Depreciation, Art Equipment				(e)70		70				70
Office Equipment	3,000				3,000				3,000	
Acc. Depreciation, Office Equipment				(f)50		50				50
Accounts Payable		$3,170				3,170				3,170
Unearned Art Fees		1,000	(g)400			600				600
J. M., Capital		10,000				10,000				10,000
J. M., Withdraw	1,400				1,400				1,400	
Adv. Fees Earned		4,200		(h) 200		4,400		4,400		
Wages Expense	1,200		(i)180		1,380		1,380			
Utility Expense	100				100		100			
Telephone Exp.	70				70		70			
Rent Expense			(a)400		400		400			
Insurance Exp.			(b)40		40		40			
Art Supplies Exp.			(c)500		500		500			
Off. Supplies Exp.			(d) 200		200		200			
Depreciation Exp., Art Equipment			(e)70		70		70			
Depreciation Exp., Office Equipment			(f) 50		50		50			
Art Fees Earned				(g)400		400		400		
Fees Receivable			(h)200		200				200	
Wages Payable				(i)180		180				180
			2,040	2,040	18,870	18,870	2,810	4,800	16,060	14,070
Net Income							1,990			1,990
							4,800	4,800	16,060	16,060

Completed Worksheet helps

1. Recording the adjusting entries

Date		Description	Post Ref.	Debit	Credit
2007 Jan.	*31*	*Rent Expense*		*400*	
		Prepaid Rent			*400*
	31	*Insurance Expense*		*40*	
		Prepaid Insurance			*40*
	31	*Art Supplies Expense*		*500*	
		Art Supplies			*500*
	31	*Office Supplies Expense*		*200*	
		Office Supplies			*200*

2. Preparing financial statements
3. Recording the closing entries

John Miller Advertising Company, Income Statement
For the month Ended January 31, 2007

Revenues		
Advertising Fees Earned	$4,400	
Art Fees Earned	400	
Total Revenues		4,800
Expenses		
Wages Expense	$1,380	
Utility Expense	100	
Telephone Expense	70	
Rent Expense	400	
Insurance Expense	40	
Art Supplies Expense	500	
Office Supplies Expense	200	
Depreciation Expense, Office Eq.	70	
Depreciation Expense, Art Eq.	50	
Total Expenses		2,810
Net Income		$1,990

John Miller Advertising Company
Statement of Owner's Equity
For the month Ended January 31, 2007

John Miller, Capital, January 1, 2007			-
Add:	Investment by John Miller	$10,000	
	Net Income	1,990	$11,990
Subtotal			$11,990
Less Withdrawals			1,400
John Miller, Capital, January 31, 2007			$10,590

CAUTION

After adjustments are done, on the worksheet the balance on the Capital account is still seen as $10,000. The correct balance of $10,590 will be obtained by closing the temporary accounts.

John Miller Advertising Company
Balance Sheet
January 31, 2007

Assets		
Cash		$1,720
Accounts Receivable		2,800
Fees Receivable		200
Art Supplies		1,300
Office Supplies		600
Prepaid Rent		400
Prepaid Insurance		440
Art Equipment	$4,200	
Less Accumulated Depreciation	70	4,130
Office Equipment	$3,000	
Less Accumulated Depreciation	50	2,950
Total Assets		$14,540
Liabilities		
Accounts Payable	$3,170	
Unearned Art Fees	600	
Wages Payable	180	
Total Liabilities		$3,950
Owner's Equity		
John Miller, Capital		$10,590
Total Liabilities and Owner's Equity		$14,540

Closing Entries

Journal entries made at the end of the accounting period

1. set stage for the next accounting period
    - clears the balances on revenue, expense and withdrawal accounts
2. summarize a period's revenues and expenses by transferring balances to Income Summary Account

Income Summary Account

- temporary account
- provide space to show all revenues and expenses in a single net figure
- its balance is transferred to the capital account

Steps in Closing Entries

1. Transfer the credit balances from income statement accounts to the Income Summary account
2. Transfer the debit balances from income statement accounts to the Income Summary account
3. Transfer the Income Summary balance to the Capital Account
4. Transfer the Withdrawals account balance to the Capital Account

Transfer the credit balances from income statement accounts to the Income Summary account

Adv. Fee Earned

Jan.31	4,400	Jan.10	1,400
		Jan.19	2,800
		Jan.31	200

Art Fees Earned

Jan.31	400	Jan.31	400

Income Summary

		Jan.31	4,800

Date		Description	Post Ref.	Debit	Credit
2007 Jan.	*31*	*Advertising Fees Earned*		*4,400*	
		Art Fees Earned		*400*	
		Income Summary			*4,800*
		Close revenue accounts			

Transfer the debit balances from income statement accounts to the Income Summary account

Date		Description	Post Ref.	Debit	Credit
2007 Jan.	*31*	*Income Summary*		*2,810*	
		Office Wage Expense			*1,380*
		Utility Expense			*100*
		Telephone Expense			*70*
		Rent Expense			*400*
		Insurance Expense			*40*
		Art supplies Expense			*500*
		Office supplies Expense			*200*
		Depreciation Expense, Office Equipment			*50*
		Depreciation Expense, Art Equipment			*70*
		Close expense accounts			

Utility Expense

Jan.29	100	Jan.31	100

Telephone Expense

Jan.30	70	Jan.31	70

Depreciation Expense, Art Equipment

Jan.31	70	Jan.31	70

Depreciation Expense, Office Equipment

Jan.31	50	Jan.31	50

Rent Expense

Jan.31	400	Jan.31	400

Insurance Expense

Jan.31	40	Jan.31	40

Office Supplies Expense

Jan.31	200	Jan.31	200

Art Supplies Expense

Jan.31	500	Jan.31	500

Wages Expense

Jan.12	600	Jan.31	1,380
Jan.26	600		
Jan.31	180		

Income Summary

Jan.31	2,810	Jan.31	4,800

Transfer the Income Summary balance to the Capital Account

John Miller, Capital

Debit	Credit
	Jan.1 10,000
	Jan.31 1,990

Income Summary

Debit	Credit
Jan.31 2,810	Jan.31 4,800
Jan.31 1,990	

Date		Description	Post Ref.	Debit	Credit
2007 Jan.	*31*	*Income Summary*		*1,990*	
		John Miller, Capital			*1,990*
		Close Income Summary Account			

Transfer the Withdraws account balance to the Capital Account

John Miller, Capital

Debit		Credit	
Jan.31	1,400	Jan.1	10,000
		Jan.31	1,990
		Bal.	10,590

John Miller, Withdrawal

Debit		Credit	
Jan.25	1,400	Jan.31	1,400

Date		Description	Post Ref.	Debit	Credit
2007 Jan.	*31*	*John Miller, Capital*		*1,400*	
		John Miller, Withdrawals			*1,400*
		Close Withdrawals Account			

Accounts After Closing

After all steps in the closing process have been completed and all of the adjusting and closing entries have been posted to ledger accounts from journal entries:

1. Accounts with zero balance
   - Revenue Accounts
   - Expense Accounts
   - Withdrawals Account
2. Capital Account shows the right balance
   - Net income is transferred to capital account
   - Withdrawals are deducted from capital account

Overview of Accounting System