Business Analysis for Engineers
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Lecture-09
Double Entry Examples-2

In the last class we just term stop with series of transactions and then I was explaining how under some circumstances we decide to realise the sale despite the fact that you have not receive the payment for the sale and as I have qualify the statement and the example that we took was when the firm actually cater to a party to a customer who happens to be a very close friend of the owner of the firm.

And then the customer says that he will pay for this little later and the question is how certain the entity is to receive this full payment. Now that should be some reasonability in this eternity of the sale. And if I feel and my judgement says that yes historically this customer has been paying and there is no problem with this customer I adopt the principle of conservatism where I am reasonably certain at this sales will generate cash in the future.

And hence I decide in recognizing this sale. Now there are times where even after doing this I do not get money also, but that does not mean that I have not consumed the resources for which this sale for which I didn't receive money happened, I need to also record because I did not receive money for the sales does not dismiss the fact that no resources were consumed for the sale.

Usually you will find some accounting transactions the cost of good sold gets reduced to that extend the resources that got consumed get reduced to that extent, but I did not generate sales and then the corresponding dual entry would be a bad sale or expense and we just write it off as a bad sale expense. So we do not actually ignore the fact that the resources have been consumed because the sale value was not collected.

So you might encounter such example such transactions in the day today life and it is on a pure judgement as to how much as the first place whether you will recognise the sale because conservatism is about recognizing the sale, and then to what extent we will realize the sale and if we feel that this sale will generate only 60%, 70% to that extent you will treat it as a sales revenue at the first stage itself.

So it based on judgement for you to decide on the timing whether to recognise it has a sale this period even without collecting cash or just recognise this sale only after I collect the cash. So it is about timing as well as how much will be able to collect later the amount as per the extent to which the sale gets realised. Both of these depend on the objective judgement that you can pay based on historical experiences.

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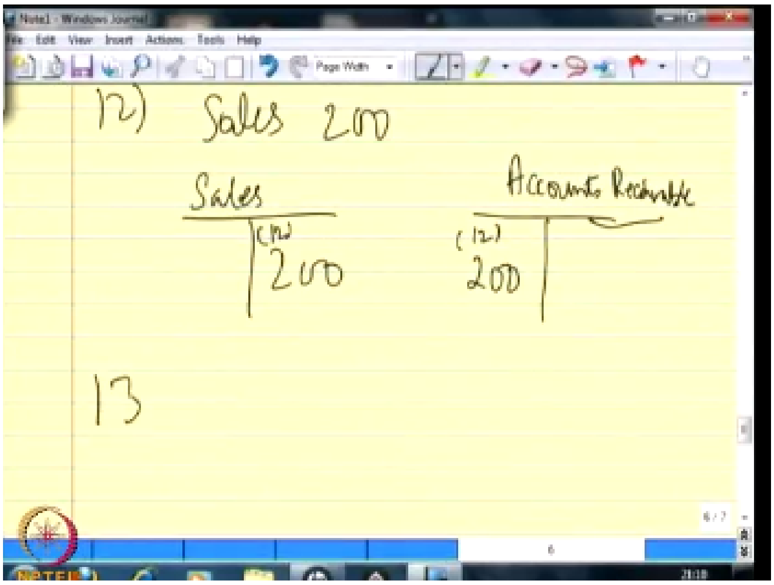

But having said that let us proceed further. Now let us say based on that I realize I record the sale of 200 for which I have not received the money because I feel that I am reasonably certain that I will be able to collect this money which happened immediately where the friend paid the outstanding sales. Now how do I record this transaction.

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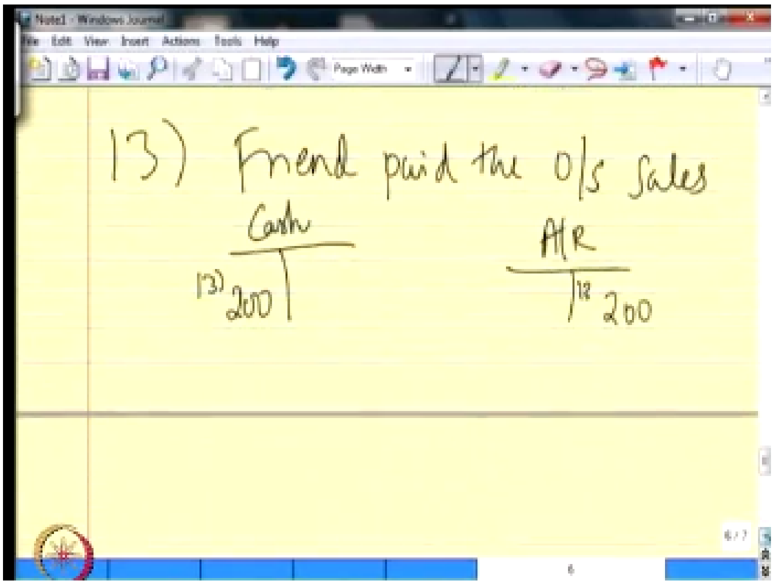

Now when I the the entity has received this 200 rupees as cash, so cash 200, as a result of which no longer is my accounts receivable 200 because I have received this 200. So my accounts receivable which was 200 current asset is no longer 200 because I have already received the money for that it drops by 200, that is why it is credit 200. Now let us assume these are all the transactions that happen during this month.

And the end of this month I am interested in knowing what is the cumulative effect of all of these transactions. This is the very purpose of stand accumulative effect of all the transactions have an effect on the balance sheet and then an income balance sheet and income statement and then how my balance sheet and income statement would look at end of this accounting period.

In this case let us say it is for this 1 particular month that I am interested in seeing the balance sheet and income statement. Now where how do we go forward in creating this balance sheet and income statement. Now before we go there what we need to do we know that these are the transactions that happened during this particular month and we need to take each of the account some may to understand the closing balance for each of the account which means you would see that in these transactions in this 13, 14 transactions that happened.

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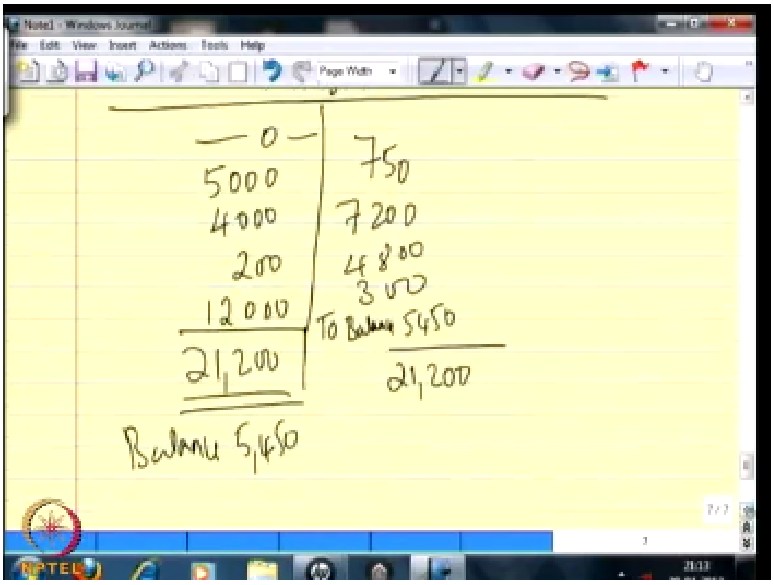

The account cash has been affected more than probably 3, 4, 5 times and we need to understand after all this what is the closing balance for cash. For example let us say cash account. If you look at what has happened it started with an opening balance of 0, no cash only after putting money that the firm got cash. Then if you trace what has happened to cash throughout you would find that they entries on the debit side of cash and then these entries on the credit side of cash.

So in a sense what is happened is after all these cash transactions have been submitted we find that a cash is leftover with a balance of 5450 on the debit side and it is this balance actually as a closing entry this usually you do not have to do I am just trying to explain for the purpose of easy understanding what actually happens in each of the closing entries for each of these transactions.

The first understanding is when you submit all these countries that have affected cash you will definitely notice that the cash will have 5450 excess on the debit side which means that is a cash balance of 5450 and debit and credit need to match to just match that to balance 5450 credit, 21200, 21200 credit and debit cash balances. But that is not the point that I would explain.

The point that I want explain to use at the end of this particular month that cash has balance of 5450. This is one account where the balance is 50450 on the debit side. Likewise you have different accounts and each of them will have a debit balance or credit balance based on how each of these transactions have affected each of these account. Now let us see I am not sure whether what I have done is correct.

There might be some mistakes in the entry. Let us say I am interested in knowing me before I proceed further take a quick check on whether I have followed the principle of dual accounting and whether my debit is equal to the credit and I need to do this interim check before I go to the other adjusting entries and before I start preparing the balance sheet and income statement.

For which I am going to create what is called trial balance. So trial balance is just simply a list of all this account names and then it lists the debit or the credit balance against each of the account name and then when we create the trial balance we will see that the debit the total debit of all the accounts is equal to total credit of all the accounts.

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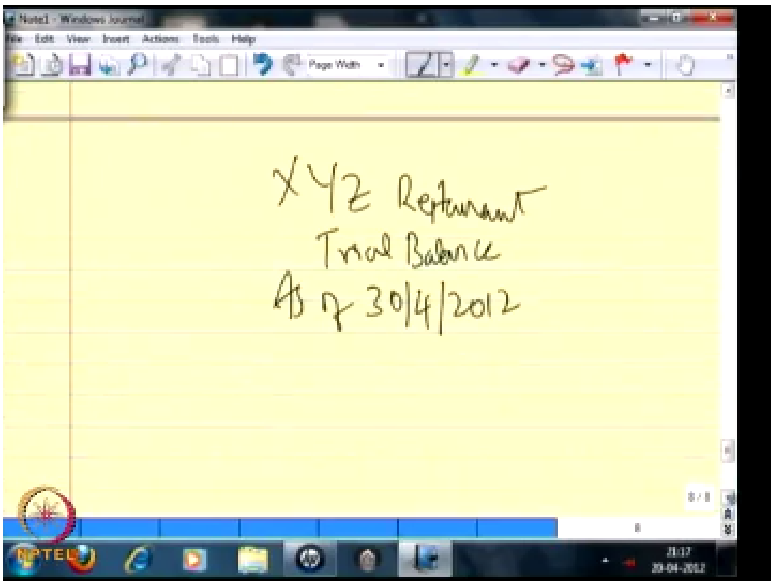

I will just create one for you to understand, let us say we are going to create this x, y, z, rest all, and it is a trial balance as of 30/042012 end of this particular month. I told you trial balance is just a list of all these accounts.

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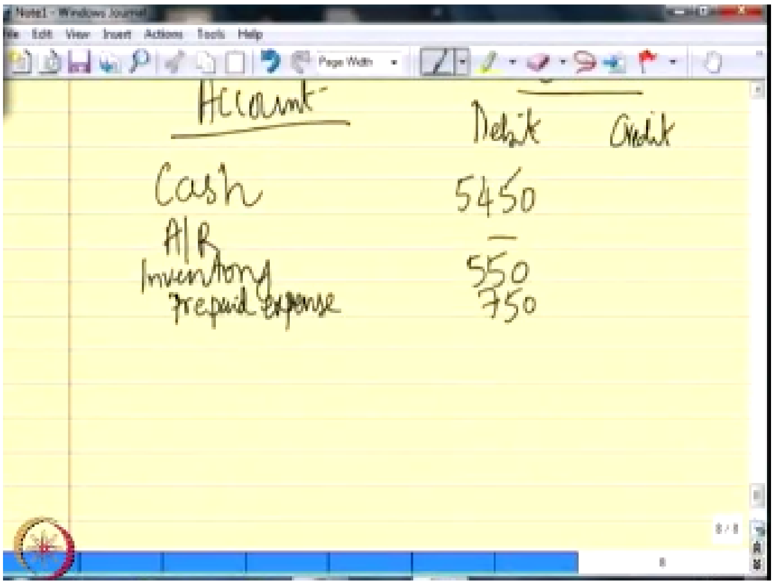

Now what are these accounts that be created that save it with cash now this is a balance and whether it is debit or credit depends on how each of these accounts have been impact and that we will know when we just trace back each of these accounts and I just as we did a summation of all the cash entries to understand that cash has a Debit balance of 5450. We will do a summation of each of these accounts and then arrive at the final debit or credit for each of these accounts.

Now I explain for cash that it was 5450 debit at the end of this particular month. Likewise you will be doing it for all the accounts that you have created. Let us quickly run through all of them, accounts receivable you find that you had an accounts receivable of 200 which you receive later. So there is no entry for accounts receivable because it is left with 0 balance. 0 on debit and 0 on credit.

Inventory remember you had two transactions one you in factory transfer entry twice and then the inventory got consumed once, so after you take the summation of all those transactions that affected inventory you will notice that inventory was left with a Debit balance of 550 prepaid expense again debit of 750, we are at the end of this month I already told you that have this prepaid expenses at one corner of your mind because we going to revisit this.

But at the end of this month based on those 13 transactions I have just handle prepaid expense in only one particular way leaving it with a debit balance of 750 which I am recording now which will change very soon because we are not heated with the adjusting entries equipment we purchase remember we purchase an equipment value was 7200 and what was the balance that credit or debit you go there paid 7200 cash.

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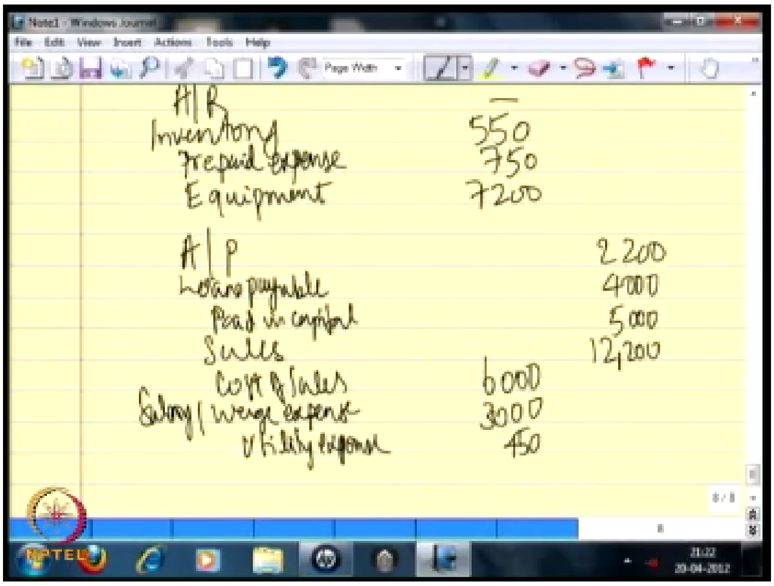

Then likewise summation accounts payable to the 2200 loans payable the summation would be 4000 paid in capital started with an initial paid in capital of 5000, then sales revenue is 12200 remember you had a 12000 sale once in a 200 sales later then cost of sales was 6000 then wage expense was salary expense we had an entry there salary expense 3000. We had another accounting entry call utility expense was 450.

So now this is a trial balance that just records all your transactions summation of all the equipment transactions. So if you take a total of all of them here 6200, 11200+12200 will be 23400, so it is basically the summation of these 4 will be check whether it is correct yeah 23400, now if you are very confident that all the transactions that you have done this correct you can blindly put 23400 and this side as well.

Only then will the submission of all your debits will be equal to summation of all your credits. If you are very confident you can just put 23400 on this side as well let me just quickly check also the 6750, 13950, 19950, 22950, 23400. So the summation of all of this is also 23400. Now you see that your trial balance which is a list of all the account and against which each of the credit and debit balances get recorded.

And then the summation of all the debit balances for each of the accounts and the submission of each of the credit balances for each of the account will necessarily match as because you have not compromised on the you have not compromise on the duality concept and every transaction that you have recorded, you have ensured that each stage the debit is equal to credit.

Now does it mean that my accounting statement result and accounting statement balance sheet of the income statement is correct, no the reason is the trial balance will only ensure at this interim stage your debit=credit. Now if your debit is not equal to credit the signal that the trial balance and just something wrong has happened in the transactions that were recorded. And even before you went to create your balance sheet and income statement if your able to understand that there is something wrong.

Then you are just trying to control the level of damage by diagnosing the entries even before you went to the balance sheet and income statement. So now you just go back to each of the accounting transactions why because your trial balance said that your debit is not equal to credit and then identify each of the accounts by the mistake has happened and then rectify to that for that purpose trial balance is useful. Now that does not mean that all the transactions that you have done is correct.

You have you could have probably added on the right side, you could have recorded some transaction wrongly on the debit side and wrongly on the credit side still your debit will be equal to your credit and your trial balance will not satisfy that all the transactions that you have entered is correct, it is only a marker if your debit balance is equal to a credit balance then you have not compromise on the principle of duality to that extend trial balance is helpful.

Mind you does not certify the accounting validity of the transactions that you have recorded. As you have told you could varied on the right side and changed the debit and credit entry and still your trial balance in balance, but then when you look you will see that there is some mistake quite possible such examples I mean such real time cases will happen. But nevertheless we need this trial balance as a interim measure to just take a quick stop and understand whether we have really captured all the accounting transactions correctly.

And if it is correct the summation of all the debit balance and summation of all your credit balance with match. So are we done with this can we go ahead with the balance sheet and income statement is the next question, because we are just interested in knowing at the end of this particular month how main balance sheet and income statement will look like. Now before we actually going to that I am just trying to introduce 3 more entries and I call them adjusting entries.

So that your balance sheet and income statement captures the big picture including all these adjusting entries. So that your balance sheet and income statement while capturing the bigger picture reflects the correct financial strength and the correct financial performance since balance sheet and income statement related both these financial strength and the performance. Now what are these 3 adjusting entries.

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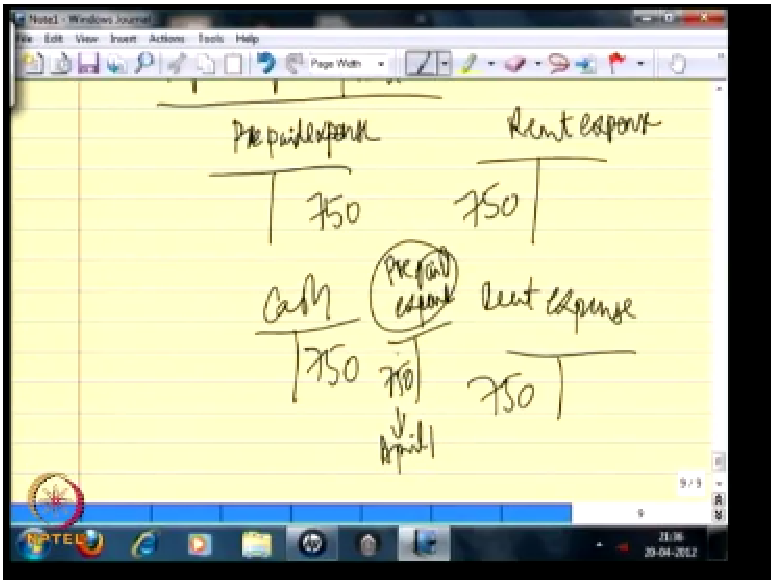

The first one is depreciation, notice that equipment can you revisit those accounts you will find that the cost of acquisition was 7200 and you have used that equipment for this one month period which means the equipment that is expected to give you some benefits has been used for one month and to that extent you have been benefited. Now what is the cost of using that equipment for that one month period.

You have to charge the entity for using that particular equipment for the one month period and that charge is your depreciation expense, how much you need to know how long or how much is the equipments lifetime let us say in this case the equipments lifetime is 10 years. So you know that this 7200 the annual cost of using this equipment hence is 720, now how long I have used equipment I use this for this particular month.

So what is the monthly cost of using this equipment 720/12 with 60, so now you know that the depreciation expense are the charge for the entity to use this equipment and this depreciation expenses 60 and I need to record this how do I record, one I stayed away record depreciation expense. This is treated as an expense because this is the expense that the firm in firm incurs because it is used this equipment for that one month period.

And since this is an expense this reduces the retained earnings since it reduces retain earning that reduces the your owners equity anything with reduced their owners equity is debit, how much 60, why 16 because it is 1 month period. So how do I record the corresponding second entry I bring in what is called an accumulated depreciation 60 why 60 because accumulated depreciation reduces the value of the equipment which was purchased at a particular cost which is the price of its acquisition by that depreciation expense for that particular period.

So I got this 7200 and the end of this particular month what happens to the book value of this equipment it would be 7200- this accumulated depreciation of 60. So in your balance sheet you would see that the equipment cost of acquisition because your accounting principal says always you will have to bring in the cost principle with this cost of acquisition with 7200 less the accumulative depreciation of 60 which has reduce the asset value to that extent.

Reduction in asset value is right hand side credit, so this is one adjusting entry and we will see how this sits in your balance sheet and income statement when we actually create a balance sheet and income statement. Now the next accounting entry the adjusting entry is your prepaid expense that for your rent remember, you paid the rent of 750 rupees at the beginning of this particular month.

And I told you that you are treating that prepaid expenses and asset because that give you a ride to use this space for this one month period and now we are at the end of this month and I am interested in knowing end of this month what is the status of the asset liability is my income and when you approach the end of this month ask this question whether this prepaid expense continues to be an asset for you.

And answer is no because you have used the space for this one month period, the benefit that accrued to you by paying the 750 as rent ceases to exist at the end of this month because you have used this, so your prepaid expense has eroded its value from 750 and since its end of month to 0. Now how do we record this transaction, your prepaid expense initially was an asset. Now it no longer is your asset.

The value of a prepaid expense as reduced so you are not going to write 0 here, you are writing 750 here because what we are trying to record is that the asset value of 750 at the beginning of the month has gone down by 750 result and prepaid expenses 0, but to what extent it has fallen down it is 750, to that extent it has reduced.

Prepaid expenses reduced from 750 to 0 which means that is the reduction to the extent of 750 in my current asset prepaid expense and hence any reduction in this particular current asset any reduction in this asset is right hand side credit. Now how will I treat the corresponding entry, since the rent expense 750, expense reduces retained earnings and hence that is 750.

Now why all this adjusting entry prepaid expand and all is there any other better way I could have a simple way that I could have treated at the first place on August 1 or April 1 when actually paid this rent could I have avoided this complicated entry of prepaid expense and then bringing this adjusting entry yes you could have and what you would have done at that point of time on April 1 is at that point of time would have treated this entire 750 as rent expense itself.

So what you would have done is you would have written cash 750 rent expense 750, on April 1 exam point of time itself you would have expensed this rent, at the end of this month also ultimately are doing only this because what you have done as an adjusting entry is you have reduced the intervening prepaid expense, prepaid expense on April 1 is now reduced to 0, right and no other cash account is affected.

Cash the fact that you have spend 750 does not change because a prepaid expenses reduced. What is changes the value of the prepaid expense itself and the rent expense you are now recognising 750, you see now how these are interlinked to finally effect only two entities cash and rent expense. So in your income statement rent expense, in your balance sheet will you see prepaid expense.

No why because the value of the asset prepaid expense is 0, you can still write prepaid expense in a balance sheet by the value of that will be 0, because you adjusted for it at the end of this month, why did you had just because it no longer continues to be a prepaid expense continues to be an asset. So this is one adjusting entry and in this I sources to be very specific for you to understand why prepaid expense is a current asset.

And how at the end of the asset is being adjusted only for that purpose. As I told you you can even right away expense it and take is as end expense on April 1st itself, but for you to understand this I just took it as a prepaid expense.

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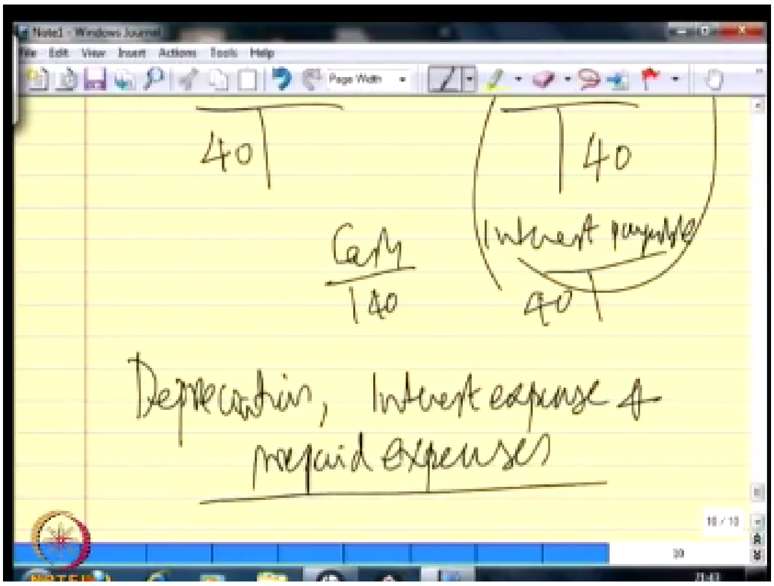

What is the other adjusting entry, interest expense. Now I told you that the entity borrowed 4000 from the bank at an interest rate of 12% per annum, so at the end of this particular month please note that I have used this entire 4000 it means the cost of using this capital 4000, the cost of using the bank's money has to be recorded as an expense. Though the interest is payable on an annual basis, but for the purpose of being exact in the financial performance.

Suppose I want to treat this as an expense for that particular month because it is to that exact that I want you to understand the financial performance. Then I can say that you know I am trying to record that portion of the interest expense for that particular month and how do I do that. First let us see what is a quantum of interest for that particular month, it is a very straight forward calculation 12% is your annual interest.

Your loan outstanding is 4000, so your monthly interest will be 40 rupees, correct interest expense 40, why debit your interest expense is retain earnings. What will be a corresponding dual entry accrued expense are simply interest payable. Interest payable is 40, it is liability which has increased, I have not paid the interest but I am suppose to pay interest. Since liability has increased it is on the right hand side credit.

So what will I do assume that on May 2nd I paid that interest expense, what will do now I did this end of April because I wanted to allocate even to that specific interest component I wanted to identify the interest expense and charge it. So that my financial performance my net profit is exact to that extent. Now I **I** told you May 3rd or May 5th I pay this interest payable. So what will happen, nothing will happen.

Your interest expense does not change, cash you would have paid 40000, and your interest payable or accrued expense will be 40 rupees, that would be the effect on the accrued expense. See you may have a doubt that when actually when you pay the interest sometime later or we double counting this interest expense, no we are not double counting, because I have already tacked this interest expense previously all that I have done subsequent to teh payment of interest is that recorded the cash outlook.

So that did not happen previously, no cash went out, now this cash went out only to offset this interest payable account, and my interest payable dropped from 40 to 0, so if you take an interest payable consolidation you will understand that interest payable 40 both will balance against each other, the closing balance will be 0 which means you have paid your interest.

And you have accounted for the interest expense only one. So in terms of accounting you have perfectly satisfied all the principles, you are not overstated your interest expense. So now these 3 adjusting entry the depreciation, interest expense and prepaid expenses. These 3 are the adjusting entries that we have to introduce.

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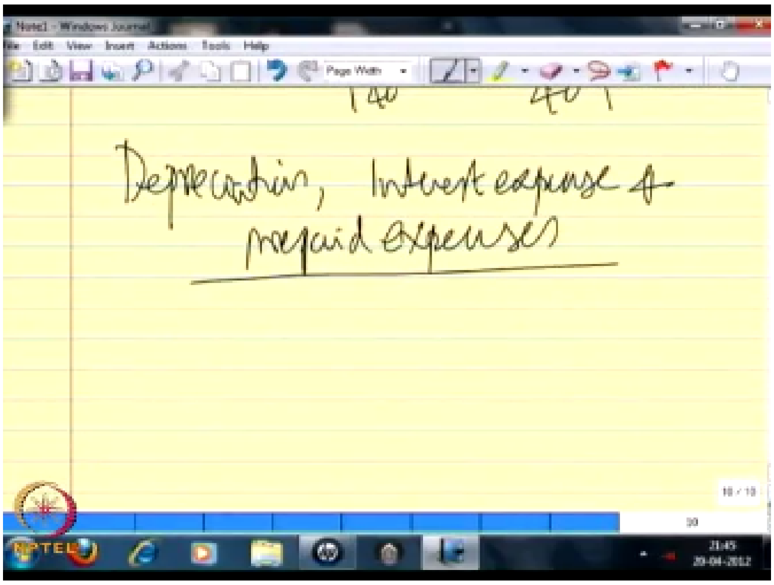

Depreciation expense is something that you cannot avoid I mean as an adjusting entry. Interest expense and prepaid expenses you can avoid as adjusting entry because it is left to you to choose whether you want to exactly and in this case because you wanted to know your monthly income statement I decided to put this interest expense for that particular month. But I can also decide to say no I would rather put my interest expense only after I pay the interest fine.

You are done for that particular amount your net earnings will look better and there is nothing wrong in it, likewise prepaid expenses the moment cash left out for the purpose of rent you can immediately treated as a rent expense, instead of creating an interim current account, prepaid expense and then closing it to find, let us assume that this trend forecast for 3 months and end of this monthly the prepaid expense of 750.

Let us assume it was for 3 months, it would have drop by 250, so the closing prepaid expense the end of this particular month would have been 500. Why because you when you actually paid the 750 record in this transaction is a prepaid expense. Now had as I told you before I could have also chosen not to record this is a current asset I could have just said 750 cash rent expense for 3 months cash and expense it, right on day one.

That is also possible, but I just trying to explain to you that these type of adjusting entries you will encounter when you are actually trying to record transactions to that specificity. Now assume that these are the only 3 adjusting entries that we have in hand and then in the trial balance we saw the summation of all the remaining accounts, your debit equals to your credit.

Because of this adjusting entry will your trial balance change, no because in each of your adjusting entry or debit is equal to credit.

So if you have a trial balance you will add depreciation 60 debit and then accumulated depreciation is 60. Prepaid expense credit 750 rent expense debit 750 and then interest expense debit 40, interest payable credit 40. All this will again get added into your trial balance, but ultimately your trial balance will balance because your individual debit and credit balance.

After taking these 3 into account are we ready to create a balance sheet and then income statement, I would say yes because you have enough transactions for us to construct a sensible balance sheet and income statement, why because we have cash, we have some equipment that we have purchased it has been depreciated, we have some inventory on the liabilities side that was owner's equity in it.

You had a bank loan, and I think you also have an accounts payable and then income statement yes during this month you made some sales revenue there were some cost of good sold you had some wait some utility expect that was an expense and then you have a net income. What would you need that this to create a balance sheet and income statement. So next class will be set from this data that we have in hand. I tell you how a balance sheet is constructed at an income statement is constructed.

And then let us understand the third important financial statement which I will be covering next class is a cash flow statement, because more often than not people get confused, they think income is cash, income is not cash, cash is the value that you see in your balance sheet while income is an income statement the sales is your income statement entity. So how can cash in a balance sheet be equal to your sales revenue and income statement is stop.

And how do you know that these two are different, while you understand a cash flow statement you will understand that cash is different from income, the cash that you see in a balance sheet is the summation of all the transactions that have affected cash either by way of getting consumed or getting generated, you either get cash inside the firm or cash goes outside the firm. How much was it the beginning, what happened that we got cash inside.

What happened that cash went out and how much is it close closing cash. This you need to understand for a different reason, you need to understand the various sources and uses of cash, for that perspective we will create a cash flow statement also. So next class we will construct a balance sheet and income statement and cash flow statement. But before you come to next class make sure you are comfortable with this double entry bookkeeping.

And with these examples you are able to understand why transactions at first title under a particular account and then why there entered the debit side and credit side, with this forms the very basis on which your bigger financial statements have been built. See you can practice some more transactions, you can probably add more to your transactions also.

And then we finish balance sheet and income statement next class with additional transactions above already added you can build your own balance sheet and income statement. So I want you to practice more before we sit for the next class, thank you.