Introduction to Accounting and Finance for Civil Engineers
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Lecture-31
Introduction to Accounting (Part-3)

Good morning, namaskar and welcome to this course once again, in the previous lecture if you remember we discussed an informal approach preparing balance sheet and profit and loss statement. We notice that with every transaction we are finding there is an impact on balance sheet and we also find that there is an impact on profit and loss statement. In this class we will discuss how to prepare these the statements especially the balance sheet and profit and loss account from the point of view of an accountant.

If you remember in one of the lectures I discussed the various steps which an accountant takes in order to prepare these financial statements.

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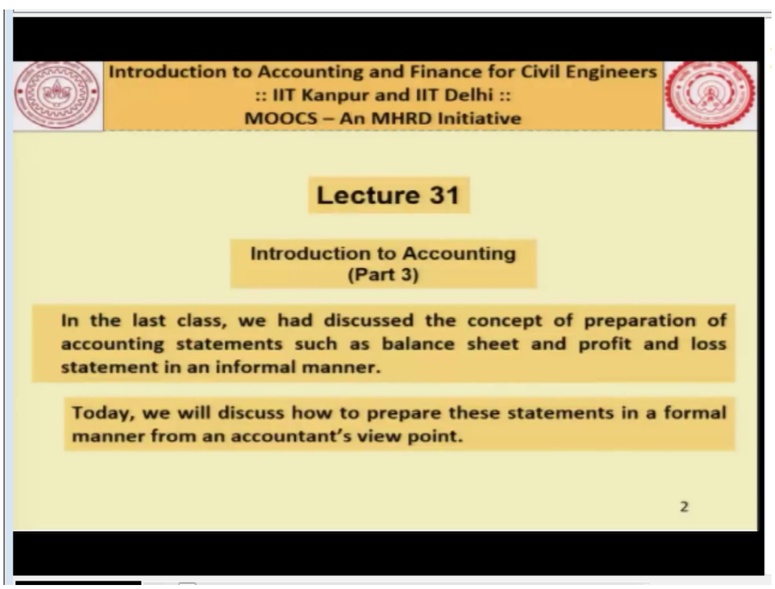

We will quickly go through those steps.

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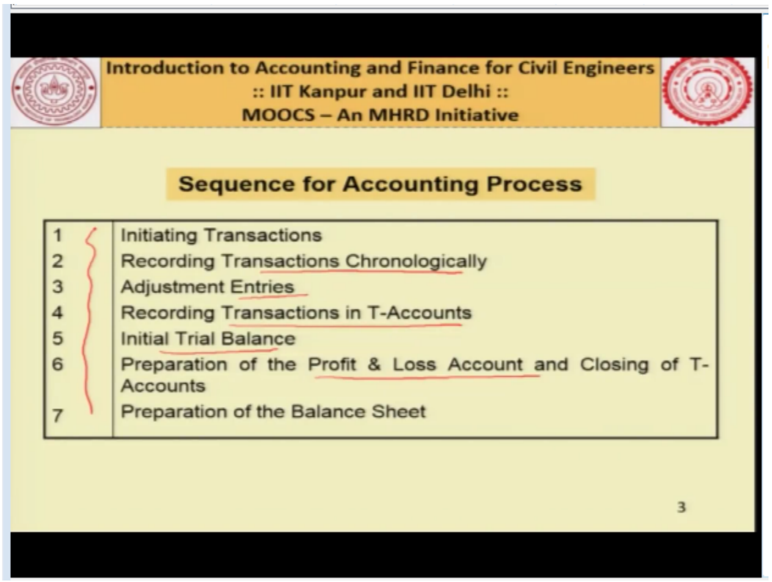

If you remember the first thing that an accounted does is to make sure that he has got documentary evidence, to make sure that any transaction takes place, until analyze some documentary proof is there it will not be assume that transaction has happened, that is why most of the time you will find an accountant would always insist on getting some kind of a document. These are important for audit purpose as well.

So the first step is to initiate the transactions, then these are transactions are recorded in a chronological manner. We have adjustment entries for transactions such as depreciations, wages of workers, stocks, work in progresses, finished goods etc. Then these transactions are recorded in different T-accounts, when I am recording the transactions I make sure that these are appropriately transferred into respective T-accounts or ledgers.

At the time of preparation of balance sheet and profit and loss statement we prepare the initial trial balance, for this purpose we try to close all our T-accounts. Once I have done this initial trial balance I try to segregate those items which are for turning to revenue and expense. I use that to prepare my profit and loss account, then I prepare a final balance sheet which is prepared after the final trial balance is prepared.

So, these are the 7 steps which normally an accountant takes in order to prepare the balance sheet and profit and loss statement. Now we will see how exactly each of these steps are carried out.

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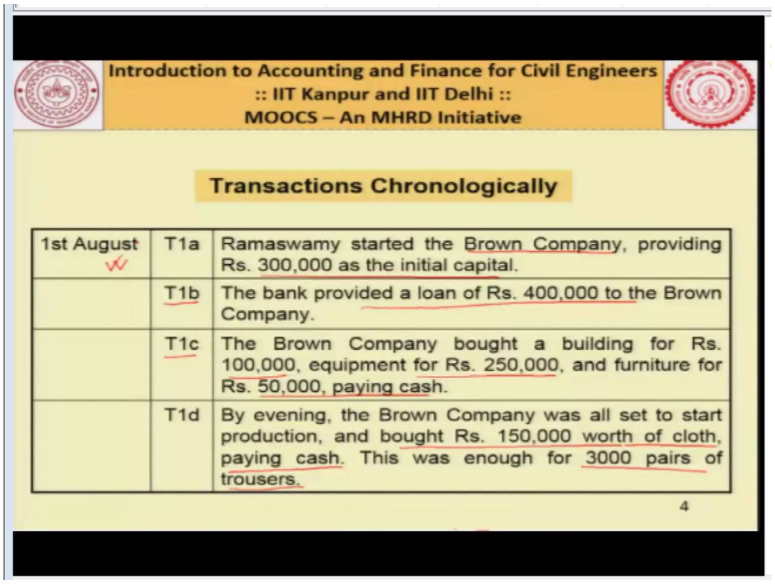

So, for that I have a list of transactions which I have recorded in a chronological manner, this particular example has been taken from one of the books called accounting made easy by Agarwal and Srinivasan. So if you look at the set of transactions on 1st of August there is a name person Ramaswamy who has a started this Brown Company providing Rupees 300,000 as the initial capital.

In the previous lecture I had told you how with every transactions your balance sheet changes. Your assets change, your liability change, now it will be very difficult for an accountant to prepare the balance sheet after every transactions. Because any company does a number of transactions on a daily basis, so what accountant do, they compile these transactions. When these transactions becomes substantial then they start taking actions as far as preparation of those the statements are concerned.

Even the posting takes place when they have got sufficient number of transactions now coming back to the list of transactions. Transaction number T1b it says the bank provided a loan of rupees 400,000 to the Brown Company, transaction T1c the brown Company bought a building for rupees 100,000 equipment for rupees 250,000 and furniture for rupees 50,000 all paying cash, by evening the Brown Company was all set a start production and bought rupees 150,000 worth of cloth paying cash.

This was enough for 3000 pairs of trousers, so the company is into making of trousers. So, all these transactions took place on 1st of August, let us move to some other transactions.

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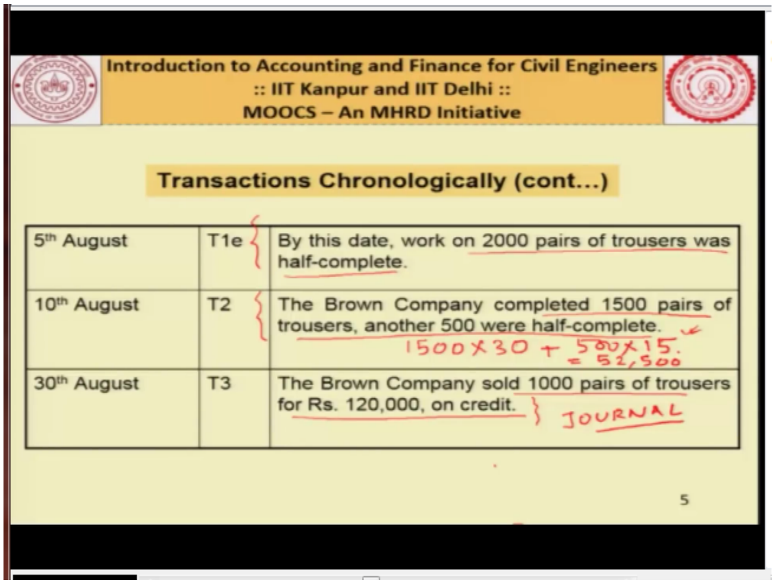

On 5th of August work on 2000 pairs of trousers was half-complete, 10th August the Brown Company completed 1500 pairs of trousers another 500 were half-complete, 30th August the Brown Company sold 1000 pairs of trousers for rupees 120,000 on credit.

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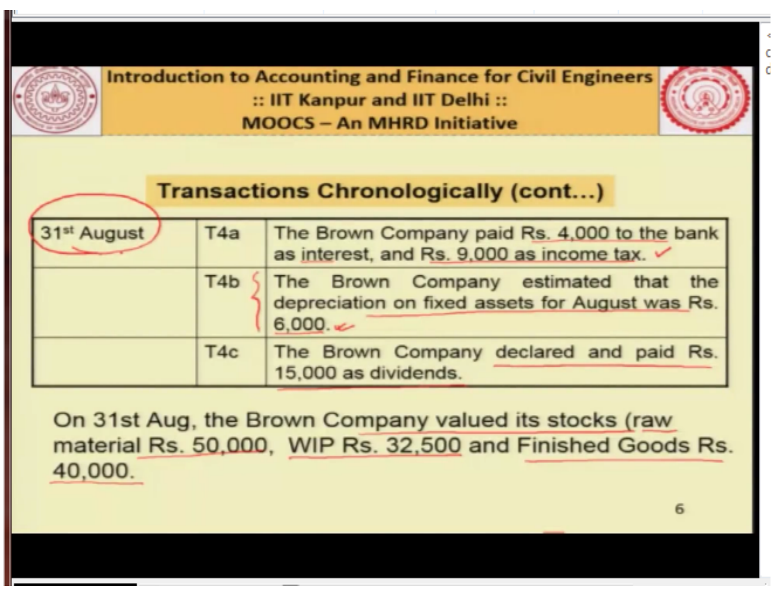

31st August the Brown Company paid rupees 4000 to the bank as interest and rupees 9000 as income tax same day the Brown Company estimated that the depreciation on fixed assets for

August was rupees 6000. The brown company declared and paid rupees 15,000 as dividends, on 31st August itself the Brown Company valued its stocks it found that raw material worth rupees 50,000 is in stock, work in progress rupees 32,500.

And finished goods stock is rupees 40,000, so these are the setoff transactions that are given to us. Now based on these set of transactions we have to prepare the balance sheet and the profit and loss statement. So we have already covered a step 2, initially we made sure that some transactions takes place then we recorded these transactions in a chronological manner. Now I what do I try to see from these transactions which of them involve cash and which of them are not involving cash.

Because if you remember there are 2 types of work essentially all cash related transactions are enter into cash book. And non-cash related transactions are entered into journals first, then there are certain transactions which are not to be recorded during interim periods. They are to be recorded only at the time of preparation of balance sheet and profit and loss statements. So let us go back to each of these transactions.

And first decide which one will go where, so as for as transaction T1a is concerned the company got 300,000 as the initial capital in the form of a cash. So this will go in cash book, bank provided a loan of rupees 400,000 to the Brown Company this is again in the form of cash. So, this will going to the cash book, Brown company bought a building for rupees 100,000 equipment for 250,000 and furniture for 50,000 all paying cash.

So, all of them will be interrupt into the cash book by evening the Brown Company was all set to a start production and bought rupees 150,000 worth of clothes. So, this is purchase of material again paying cash, so this will be recorded in cash book, this is enough for 3000 pairs of trousers that means we are assuming that we are incurring 50 rupees per trouser as for as mutual cost a loan is concerned and let us also assume that we are incurring 30 rupees per trouser as labor charge.

So, we will see this but right now let us assume we are incurring this labor cost and 50 is material cost. Now when you look at this transaction T1e by this date work on 2000 pairs of trousers was half-complete. So, although this affecting my work in progress but I am not going to record them now at this point of time. I will record them only when I need to prepare the balance sheet, likewise here you can see this is again work in progress.

The Brown Company completed 1500 pairs of trousers, another 1500 pairs trousers another 15 500 were half-complete. So, this is also not be considered at this point of time but when you look at this the Brown Company sold 1000 pairs of trousers for rupees 120,000 on credit. This is not involving cash, so this will be first recorded in journal, now you know journal records both the debit entries as well as the credit entries.

So we have to record in the similar manner, here again if you look at the Brown Company they paid 40000 rupees towards interest and 9000 as income tax. So each one of them will recorded again in cash book, now here you see depreciation has been estimated to be rupees 6000, this again will be considered only when we are preparing the balance sheet let us say if we have preparing the balance sheet as of 31st August.

So we will consider this particular transaction, when it comes to this last transaction dividend 15,000 dividend was paid by the company. So this is also affecting the cash, so I will put this under cash book.

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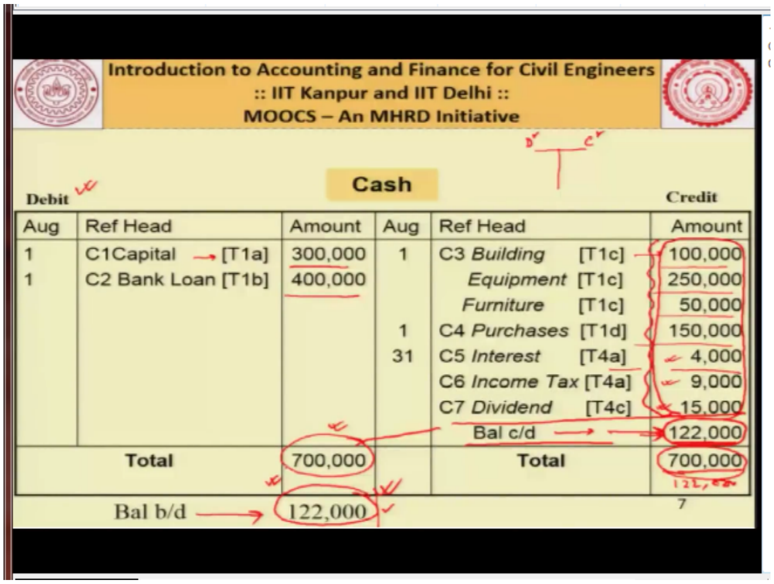

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Cash

Debit | Credit

Aug	Ref Head	Amount	Aug	Ref Head	Amount
1	C1Capital [T1a]	300,000	1	C3 *Building* [T1c]	100,000
1	C2 Bank Loan [T1b]	400,000		*Equipment* [T1c]	250,000
				Furniture [T1c]	50,000
			1	C4 *Purchases* [T1d]	150,000
			31	C5 *Interest* [T4a]	4,000
				C6 *Income Tax* [T4a]	9,000
				C7 *Dividend* [T4c]	15,000
				Bal c/d	122,000
	Total	700,000		**Total**	700,000
	Bal b/d	122,000			

Now let us move to the cash book, this is how typical cash book which is again kind of its T-account, if you look at this carefully it would give you an impression that it is like a T-account and left hand side you write debit, right hand side you write credit. Now here if you remember 300,000 capital was supplied by Mr. Ramaswamy 400,000 was taken as bank loan. Now this is increase in cash asset, so we are putting it under debit side.

So, anything which increases your asset we are recording it under debit side this is what our convention is whenever we are spending cash that means we are decreasing our cash asset. So, we are recording it under credit, so the company invested money for purchasing the building it invested money to purchase furnitures, purchase equipments. So all this if you see we have recorded it under credit side building 100,000.

So this has reduced my cash asset, so it is kept under credit side, equipment again it has brought down my cash. So it is shown under credit side, furniture I am putting it again in the credit side, I made a purchase of 150,000, raw material I am putting it under credit side. Because all these are reducing my cash which is an asset, if you see interest part I paid the company paid 4000 rupees which reduced your cash balance.

So it is retain in the credit side, same way you paid in the income tax of 9000 rupees it is shown under credit side. Dividends were also paid 15,000 rupees, so we are showing it again on the credit side. Now at any point of time this cash book will show how much cash came in and how much cash went out. So if you try to close this cash account you will be able to find out how much is the cash balance at any point of time with the company.

So if you look at the left hand side the debit amount is 700,000, if you look at the right hand side if you add it up, up to here. You will find that this is equal to 700,000-122,000, so this side we are having lesser value 700-122 in terms of the credit. So what I do is in order to balance both side I subtract this total from this 700,000 and you will find this coming to be 122,000. So, this I am keeping it under the credit side as balance carried down what I am doing I first added up this and I subtracted this from 700,000.

I find that this value is coming to be 122,000, so this I am writing it as balance carried down, now when I add you will find both of them are matching. So, this is 700,000 this is 700,000 but this balance carried down was added here 12,000, so in order to make it balance I am putting this as balance broad down 122,000. Now this also indicates that at this point of time the company is in a position of 122,000 cash.

So, cash book at any point of time will tell you how much money came in how much money went out. And what is the current cash balance available with the company. So, these are as for as cash transactions were concerned. Now we will see those entries which do not involve the cash directly, for example if you look at the sales.

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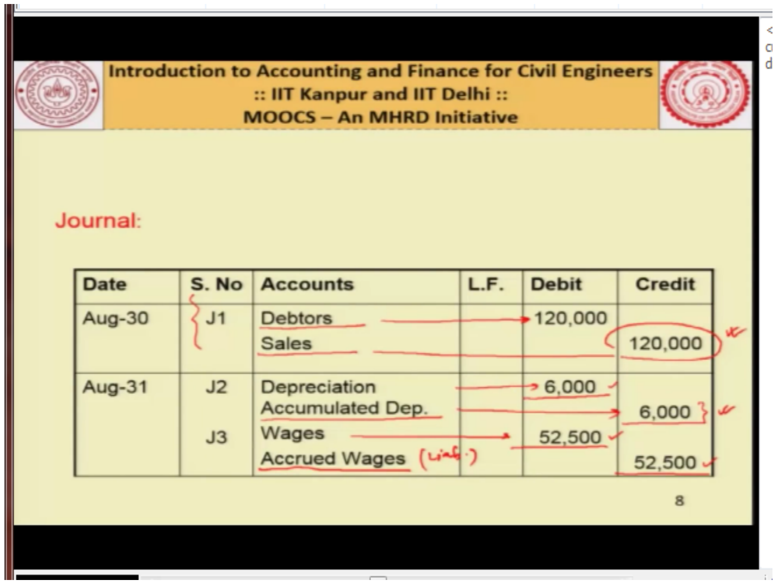

Date	S. No	Accounts	L.F.	Debit	Credit
Aug-30	J1	Debtors		120,000	
		Sales			120,000
Aug-31	J2	Depreciation		6,000	
		Accumulated Dep.			6,000
	J3	Wages		52,500	
		Accrued Wages			52,500

If you remember the company made a sales of 120,000, now this was not against cash. So you have another asset called debtors. So increase in asset we are writing it as debit and the corresponding entry is also there in the sales part in credit side. So, this is how journal entry takes place then the other journal entry is for turning to depreciation, in the problem it was given that the depreciation for turning to that particular equipment was rupees 6000.

Now every entry has to be recorded at least a 2 places, you can see corresponding to depreciation of 6000 which is considered as a expense. And as you know expenses are written inside the debit column, so you can see depreciation I am writing it as 6000. Because this is an expense. On the other hand accumulated depreciation this is the depreciation from the very beginning is coming to be again 60000.

Because initial depreciation was 0 and for the depreciation was 6000, so total accumulated depreciation is 6000. This is considered as liability, so increase in liability I am writing it on credit side, so you can see for every entry I have a debit entry and I have a corresponding credit entry. When it comes to wages you can see I have incurred a total wages of 52,500. Now from where it is coming you have to go back to the transaction detail.

It is given here that Brown Company completed 1500 pairs of trousers. Now the labor component for each of the trouser is 30 rupees, so 1500*30 here and another 500 were half-complete. So, it is assumed that 500 the labor wages were roughly 15 rupees, so if you multiply and add it here you will find this is coming to be 52,500. So this is the value I am writing here under wages. So, wages is an expense if you remember the convention increase in expense.

I am writing in under debit side where as accrued wages which is a liability increase in liability you know it is written in credit side. So, you can see for every entry you have got corresponding debit and credit entry, so out of the number of transactions that were given to us, some of them went to the cash book. Some of them went to the journal and some of them we need not even take any note of it. Now what I do as the next step I try to transfer each of these entries into their respective T-accounts.

So all these transactions are to be transferred to their respected T-account or ledger. For example the first one let see the capital account which is a liability.

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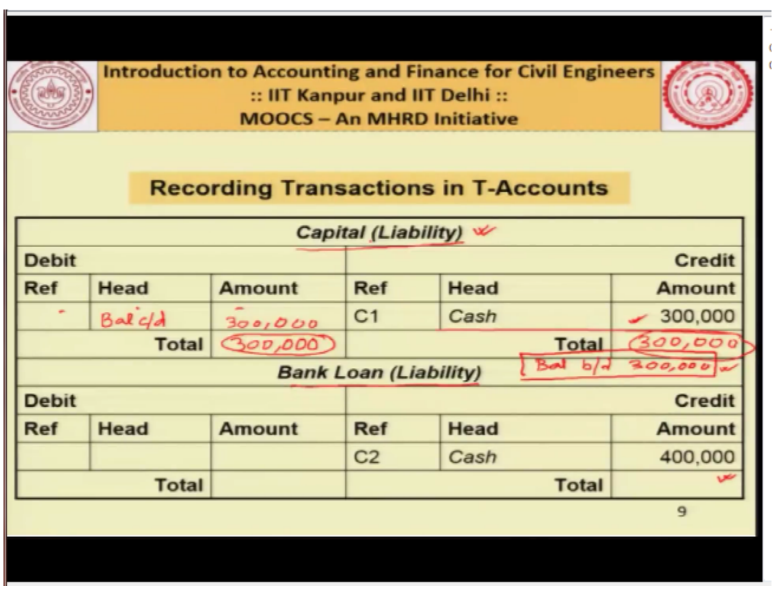

If you remember 300,000 was contributed by Mr. Ramaswamy that has given rise to increase in liability. So I am putting it in credit side, so you can see this liability T-account will look something like this in which the 300,000 I am recording it under credit side. Likewise bank loan this is again a liability. You can see I am recording it under credit side there is nothing in the debit side right now move to other T-accounts buildings.

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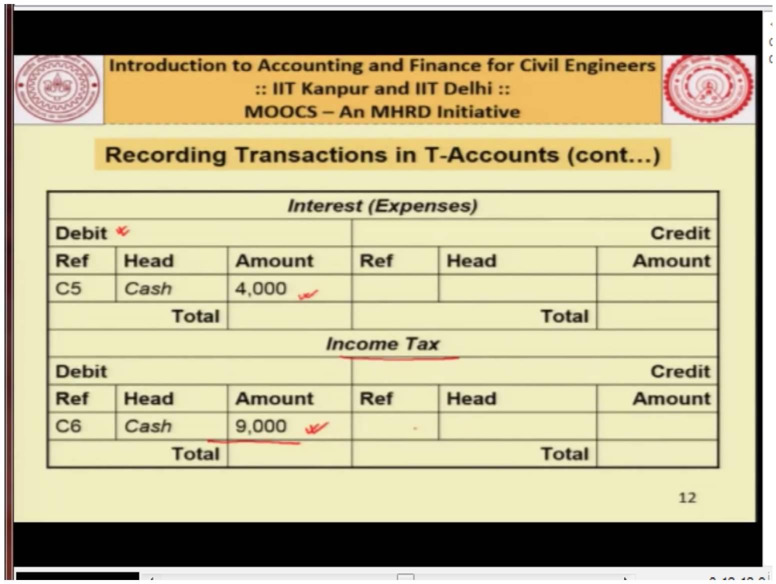

It is an asset increase in asset I record it in debit side you can see here it is against cash 100,000 nothing on the credit side right now, equipment again is an asset increase in asset in the form of cash. I am recording it in debit side. Furniture again an asset I am recording it in debit side furniture worth rupees 50,000 purchases you can see I am putting it in cash 150,000 in debit side. Interest it as an expense you can see it is being recorded in debit side.

All these transactions you can see are being recorded as per the convention which I told you in the previous lecture, likewise you can see here income tax it is again an expense, so this is going in debit side 9000 all these are blanks right now.

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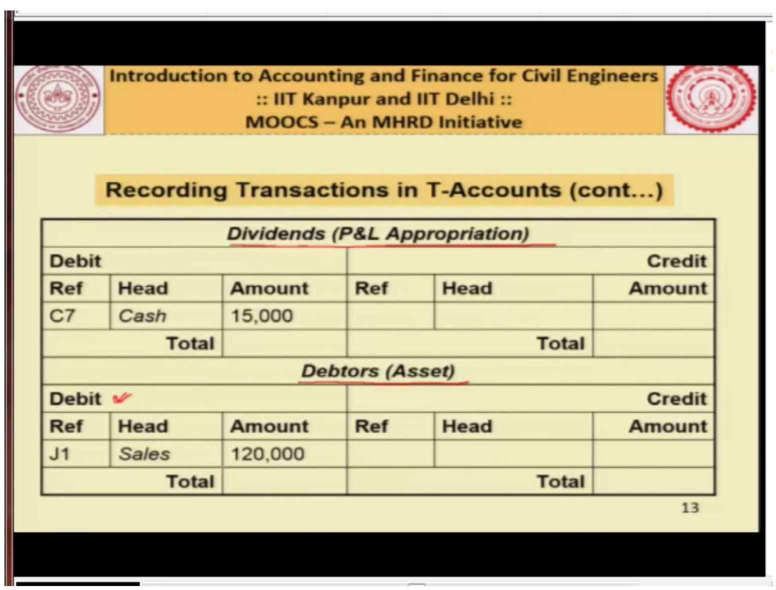

Dividends this is part of profit and loss appropriation, so the company after doing business let say generate some profit. Now not all that profit is to be retained by the company some of it the company may decide to distribute it to the investors. Those who provided the capital to the company when it was being establish, so some money you may keep it to be distributed among these shareholders.

So that is part of your appropriation of profit and loss, then I have another T-account called debtors, here again you can see increase in asset we are recording it under debit side.

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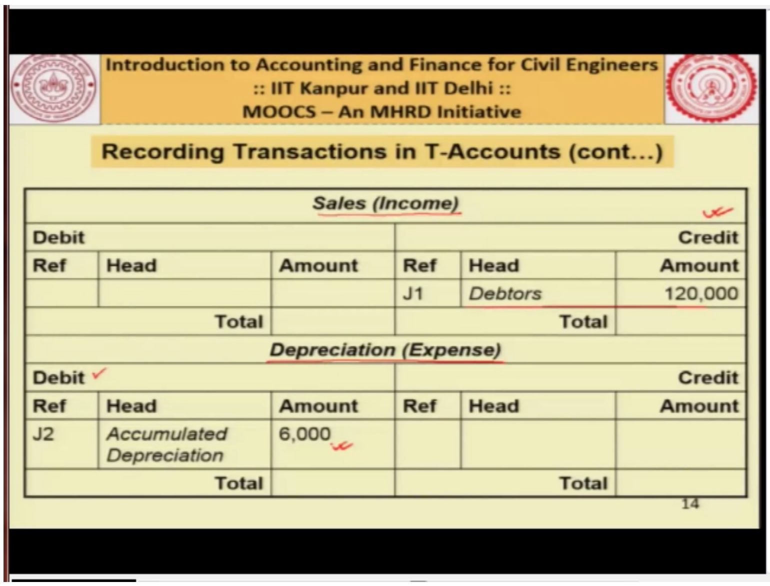

So, 120,000 sales here again you can see increase in sales or income it is being put under credit side following the convention. Deprecation is an expense right it is to be recorded in debit side because increase in expense is to be recorded in debit side.

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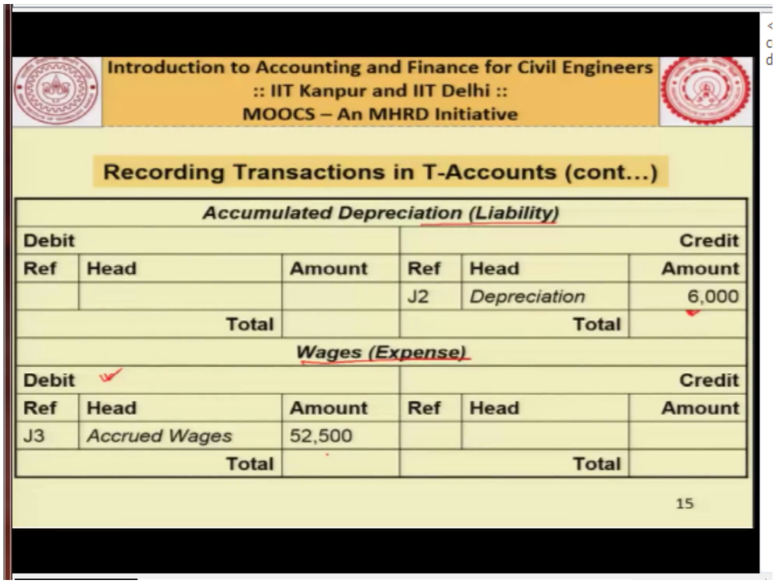

Accumulated depreciation on the other hand is liability increase in liability it is to be recorded in credit side. Wages which is an expense is to be recorded in debit side because increase in expense is to be recorded in debit side. Likewise you will have crewed wages which is a liability increase in liability I am writing it in credit side.

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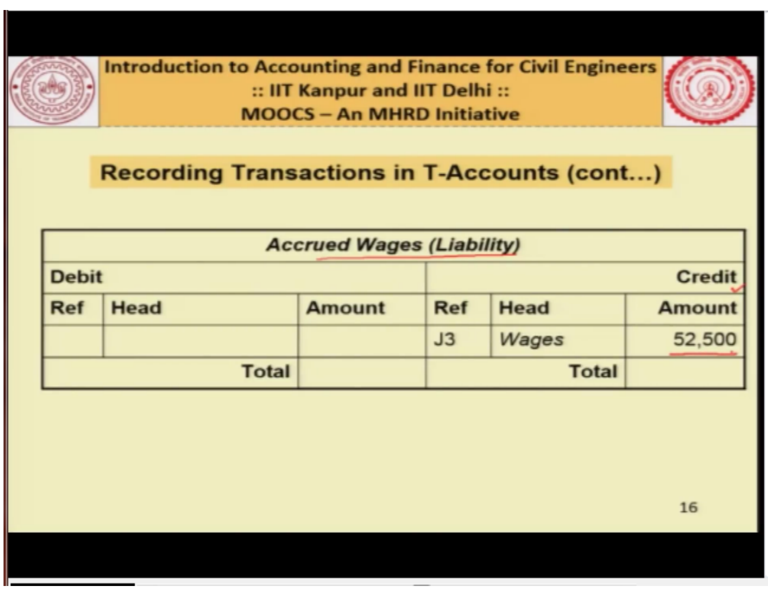

So, you can see here 52,500.

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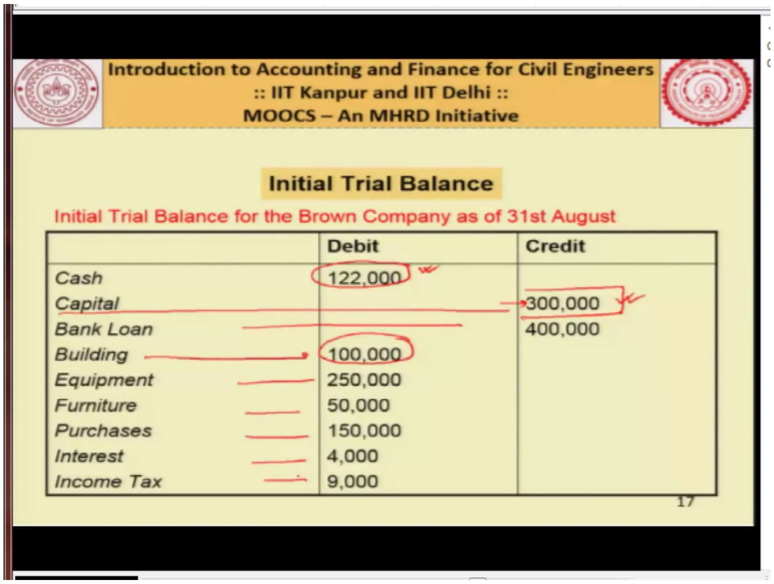

So, you can see all the entries in cash book as well as in journals are transferred into their respective T-account. So we had capital, we had bank loan, we had equipment we had furniture, we had various purchases. All these we transferred it to their respective T-account. Now I had to prepare initial trial balance, suppose as of that date I am interested in preparing the balance sheet and the profit and loss account.

So what I do I try to close each of these T-accounts, how do I close that t-accounts I will show you for few cases, let us say I want to close this T-accounts, capital T-account is to be closed. Now if you look at the entry you have a entry in credit side. So this is coming to be total 300,000 right, on the left hand side there is nothing but accountant would not be happy until unless you have same figure on the both sides.

So, what I do equivalent to this amount I write here balance carried down and I write here 300,000. So, my total here becomes 300,000, now this makes the accountant happy. Because this value and this value both are no matching. Now what I further do is I write another entry here balance brought down and I write 300,000. Now this will go in the initial trial balance corresponding to entry of capital in the credit side just (()) (21:43) for next the slide. So, just remember I have to enter this value 300,000 in credit side for capital.

So, let us go to the slide where I am preparing the initial trial balance you can see this capital and you can see this 300,000 is in credit side. So, from where it is coming, this is coming from the closer of this capital T-accounts. Now let us go to the cash T-account, let us see how to close that, if you look at the cash the debit side entries 700,000 right side entry was 700,000-122,000, so in order to match this also to 700,000 I added this under balance carried downs.

So, 122,000 was added here, so that makes this sum also as 700,000. Now since you have this entry balance carried down you can have another entry here balance brought down 122,000, so you can see for cash we are going to write in the initial trial balance of figure of 122,000 in the debit side. So you can just have a look here you can see this cash 122,000 is in debit side, all this is coming from the closer of T-account.

I will give you one more example let us go to building, let us go to the building T-account and close it.

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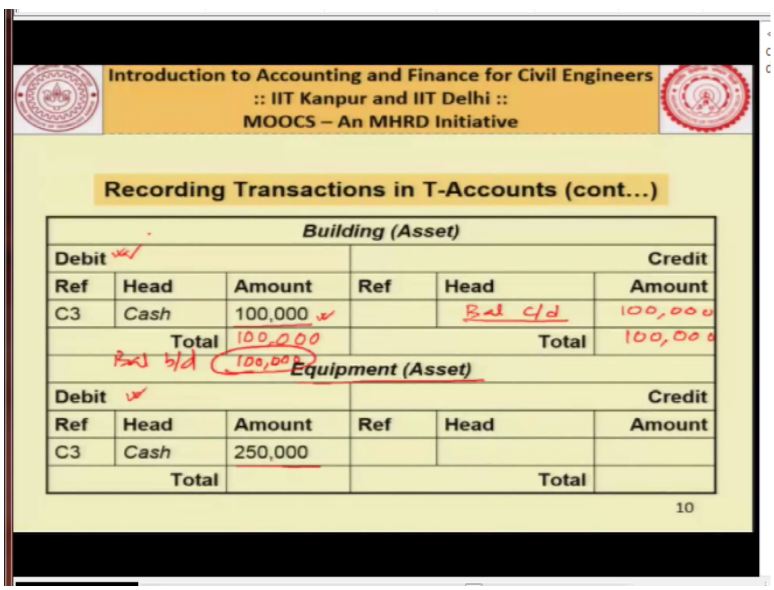

So, when you see building T-account it is like this, now your entry is in debit side because increase in asset you have record it in debit side. Now this side you have 100,000, this side there is nothing, you need to balance this, so what I do I write balance carried down here and equal to 100,000. I now get this total as 100,000, now since I have written balance carried down here I will write balance brought down here equivalent to 100,000.

So, this value keep it in the initial trial balance under debit side let us go to there you can see this, this building 100,000 is written in the debit side. Now in the same manner you carry on and close all the T-accounts. So whether it is bank loan, whether it is equipment, furniture, purchases interest, income tax.

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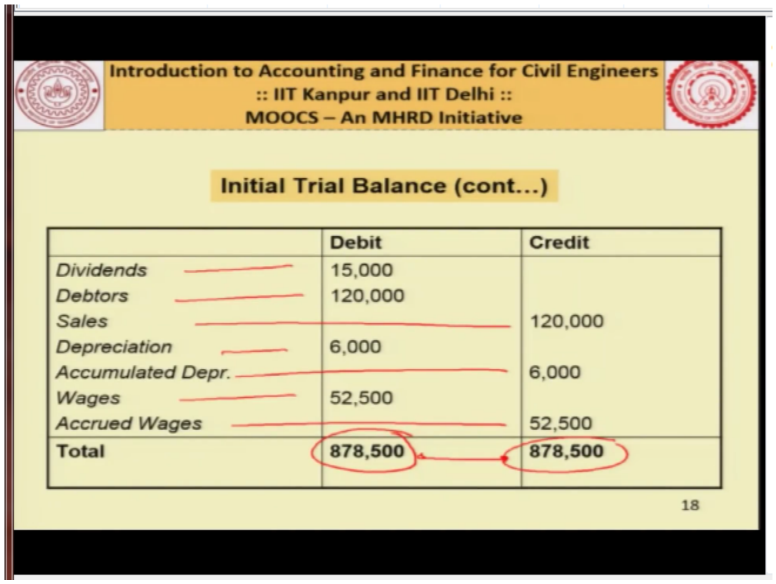

All these accounts are getting close even dividends, debtors, sales depreciation accumulated depreciation, wages accrued wages. All these were my T-accounts. Now when I add it up all debit column you will find the sum is coming to be 878,500, likewise when you sum the credit side entries you are getting 878,500. Now if you had made some error you would not have been getting these 2 values as same.

So if these values are not coming same you have to assume that you have made some error and then you have to relook at those closure values right. Now what I have to do I have already prepared the initial trial balance now I have to prepare the profit and loss account. Now what I do from these initial trial balance statements I take out all those heads which are pertaining to either revenue or the expense right.

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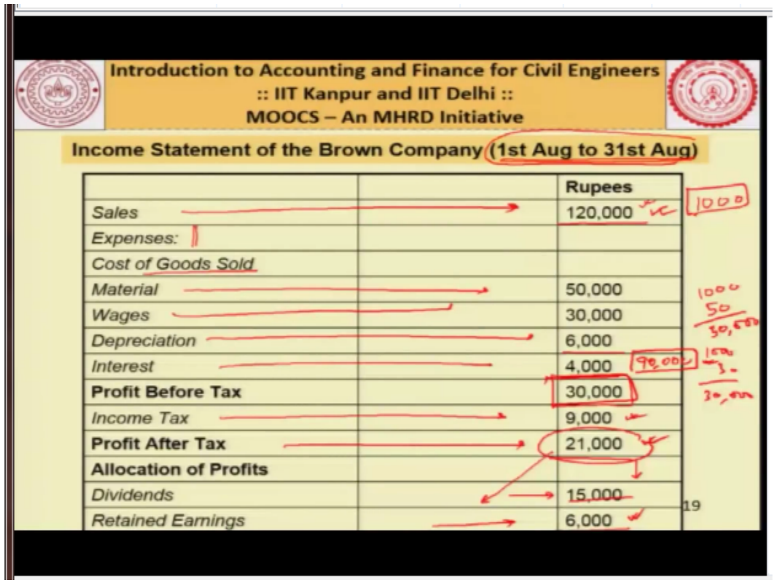

So, let us see how to do it, so what I did is I separated the sales, you remember the sales was for an amount of 120,000. Now I will sum up the expenses, expenses consist of cost of goods sold. So material I had purchased for 50,000 if you remember for 1000 we says we are incurring material at a rate of 50 rupees. So, this is 50,000 wages I am incurring at a rate of 30, so 1000 multiplied by 30.

So, wages are total 30,000 this is for 122,000 sale that means we sold 1000 trousers ok, depreciation was given to be 6000 interest that was paid was 4000, so total is how much 50+30 80+6 86+4 90. So, 90,000 was the total cost of goods sold, so the total cost is coming to be 90,000 and you sold at 120,000. So your profit before tax is 30,000, now out of this profit you paid 9000 rupees towards income tax.

So 9000 is gone, so your profit after tax is coming to be 30,000-9000 which is 21,000. Now this 21,000 company has decide not to keep whole amount with the company itself out of this 15,000 is being paid to the shareholders as part of dividends. And retained earning that means the money that is with the company is 6000. So this is the breakup of 21,000, had there been no dividend then the whole profit after tax would have been retained as retained earnings.

And it would have been 21,000 instead of 6000 here, so is how you prepare the income statement or profit and loss account. Now here also you can notice this is for the whole period the company started from 1st August and the details that were given to us was up to 31st[t] August. So, we prepared this statement for a period of 1st[t] August to 31st August.

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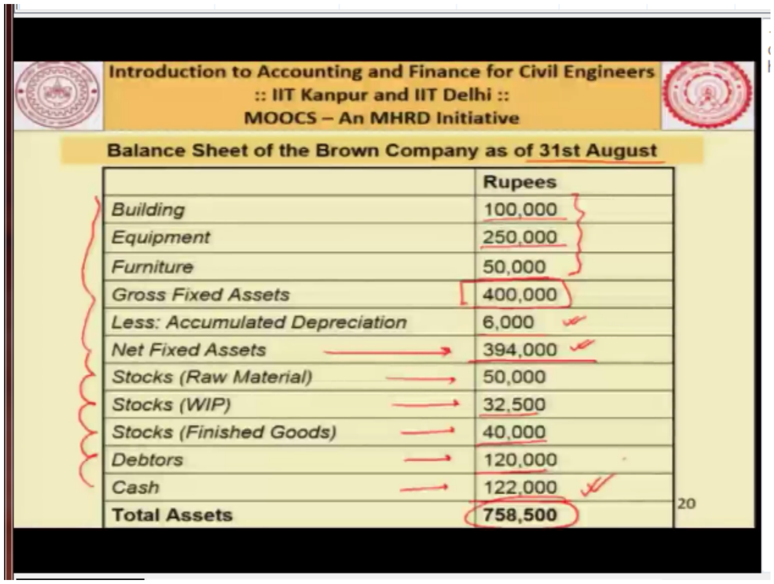

Now at this point of time now we are ready to prepare the balance sheet, what I did I close the T-accounts then I prepared the initial trial balance from the initial trial balance. I segregated all those items for turning to revenue and expenditure and that way I was able to find out what is my profit, before tax what is my profit, after tax those profits were appropriated in dividends and retained earnings.

Now from this a statement I can derive my balance sheet. Now for the balance sheet I have to again visit the initial trial balance and in combination with various adjustment entries like stocks of raw material, stock of work in progress, stock of finished goods, depreciation and all those things when I put it and prepare the final trial balance I will be in a position to draw my balance sheet. So, if you look at the balance sheet of this company as of 31st August.

You can see building 100,000 equipment, 250,000 furniture 50,000, so total gross asset if you see 100+250+50 it is coming to be 400,000. Now on this the accumulated depreciation, so for in this one month has been 6000, so the value of fixed asset as of now is 394,000. How I am getting this the total value of asset was 400,000, now for this period there was a depreciation of 6000. So, that is giving me a net fixed asset of 394,000 stocks of raw material given to me is 50,000 as of 31st August.

Stocks for work in progress is 32,500, finished good stock is 40,000, debtors is 120,000 and cash available with me is 122,000. So, my total asset is 758,500. Now if you look at the balance sheet you will find that they are in particular order. For example the fixed assets I am writing it at the top and more liquid assets I am writing it at the bottom, out of all these assets for example cash, debtors, stocks and fixed assets like building, equipment and so on.

You find I am writing most liquid asset at the bottom, so most liquid asset means how fast you can convert that into money. Now cash is already in the form of money, so it is the most liquid form of asset whereas buildings and equipment. They will take time to sell out and thus realizing money out of them takes little time. So that is why they are called as fixed asset and they have they are not that liquid right.

So liquidity means ease with which you can convert them into cash. So, this is as far as asset side is concerned.

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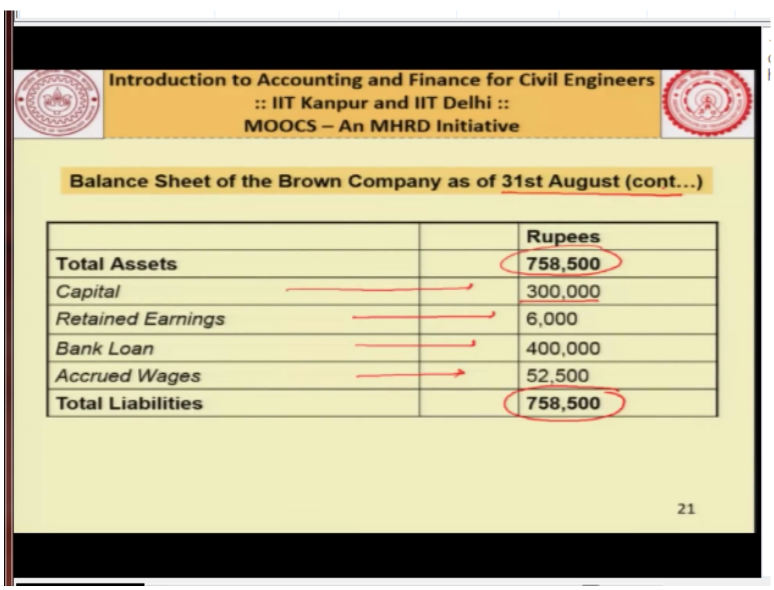

When it comes to liability you can find capital worth 300,000, retained earnings 6,000, bank loan 400,000 accrued wages 52,500. So, total liability you are getting it as 758,500 right, so this way you can get the balance sheet prepared as of 31st August or for that matter as of any date. So, what we have done is we have just given you illustration corresponding to each of their steps. When it came to the last few steps I did not go exactly in the manner in which an accountant could ideally like to go.

Because after preparing the profit and loss account they would like to see the entries which are there for example the retained earning the profit and I mean the dividends and for that they will have corresponding journal entries. Now those journal entries also will be closed and finally they will have a trial balance and that would lead to the final balance sheet. But just to give you an idea even if you have this understanding it is ok for our purpose.

After all our aim is just to make sure that you understand the processes involve for preparing these statements. Our main purpose of going through this particular course is to make sure that you understand these processes and you are able to interpret these statements. So in some of the next lecture that you will be going through we will let you know how to interpret the readings or the statements their inside the balance sheet as well as inside the profit and loss account more on this we will see in some other lectures .

We stop at this particular point but before that we summarize you know the 7 steps that we took starting from initiation of transactions to recording to those transactions in chronological manner, going in for adjustment entries transferring all these entries into respective T-accounts, preparing the initial trial balance from the initial trial balance segregating items pertaining to revenue and expenses, then preparing the profit and loss statement.

Then preparing the final trial balance and finally the balance sheet as of a particular date. So if you keep understanding these things I am sure you would be in a position to understand and appreciate the figures inside the balance sheet and profit and loss statement. So we will discuss more on this in some other lectures till then we stop here and thank you very much.