Business Analysis for Engineers
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Lecture-02
Introduction to Accounting

Good morning class, it is good to see you again, last class we covered the basics about what a business organisation is and what this course business analysis for the engineers is going to actually offer you it was kind of an introductory framework to this entire course in which I said in addition to defining what a business is, I had provided the 3Cs that actually is used to analyse a business a quick recap of those 3Cs namely the code, the conduct and the climate.

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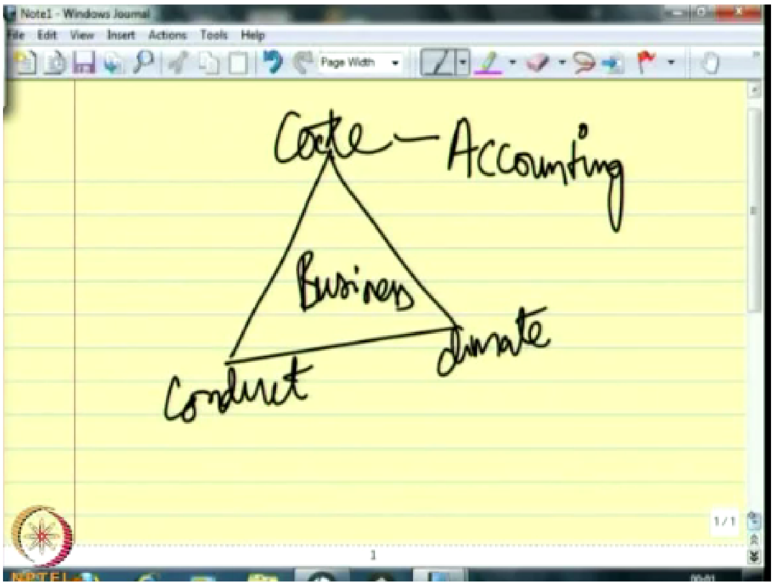

And we concluded last class with code and I said that I would be beginning this session today it some introduction to accounting and that's what we're going to do this class I told you last class in any business organisation whether it's for profit or not for profit there is a lot of activity that happens in a business organisation activities or rather lot of work happens in a business organisation.

And this work is done using resources, resources being men material and other productive resources and when such resources are being used we need to know some information on those resources what type of information we need to know what are the resources at the first place, to what extent are available with us and when it was acquired what were the sources of finance to acquire with these resources.

And how these resources were spent and as a result of utilising these resources what is the benefit to the business organisation. So we need to understand that all this information in different forms is required, could be the means of financing these resources the extent to which these resources were used and the results achieved by using these resources. So the information hence is critical not only for those who are inside the business organisation.

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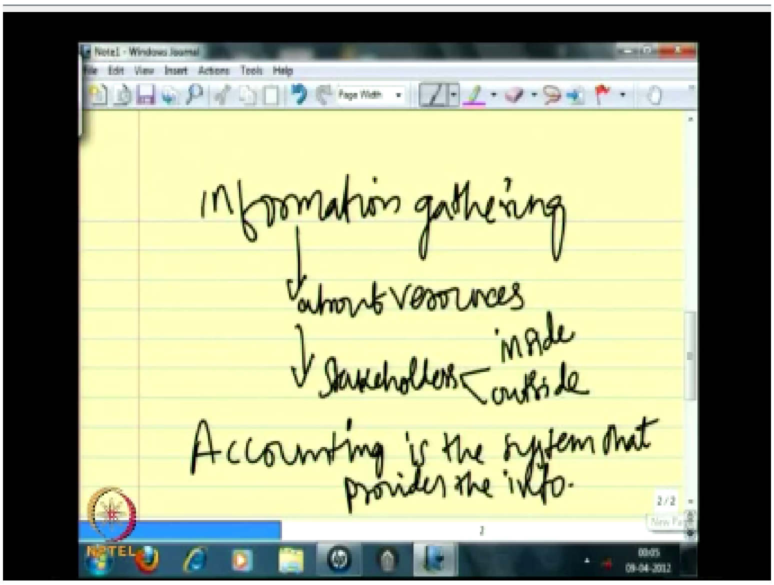

But also outside the business organ, so in essence this information gathering is a big exercise by itself and now this information is about resources that are being consumed and who is going to use this information, it could be the stakeholders, the stakeholders it means both parties inside as well as outside to the business organisation. So when we are going to capture this information we need a system that provides information.

In absence of any system think about capturing this information, that is one business organisation X there is one business organisation Y and for the sake of comparison let us assume that these are the only two organisations but however in reality you have thousands and millions of organisations outside. So information gathering has to be in a uniform, has to be in a manner that is done at least to ensure that there is some consistency across various organisations in gathering this information.

Now the system that provides consistency between two organisations X or Y for the matter a system that provides consistency to all the organisations when it comes to gathering this information is actually accounting, so accounting in a very very broad perspective you know going to get into the final definitions about accounting yes but a very broad general level it is a system that provides this information.

So this system provide the info that stakeholders inside and outside the business organisation need and this info is about the resources that are been utilised in contact of business whether it is for profit or not for profit.

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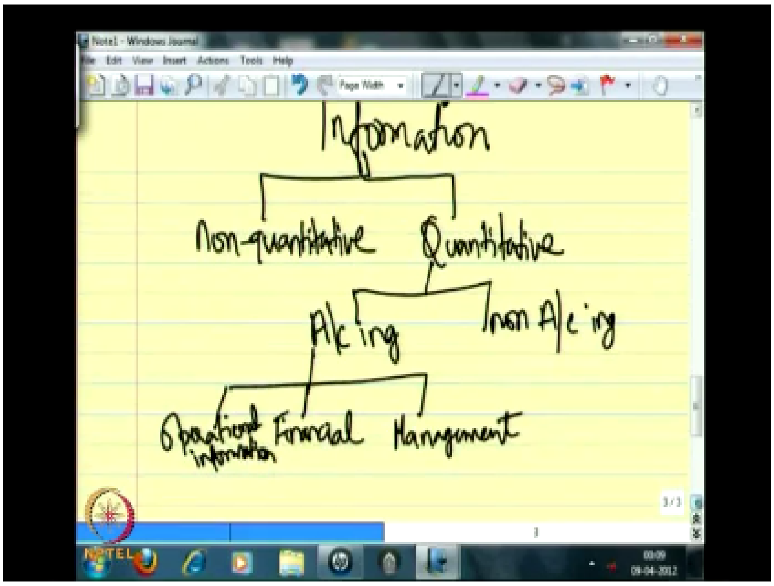

So the center piece to the accounting system is the information that is required information is the key in the system, so what I am going to say that information is required I cannot just let it allow to hang loosely because information by itself is a generic statement, generic word it covers everything. The fact that today is a holiday for my company is information but accounting did not capture that.

So we need to know what type of information is actually is essential for the purpose of accounting for which let us say information can further be categorised into two forms non quantitative and then quantitative. I am not interested in quantitative information, I am not interested in on quantitative information, what could be in on quantitative information it could be that Cos interview of the newspaper or the visual advertisements of the organisation is a available, press releases.

This is also information about the business organisation but it is more qualitative or that is non quantitative and hence accounting system is not really capture these types of non quantitative information. So I am going to ignore for the purpose of accounting not done on quantitative information not necessary but for the purpose of accounting I am going to spend more time in selecting only quantitative information because that is actually the required information.

Now again in quantitative information still a very broad terminology still I need to segregate certain type of information that I need and then ignore other quantitative information that I know do not need and a very broad perspective I can say there is some non accounting quantitative information and then accounting quantitative information. Non accounting was the average work experience of the employees in a business organisation 45 years.

It is quantitative but then whether it is required from an accounting perspective no. So as long as there is quantitative information that is non monetary would it this way then I can say that it is non accounting information. So I am not interested in information that is non accounting do it is quantitative. So I am interested in getting information which is quantitative but the same time is accounting in nature.

What do you mean by accounting in nature that case I have to express this information in monetary terms what type of information would they be again last class I was mentioning that there are three types of accounting the financial accounting, the management accounting, without accounting related quantitative information is the operational information. Now operational information is accounting to a certain extent and quantitative as well.

Number of units of a product is a business organisation sells, it is definitely accounting information and quantitative payroll. So this is again quantitative as well as relevant accounting perfect but from reporting perspective I would say that I am not really concerned that is relevant information for accounting and quantitative for the purpose of reporting I would restrict the information that I need broadly into these two categories namely financial and management accounting.

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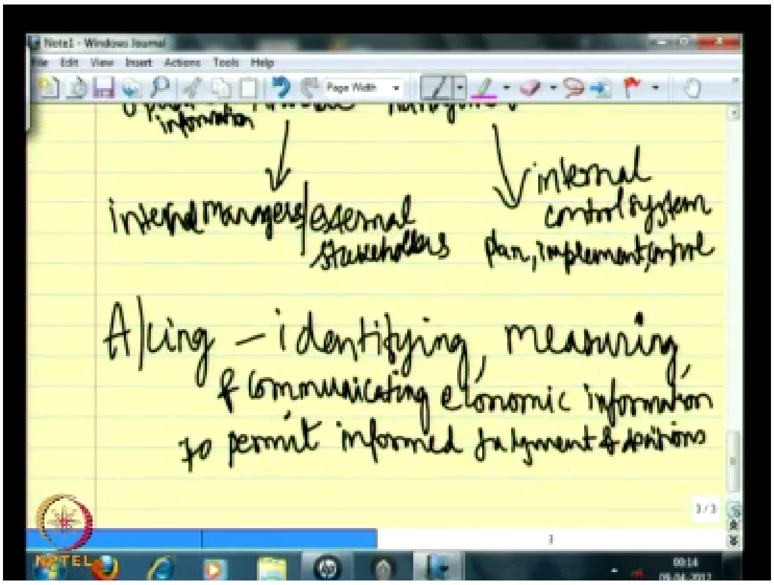

Now financial accounting as I said last class it is actually more for the purpose of internal managers to capture this information that we have been talking about as well as external stakeholders. So this financial accounting is one form of accounting that captures information reports in a particular form which is used by not only those internal to the organisation, but also other stakeholders in making judgements on making investment decisions of or whatever purpose they think they can use this best.

And on the other hand you also have management accounting which by enlarge is an internal control system where it is used more to plan effective usage of resources to implement certain optimisation mechanism to control the budgets. So we need to capture some information that is required to plan, implement or control the internal business system and remember last class I was talking about how management accounting hands would be dealing with various issues like fixed cost, variable cost, budgeting, variance analysis.

And all this is internally consumed because it is more to be used for the purpose of improving mechanisms internal to the organisation. To provide a text book definition of accounting and looking at all of these terminologies I would say that accounting is the process of identifying measuring after you identify you need to measure and also communicate it in a proper format. So identifying measuring and communicating.

Communicating what communicating I am using this word economic information, this is synonymous with the quantitative accounting information that explain before and after doing why are we doing this is after you identify you measure and communicate this economic information then the uses of this information can take informed decisions or make judgements and when does permits form judgement and decision.

Who the uses of this information, so in a sense accounting identifies measures and communicate economic information to a specific set of user group who based on this information can take decisions or make an informed judgement. This in a sense is the broad principle of the definition of accounting. And those who practice the profession of accounting that is called the chartered accountants regulated through the institute ICAI also called as CPA outside India.

So CPA is a chartered accountants that the ones work professionally engage in the practice of accounting as a profession when they are empowered to sign on financial statements on behalf of business organisation they do the auditing. So they endorse this information that we have identified measured and communicated is correct and satisfies the various stipulations the norms and benchmarks.

And very much within the allowable framework of accounting standards but which will be discussing later but this profession of accounting is practised by those certified professionals called chartered accountants. I told you last class that my endeavor is not to give you an orientation towards accounting so that you can appear for a chartered accountancy examination clear that no.

I am just going to give you some inputs, so that you can appreciate and understand by the very look of a balance sheet and income statement you can make some sense from the these statements, you can make some sense from the annual reports of various companies that limited will be giving you some inputs on accounting, so I said that let me just give you some history to accounting.

So accounting is not a new concept even in 5000 BC you know we had some symbols were recorded transactions symbols used by those tribals recording transactions. So the idea was to record transactions that was significant and then I just went by various civilizations be the Indian civilization of the Egyptian, Mesopotamian whatever they are, every civilization had its own ways of recording information that could convey that such a transaction has happened.

But the most telling form of accounting maybe the double entry bookkeeping, trace traces its origins to the European zone probably somewhere during the 1300 and then predominantly used by government enterprises because government was the agency that was engaged in business in those days but after the industrial revolution took place even private organisations that part of the big enterprise as a result of which the users are the creators of these accounting statement for the financial statements are not just government agencies better.

But also private enterprises, so post industrial revolution we can see that there is a great need for accounting professionals because all these transactions which till one point of time was restricted with government agencies now where undertaken by private enterprises and then proliferated over a period of time so today even imagine how many government agencies how many private enterprises, all of them doing business for profit not for profit.

And all of them engaged in utilising some resources in that day to day activities which needs to be capture, then you can understand the need for accounting professional, so accounting is hence my opinion I told you last class become the language of business.

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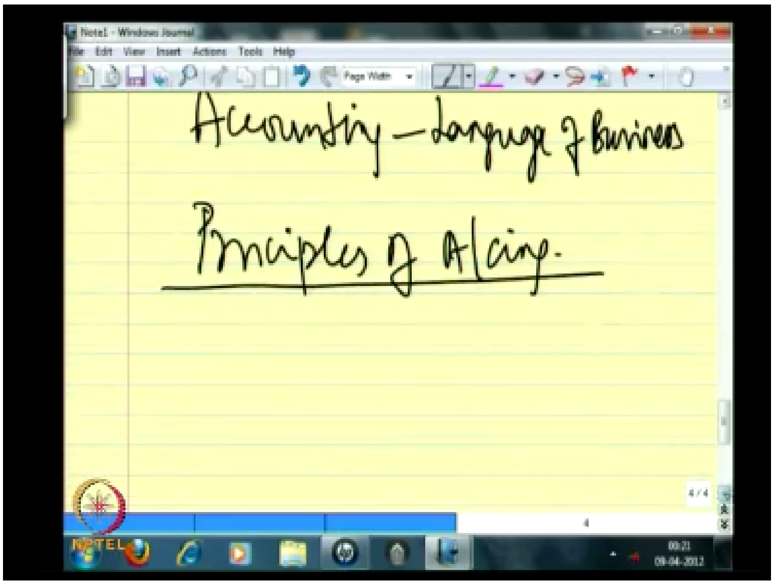

Any type of business any type of business it could be government or private it is not for profit in church University information using language that provides some common understanding stakeholders who use this information in taking judgements on making decisions accounting foreign language it is for any type of business it could be the government or private or whoever it is, it can be language of business to be a non profiting to a temple, to a church, could be university whatever they are.

All of them need to capture information using particular language that provides some common understanding because all stakeholders who use this information in taking judgements or making decisions. That does not mean accounting is a foreign language it is foreign to the limited extent that you know Americans trying to talk English in a British way, wheat in America is corn in UK and corn and UK maize for Americans. So football in football in US they it as the (()) (20:28).

So account is a language which is foreign limited extend that few words to convey different meaning but majority of what happens within this accounting framework understands the language in a uniform manner except for these minor exceptions because different countries will have different reporting standards as a result of which certain terminologies will not different meanings in certain geography.

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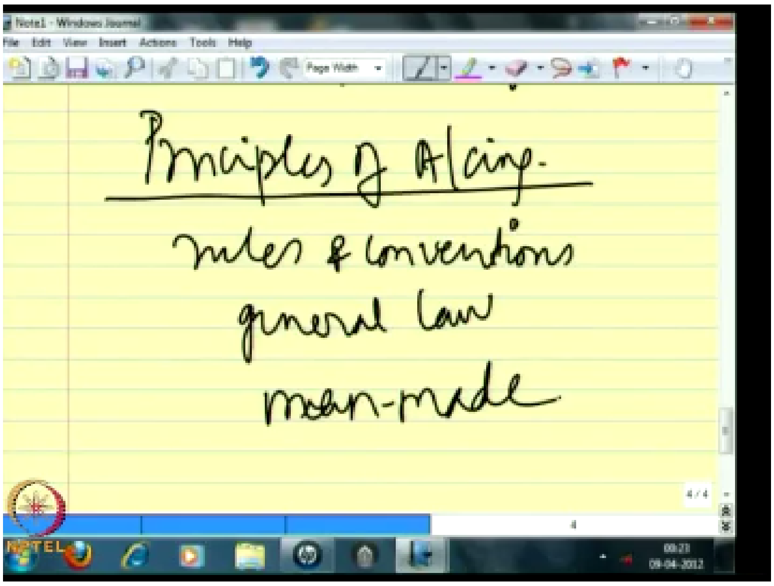

But by large accounting as a subject of study is governed by some generally accepted accounting principles, let us understand what is generally accounting account generally accepted accounting principles called, before I tell you what those principles are clarify that is accounting principles are general rules and conventions visa rules and conventions which means it is settled form that actually and that actually provides a basis on which business practice or accounting as a profession is conducted.

It is kind of a general law to guide to action and these principles are settled as I told you before, but across organisation within the generally accepted principles different organisations might record the same transactions in different way that I will give you some examples later for you to understand what I mean by this but at least at this point of time you must understand that though these are generally accepted principles.

There might be different interpretations as a result of which you find different organisations recording is same type of transaction in different ways and these principles or not are not rigid it is not that they will never change these are manmade principles because we make these accounting principles manmade. These are not principles that you see in physics or chemistry or other natural science subjects and these principles may change when did change everybody well resort to these new changes.

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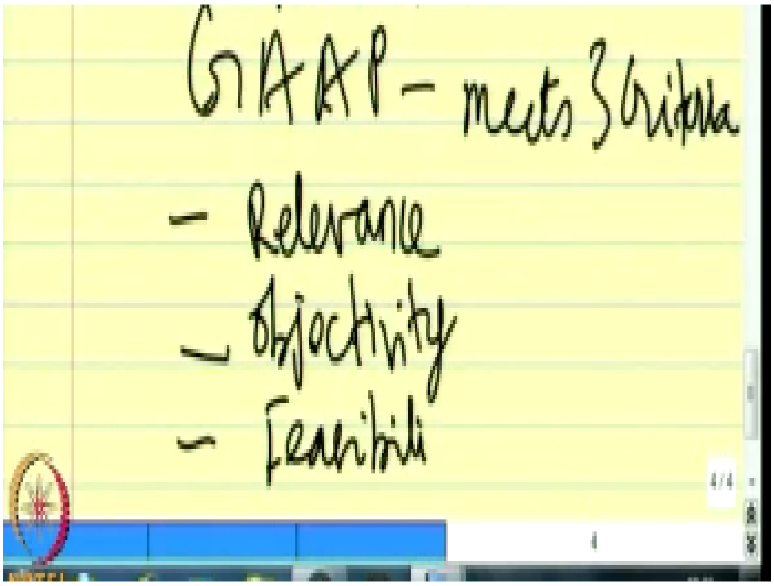

And ensure that these principles are followed as mentioned that have been made and these principles as I told you call the generally accepted accounting principles and this is generally accepted universally accepted and the foundation to lease accounting principles is the fact that these principles actually meet 3 very important criteria is actually in my opinion forms a very foundation on which accounting as a subject of study survive.

Gap meets 3 criteria, 1 relevance by relevance to the extend that the information that is captured is meaningful and useful to the user, what is the point if the price of if the market price of the building that I am going to acquire now as 1 million dollars and 1950 it was 10,000 dollars, the fact that it cost 10,000 dollars in 1950 is no longer relevant for macro environment. The information that is relevant is that today by this building it is going to cost 1 million dollars.

It cannot be cost 10,000 dollars in 1950 relevant in a different context but in an accounting context it is relevant, second criteria that needs to be satisfied is that, that should be some objectivity while we capture this information, to the extent that the information that we capture is measured and reported with no inhered and buyers in it so it should be unbiased way of reporting the transaction measuring the transaction communicating with transaction.

And orderly should be unbiased it should also stand on ozone merit which means that it should be it could be verifiable at a later stage, so that the principal ensure that it is object you cannot allow the rules of subjectivity to include this principles. The third one is feasibility, to the extend that the entire exercise of identifying measuring and communicating information is implemented, no undue complexities we are going to do this.

So to that extent the accounting principles was ensure that that is relevant, that there is objectivity and there is feasibility when we are trying to identify measure and communicate this information is economic information. So the generally accepted accounting principles ensure that these three foundational pillars is not overlook at any point of time. I will just give you a small example for you to understand better.

Apple as a company the book value of Apple shares let us say 10 dollars today, 10 dollars book value of Apple shares, but today it is trading in the market for let us say 200 dollars, but when you look at the balance sheet of Apple you find the stocks value that is book value. Now are you going to tell me that it is an error in accounting because the market value is 200 dollars and that the balance sheet is not capture the market value.

No it is not an error in accounting but the principle of accounting that says that when you capture such stock values and reflected in the balance sheet it has to be at its book value not at its market value, we going to see a lot of examples that I am going to talk about this, but please have in mind that relevance subjectivity and feasibility of the three corner stones that actually guides practicing professionals to ensure that information that capture less than in a proper manner.

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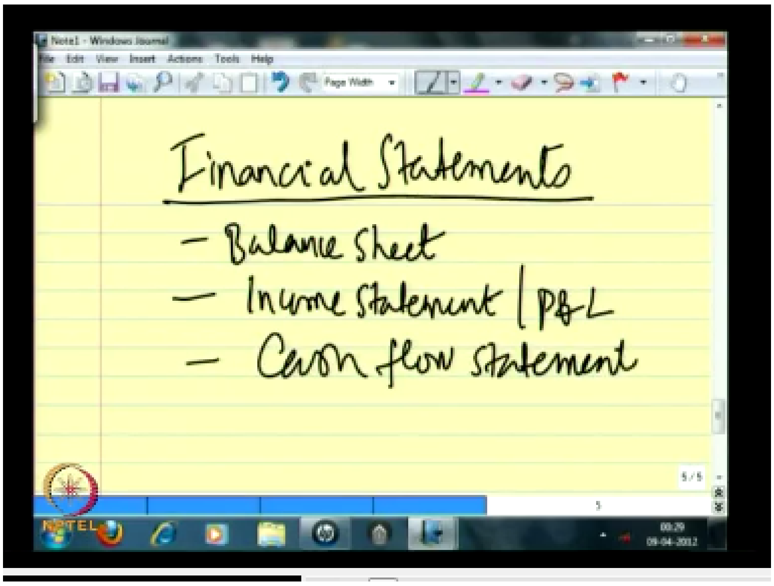

Now why are you capturing this information, we are capturing is information so that we are able to come out with some financial statements and three most commonly used financial statements the balance sheet, the income statement or profit and loss statement, the cash flow statement. These are the three main financial statements that will be trying to construct based on the information that we have captured.

And I am going to spend a lot of time in understanding what is individual statement are, but for the purpose of today's class it is enough for you to understand that balance sheet is kind of a status report in office stock report that that actually a highlight the financial strength of an organisation the income statement and cash flow statements are flow reports this kind of a status report, while these are flow reports.

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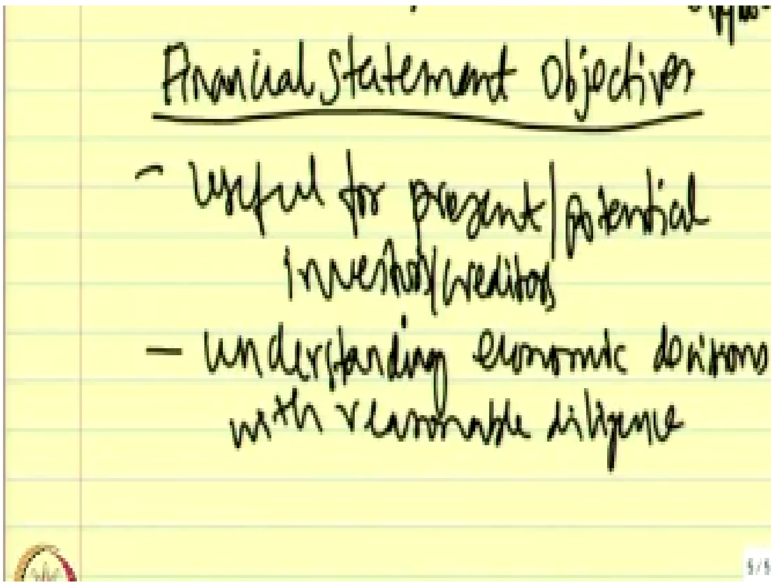

What do you mean by this, water in a reservoir at one point of time stock or status. The amount of water that flows through the reservoir over a period of time let us say a day flow difference between status and flow. The status or stock report is kind of a snapshot you take a photo a snapshot while the flow report is like motion picture you take a video. So balance sheet is kind of stock report immediately says this is the financial strength of the entity.

While income statement and cash flow statement of flow reports that analyses transactions over a period of time and provides information on the performance of the entity how profitable there how it cash it cash go out. So that is this level of difference between these three statements and when we try to create them or sells after we actually just and accounting Principles then you will begin to appreciate the essence of these three statements.

Now why do we actually create or why do we construct this financial statements, financial statement objectives, why do we need such financial statements, we answers these statements are useful for present or potential investors creditors. So that they can take investment decisions or take credit decisions based on what is balance sheet and income statement provides a signal.

So it is useful for present as well as potential investors or creditors. Creditors meaning in the bank give you loans. So you need to create a financial statement because these people need to understand what this financial statements is as a result of which they can take proper decisions. And also for the purpose of understanding economic decisions with reasonable diligence.

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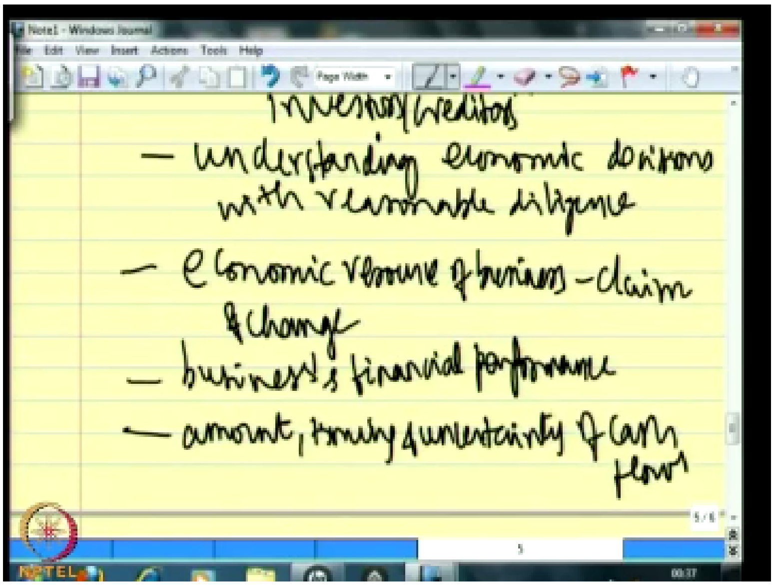

So actually we try to understand the rational the thought process behind certain economic decision making with reasonable amount of diligence you can look at the financial statements and then as an investor or credit or as a manager also you would say yes his decision was taken because we feel that at this profitability or this capital structure or at this current asset management strategy we will be able to achieve target takes target etc.

Now I told you that every business as an economic resource and every economic resources every economic resource has a claim against it. So you create a resource you created the resource because somebody gave you money or you put your money which means that resource can be claimed by the owner of the person who gave money to create that resource and that claim will also change your appeal of time as well you can repay loans.

So the economic resources that created and it claims again claims against those resources also need to be understood and also we need to understand that we claims for the various stakeholders. In addition you also need to understand the business, the businesses financial performance, by financial performance I mean the profitability of the business whether the gross margin is high to understand the operational to make margin of business, how profitable is this business.

Because we are going to understand what need to use the balance sheet as well and also we need information on the amount, the timing and probably uncertainty of cash flows you know when I am going to get cash you need to know how much cash I am going to get and whether

I will be able to get it at the first place. So when cash comes in, how much of cash comes in, whether it will come and how it goes out.

I get cash either by income that I generate I meaning the business organisation, business gets cash because it invested in some instruments outside and it is getting an investment income are disposed of its own assets as a result of which I got in cash, cash from the procedure of disposing of the message or cash can also leave a business enterprise I pay dividends shareholders cash course, I pay interest to my loan, cash goes out.

As a portion of my loan cash goes out, so broadly these 5 objectives namely useful information for present and potential investors and for them also to understand the rational behind is economic decision making and for these two types of adjectives these two object is actually we need some level of sophistication not everybody can exercise due diligence in understanding the rational behind the economic decision making you need some level of sophistication in accounting as a subject.

That you use an income statement balance sheet and financial statement for that matter for this purpose. You thought purpose is the economic resources that are being created in a business, the economic resources that is claim against the resource you need to know what is those are, these claims may change finally you understand how the claims keeps changing order period of time.

And fourthly you need to understand the business performance the financial performance of the business. So you will understand it claims against economic resources if you look at the balance sheet, you will understand the financial performance of the business if you look at me income statement of the profit and loss and if the object that provides input on the timing the amount of the uncertainty in cash flow will be able to understand.

If you are able to create a cash flow, in a sense these financial statements try to satisfy these high broad objectives for which this financial statements are being created. Now we can construct the financial statements the following certain Syntax last class I was mentioning about the code which means to this language of business there is a syntax and you follow the syntax and since the user of this information is not only somebody inside the organisation.

It is also somebody was outside the organisation, outside even the country in which the organisation is existing, which means at all levels, all geography people need to understand and interpret this information in uniform manner. I cannot say that looking at the financial statement in India I am making profit and the same financial statement is reported elsewhere it is reporting loss, it could be for different reasons.

But all things being equal it is very unlikely that situation will choose this type and for investors, for creditors, for government agencies, for any and user of this information it is always better that there is some consistency in identifying, in measuring and communicating this information. So that as an end user I can also interpret from this information in the same way that any other sensible and user would do.

That with the fundamental for which we need to have a common syntax, so that this language of accounting is spoken and understood in a manner that is University acceptable, but reporting could be different in some countries financial statements for the purpose of reporting the income tax authorities could be a little different from financial statements for the purpose of reporting to shareholders.

Not that they are doing something wrong then within the allowed framework some entries can be reported in a different way when we file income tax return, some entries can be reported in a different way, remember it can be reported in a different way, I am not saying that you can you can be reported in a wrong way it is a different way, but very much within the accepted framework.

As a result of which you can still have an income statement balance sheet for the purpose of income tax, different income statement and balance sheet for the purpose of reporting to shareholders. So this difference may occur but that does not mean that there is something wrong in it as long as it follows accepted principles be broadly allowed framework it is an accepted price.

So quick recap accounting and system that provides a framework which captures information which by enlarge is quantitative and can be expressed in monetary terms for the purpose of use by both internal as well as external users and in the process of identifying measuring and communicating this information we create three important financial statements namely the balance sheet, the income statement.

And cash flow statement which dominantly satisfies 5 main objectives of a financial statement which are basically to provide good level of information based on which we can take good decision, understand the economic resources and claims against these resources understand the financial performance of business and also get to know the movements of cash with in a business entity.

So this is an introduction to accounting as a concept accounting as a system. So what we will be doing further is to understand what are the various principles that actually governs this practice of accounting and I told you that these principles the foundation to these principles are the relevance objectivity and the feasibility so you should have reached three in mind when we are actually trying to identify measure and communicate this economic information.

And it is only on these 3 foundation class is 11 principles have been formulated it is been follow. So what I will be doing is I will be explaining to you each of these principles and as when possible I will try to give some examples for you to understand what this principles actually meet. But have in mind that these are the broad principles which will give you some sense of direction in the absence of which you want just record a reporter section in an arbitrary way.

Questionable practices how to avoid this arbitrariness or questionable practices we need some guiding principles. These principles change but what is applicable now is dost set of guiding principles which is well settled and this forms the basis of the conduct of accounting is a professional conduct of business in general and when you understand these principles then when you actually try to capture these transactions and business entity.

You will relate a particular transaction to one or more of these principles and then decide whether this is the right way to do or is there a better way of reporting this transaction. So you will be revisiting these principles as and when you have doubts when you are going to capture these transactions and when you start capturing these transactions for a longer period of time in then becomes a you should practice for you that you will report transactions in a perfect manner knowingly or unknowingly.

You will be following these principles, till such time this principles not till such time every time these principles from the foundational then, but till the time you get comfortable till the time you are convenient in reporting transactions you will definitely revisit this principles and then convince yourself yes this is the right way to record this transaction, why because the principle of entity are going concern tells me this.

The principle of money measurement tells me this I want to talk in detail about what these principles are, but I have in mind these principles will be forming a very foundations on which you will be interpreting this day today transactions, you will be capturing this information which one aggregated or all of the transactions in a business in entity when aggregated together by way of proper reporting is your balance sheet is your income statement research cash flow.

Now this aggregation is possible only if there is some structure to this reporting, only if there is some structure whose foundation is based on some principles that is universally accepted, you must remember this structure is the one that is going to give you the balance sheet and income statement and cash flow.

And this is the one that everybody will be using it as a result of which I again create that we has to follow a set of generally accepted accounting principles about which I will be talking in next class. So in the next class where I will be starting with some of those principles and try to finish all of them in next class, so I will meet you next class thank you.