Mobile Computing
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Lecture 38

Hello! In this video we will learned how to work with dialogues, when you have used android applications you have seen different dialogues popping up, very common dialogue is to select the date where a calendar pops up in this course. So, in today we will take the same example and the let us say run our application.

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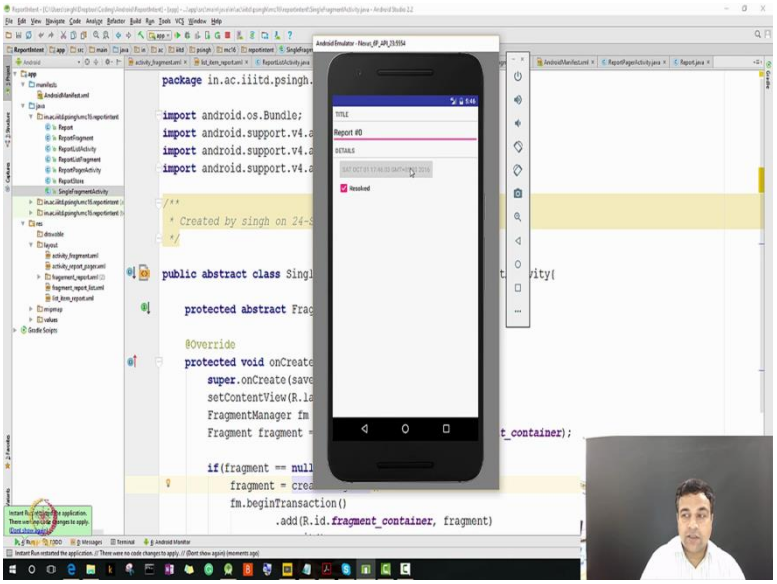

So, currently if you see that in our application of the date is a disabled, and we will enable it and when we press this button, a dialogue should appear where we are able to choose the date. So, this is todays task and we will do it, now in android when the android move to the newer version the way dialogue as printed has change then the way dialogue is presented in a folder android devices and in order to compensate for it, the act compact library which is available provides us a consistent view of the dialogues.

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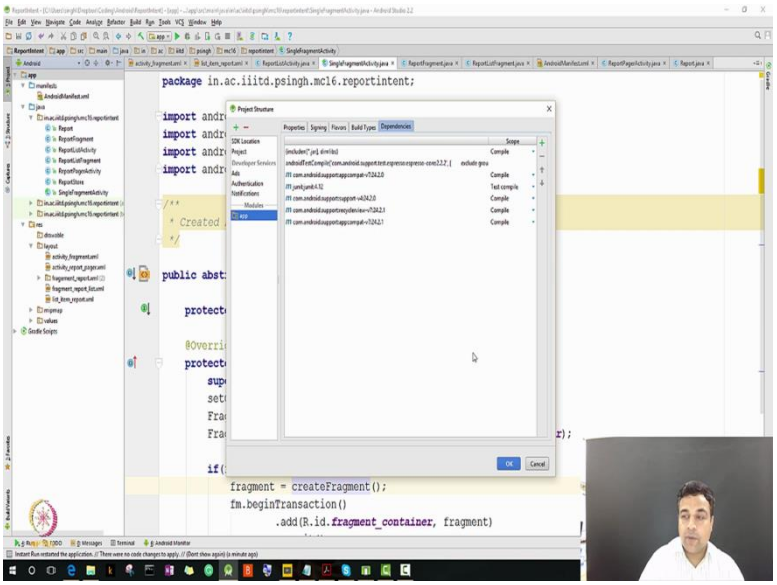

So, before moving forward you would like to at the act compact library in our program. So, the way to do that a similar as we did earlier we go to file, we go to project structure, we go to the module app, we go to dependencies, we press the plus button ,we press library dependency and we choose the app compact E 7 colon 24.2.1 and press okay, this is added and that is fine.

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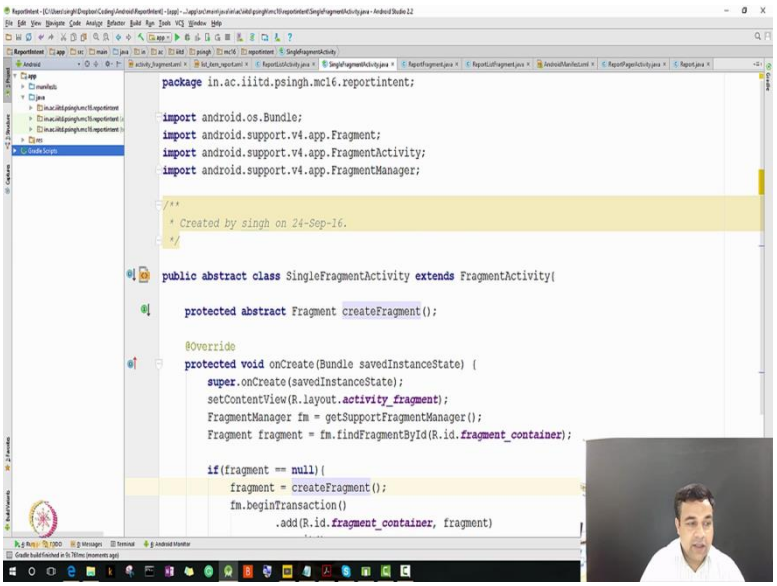

So, this is that we have done multiple times, so I go to do not mind now currently our program is being built again. So, let us let it gets build and then we will start working with how to add the dialogue to our date pattern. So, in order to do that we will be doing few

things number one that we will be creating a fragment class and then we will be building an alert dialogue and then we will be using a fragment manager to add that dialogue on this way.

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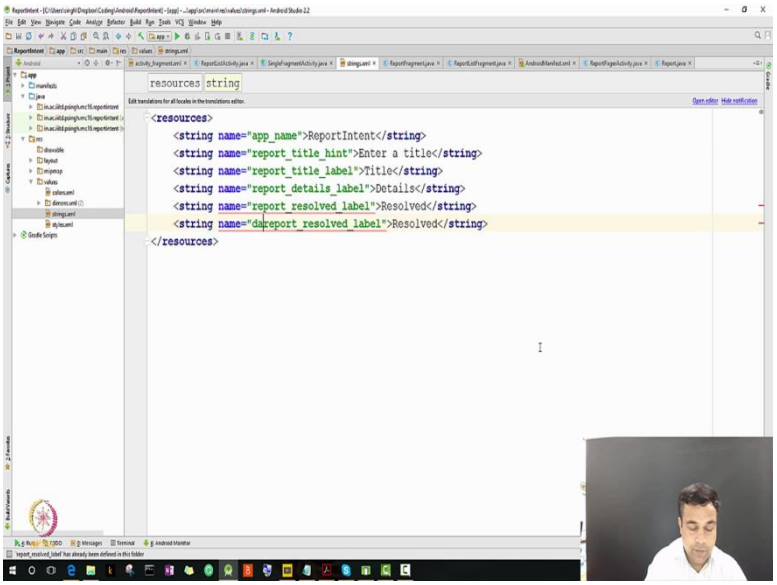

So, let us get start it so first we should do is to add some resources, we will go into our strings.XML and we can add a new resource called I will just copy and change set control C, control V, string name as we want to choose the date, we give it the name date picker title and the valuable we date of reporting data report. So, that is something which we just date we added as a source. Now let us start adding the court which will allow us to peak a date through a dialogue. So, the first step first let us create a fragment, we will called it dialogue fragment and that is a through this dialogue fragment we will increment our functionality. So, I am doing I am adding a new class of type java class will giving it a name date picker fragment and I too extend dialogue fragment, this is fine and now I override the method this is the method called oncreate dialogue that is the method which you need to override.

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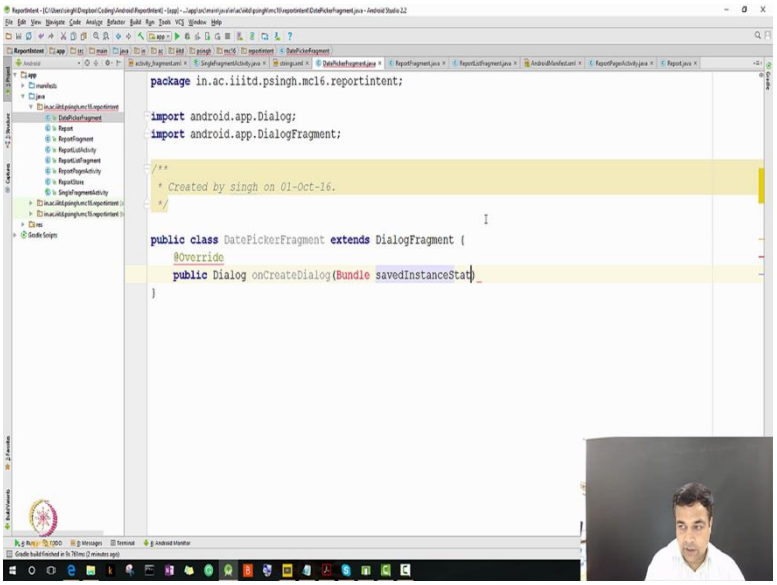

So, public dialogue on create dialogue bundle saved instance state comes in and we do nothing but we just create an alert dialogue, alert dialogue. builder get activity.set title just the resources we had just created, string.date to picker title.set position set positive button as android and android.R.string.okay. So, this is a string already given to us and then we call the oncreate and that is it. So, this is our date picker fragment for the time being. So, this is a very simple code an as you can understand we are just setting title we are setting positive button you will see the meaning of it and we creating it.

So, as of now our set positive button which normally takes the string and an object that will remind some listener. So, for that we are currently passing null because we will be adding this listener later and for a string source we are just passing all android the string okay that is available to us. So, then we called the create which written us the configure alert dialogue instance

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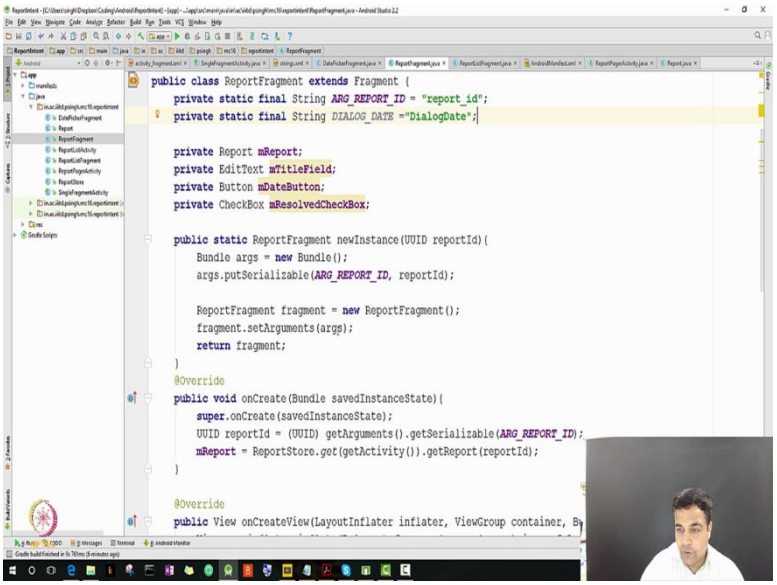

Now, you know let us go to our original code and try to show shows this alert dialogue. So, let us go to the report fragment where we want to use it and the we already have some code here, we will be adding more codes, so that we will see our dialogue final string and dialogue date = dialogue date and then first thing that we have to do is that earlier we had enabled the button to be false, so yes so here it is so we had enabled it to be false, now we remove this line and we say mdate button.set on click listener, because now we want to respond when somebody clicks to it and how do you want to respond is simply view.onclick listener.

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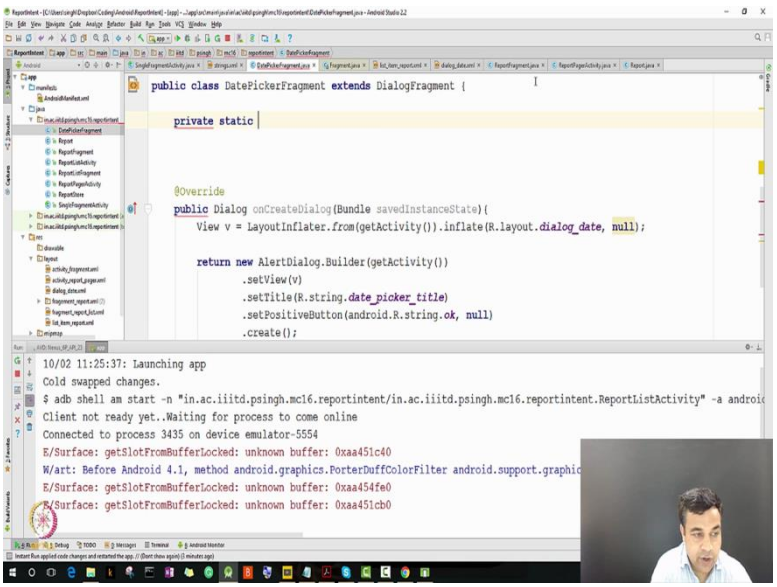

So, again I am making use of anonymous class @override override and we will just override the onclick method public void onclick onclick method is taking a view. So, let us continue

developing our onclick, first we need a fragment manager make sure that your fragment measure is of type V4 app fragment measure because this is what you have added and that date picker fragment class. So, let us go back and continue with our onclick method, we have it is, yes manager = get fragment manager and then the next thing that we have to create is the dialogue.

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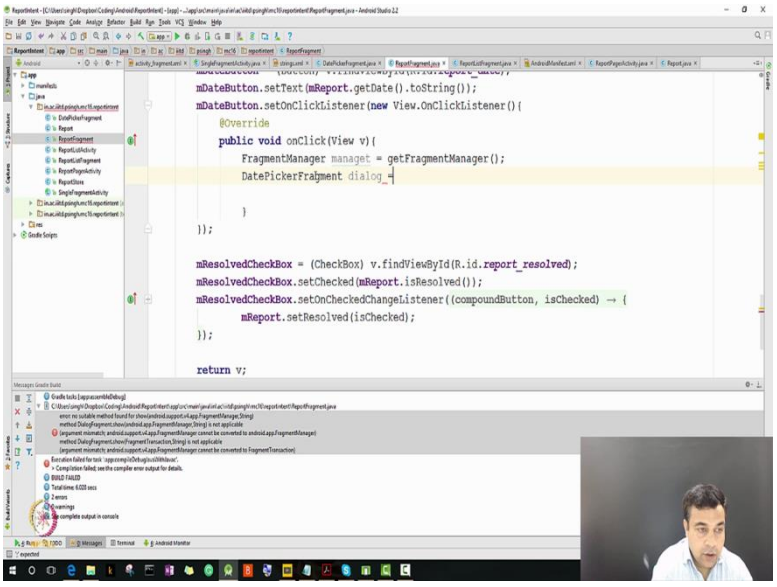

So, we create a date picker fragment dialogue = new date picker fragment, then all we have to do is dialogue.show manager and the dialogue date okay so I made a typo here, so yes so, now our basic dialogue will come up let us run our program and check what does it shows.

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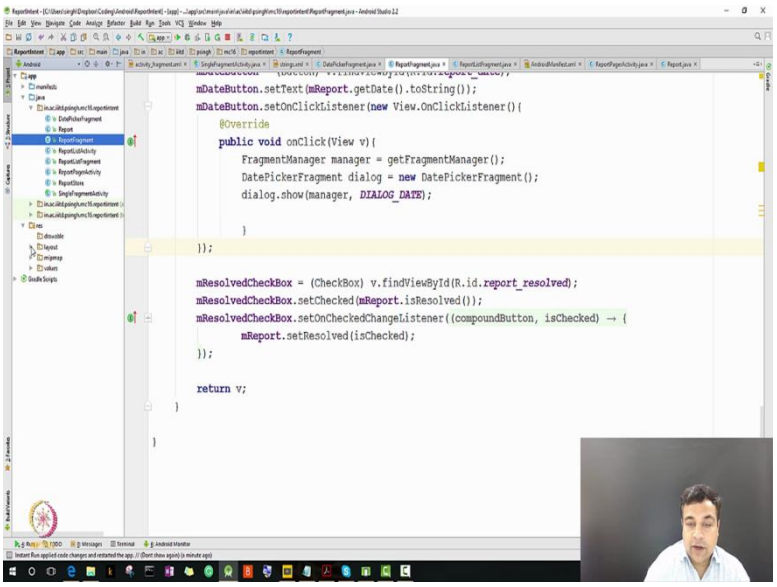

So, we run it let us click on a port, now you can see that the button is enabled I click on the button and I see a dialogue box. So, there is nothing much here we will now put some material here essentially a calendar, so that we can picker date but the basic functionality has already been implemented. Now let us start working towards set the content of this dialogue. So, we will do it the so we are basically going to change the visit the date picker that we are that we are using. So, we are going to add a visit into it and ideally that should show as a calendar. So, that is the objective of our working and because we need to display something, we will have to create a layout file and then we will have to lose the functional state of the defined button android to use it.

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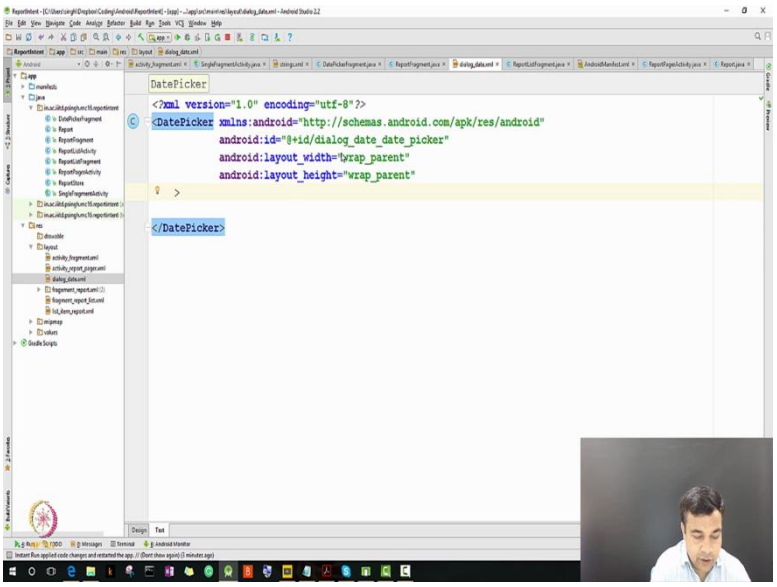

So, first step first we are going to create a layout file in the layout folder only and we will call this layout file as dialogue date, dialogue_date. So, so the so we will be put the root element as date picker yeah press okay. So, now the as you can see that the basic date picker has been created we will because we will be using it in our program, we have to definitely add an id at just id/dialogue_date_date picker to give the id the layout width and height instead match parent or make it wrap parent, because we do not want it to hold space something more than what it means. Now I will add another attribute here, I will explain you later once we have a display that why we need a date.

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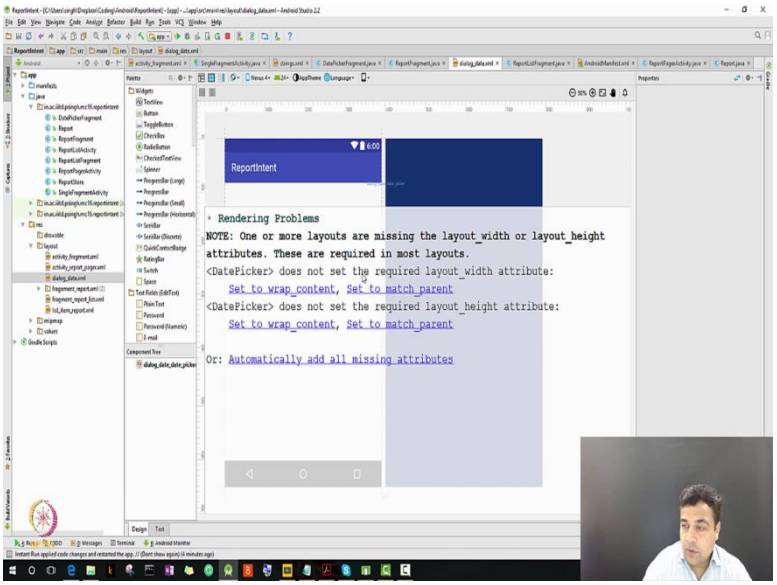

So, android calendar view shown = false. Now this currently looks continuity, but soon you will understand the reason. So, as you see that there are some issues here layout date picker does not set the require layout height or automatically add all the missing attributes. So, this looks fine now, you can see how it will roughly look yeah. So, let us look forward and we have to now add this date picker to our alert dialogue you to now add this date picker to our alert dialogue.

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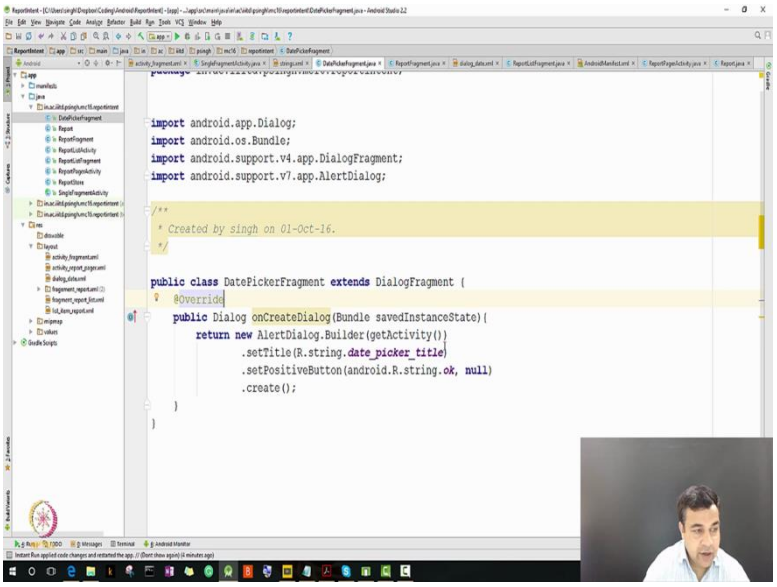

So, we go here and as you see that earlier we at set all the set title set positive button and create. Now we will say now we will have to add a view here the view which is just created. So, first thing first let us create the view here and this is nothing but layout inflater from get a

activity.inflate and our latest layout dialogue date that is it. Now only thing that we need to do is here to.set view and in here may have to make sure report class view so yes. Now we have created a layout as we added here.

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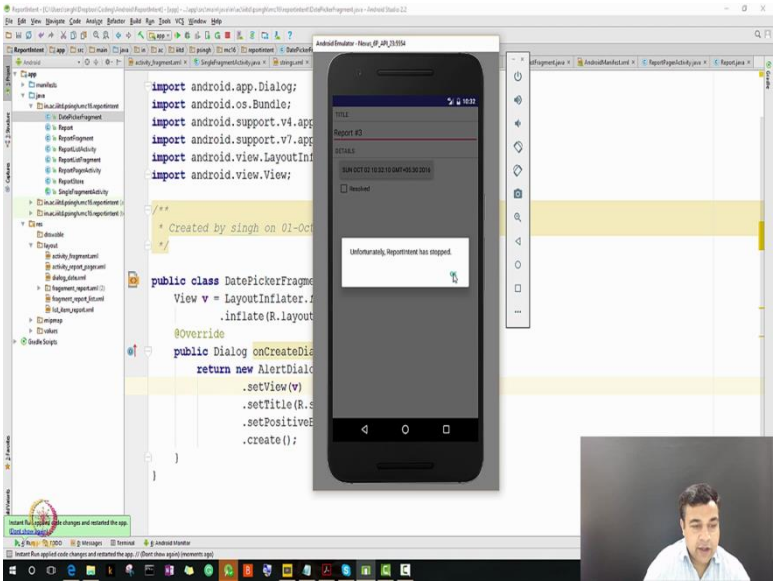

Now let us run it again, click on any report click on button, so we are getting an error now, and let us find out why we are getting an error okay. So, now let us look at why are we getting errors, let us go to the date picker fragment class okay.

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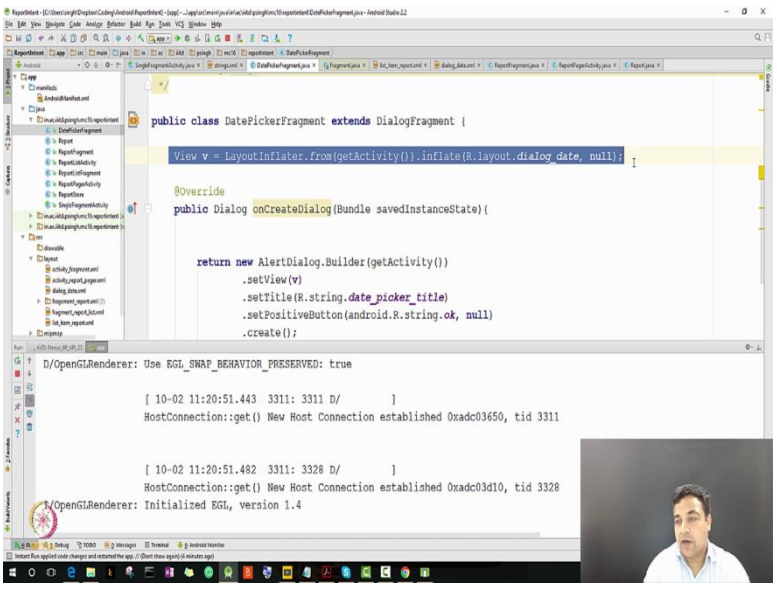

So, this is the error we added the view this was to be in the oncreate dialogue and not outside it. So, let me put it in the oncreate dialogue and let me run the program again.

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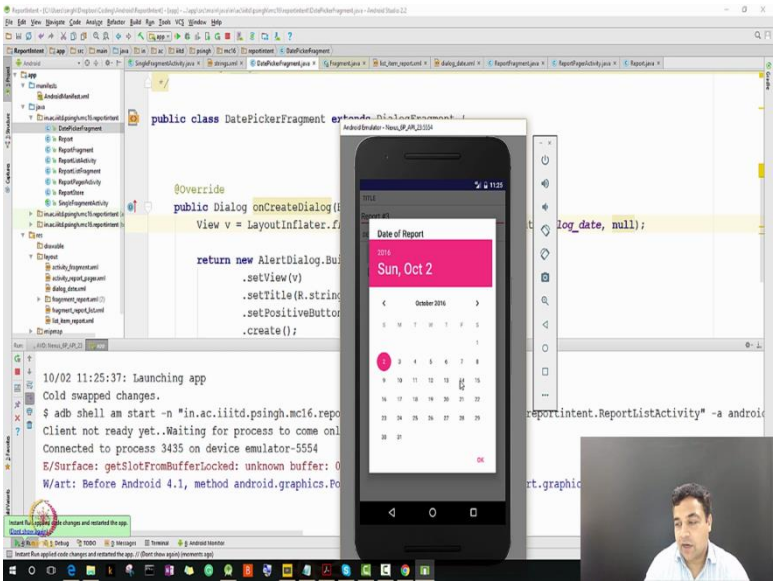

So, we create on a report create okay yes so now we see our calendar, so as you can say that we get some work and after that we are able to see the calendar. So, this is how we show a dialogue and then the dialogue will set up how calendar to be shown in between the before the buttons that was pressed.

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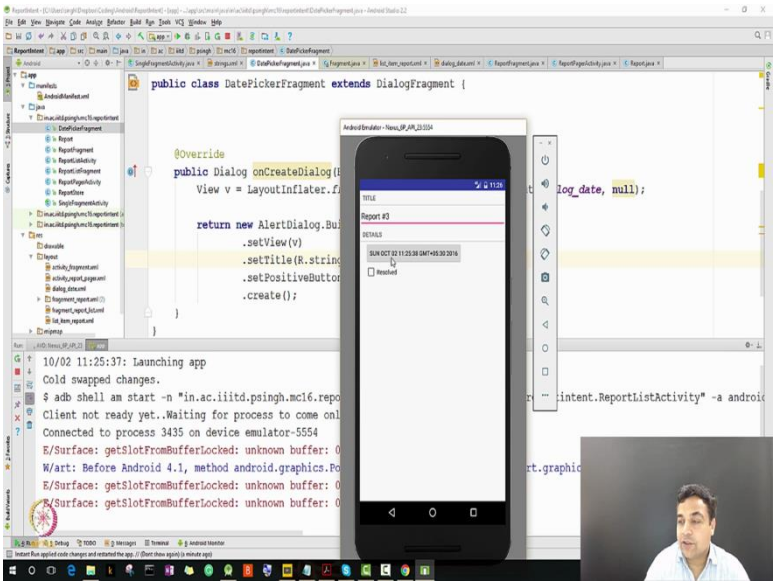

So, basically that is because it is added the cycle here and now we will see that how to pass the data back from these to our fragment. Why we want to say this is that because if you run it I choose, for example 12, I press okay but still says 2. So, the 12 has not been update it because I have not been able to pass a data back. So, now we will develop the rest of the code which will pass the data back.

So, one more thing calendar will that we are showing we are seeing here is a view with material design, this was introduced half to android lollipop, if you are running on older device then your view will be different and this when modification was made in android lollipop they ignored this particular thing that is why we can set it to false at it does not impact. So, yes so now let us go back and start adding some code so that once we choose a date the date is reflected here when we go back. Now, as earlier we will again we using intent to pass the data between the 2 fragments, here our 2 fragments are the date fragments and the report. So, let us be ready within time to next pass again, so that you can pass some data back in code will back.

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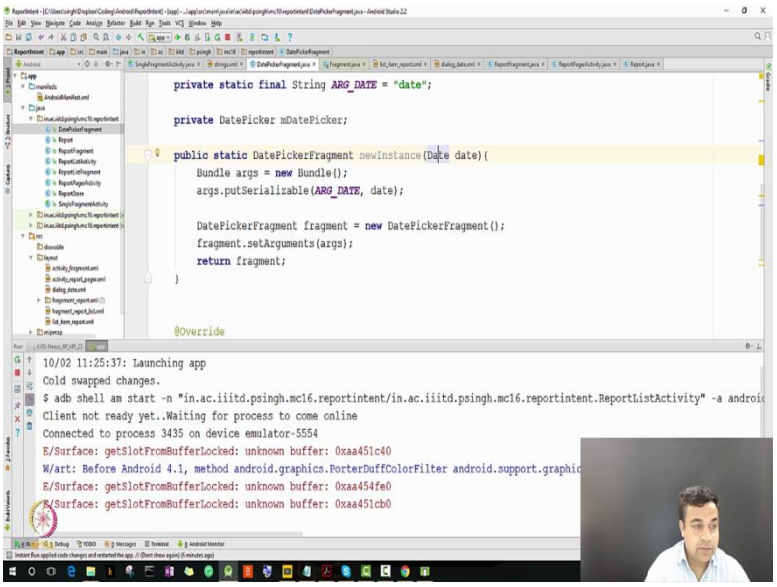

So, let us go to our date picker fragment class and this time we will add few string to it. so, the first thing as usual with all the X class I am going to add a this string and let say this is the date = the value is date, you can come than we are going to create date picker and date picker, public, static date picker fragment new instance we have done this multiple times, so now you can understand without explaining every step we will be using this method to create bundle args. So now again I am getting the bundle where I would be storing the information, this is similar to the last median which we use the same method args.puts serialisable ARG are DATE date and then date flicker fragment, fragment = new date flicker fragment, fragment.set fragment.set arguments args, then we just return the fragment, so this is our static method to returned the fragment.

That is what it we will be using, we are creating a error here I will press Alt Enter and when I press Alt Enter on date we get 2 options date java.util and java.sql so I will press java.util and

the error is now gone. So, now we need to go to the report fragment and we will have to remove the earlier code which we used to create the date picker fragment because now we are choosing a different method to crate the date picker fragment. So, let me go here let me correct, find out the code. So, it is loss and oncreate view, so yeah. So, here it was here earlier we were creating a date picker fragment dialogue by calling new date picker fragment, now we would not be doing it, we would be using this instead the static method that you want.

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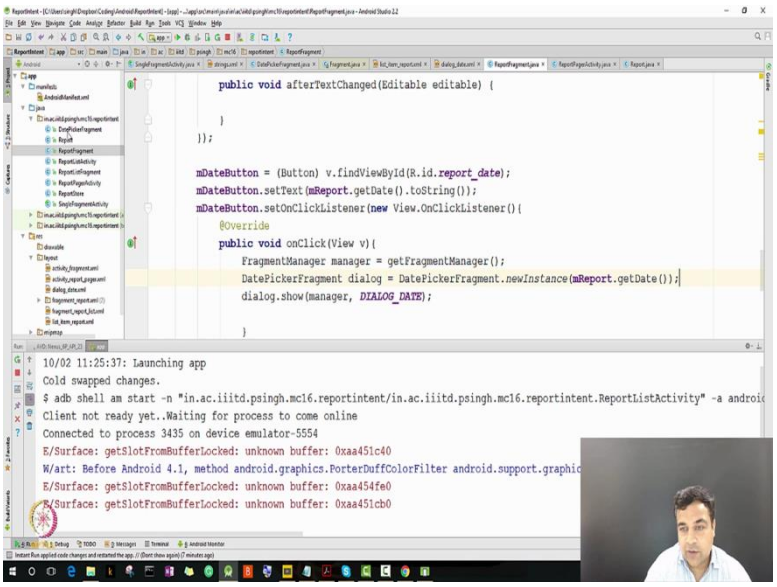

So, set date picker fragment = dialogue = just take fragment.new instance.M report.the date, so yes. So, now we are passing the date from here to there and from there will select the date and pass it back here. So, this is a 2 way communication as you can see, but now we are not using anything new, we have already used many of this things are there, so you thing should be easier for you do not understand. Now let us go back to the date picker fragment and in again in the oncreate dialogue let us at some more code.

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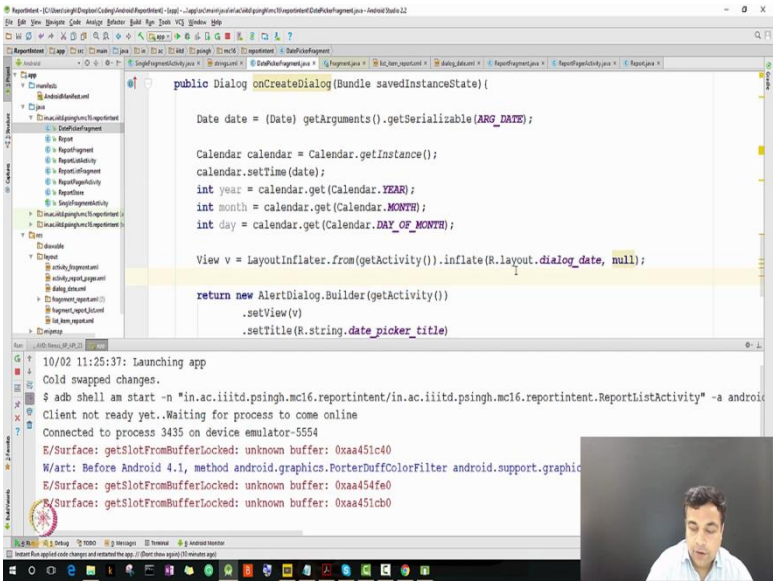

So, date = date just now we need to retrieve some values to the bundle that we are receiving, let see a (())(22:52) or date calendar calendar = calendar calendar that get instance, calendar.set time pass the date that we just created and then let us take out by year, calendar.get calendar.look, only thing is like.here same thing we will do for month and day, in month = the calendar.get length.month calendar.month and then for the day, date of month okay.

Now we will chose m date picker = date picker v, so v is our view view.find view by id R.id.uhh dialogue dated picker. Now we are looking at what the layout that we are created m date picker.in it year, month, date null yes. So, let us quickly run it and see that what changes it brings.

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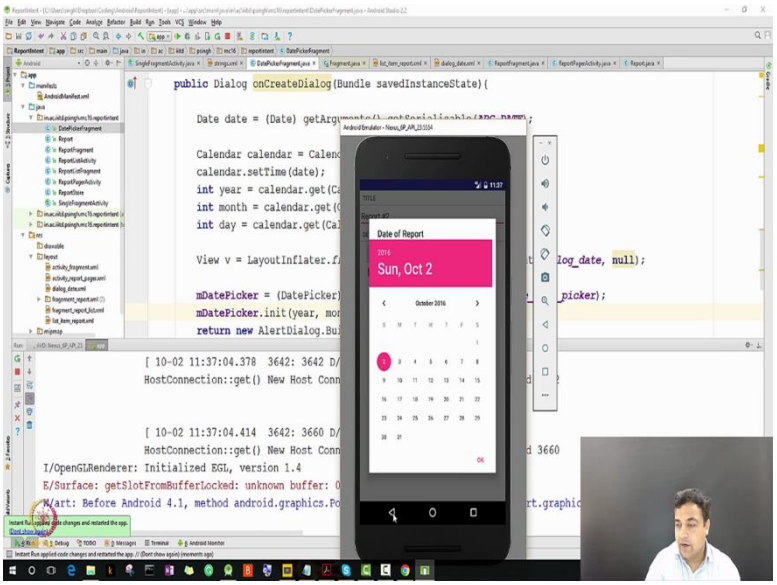

When I create now you see that it is already selecting a date, so it is initialized uh the date picker and then we will add some more code to transfer the data back. So, currently we are only showing it which date to show and latter on we will transfer the data back, will return the data back. As you know that the when we need to pass the data between the activities you used to say set activity for result and then we used to get back the data we will be doing similar thing because in the earlier case of activities the activity manager each like of the relationship that which activity needs to pass data.

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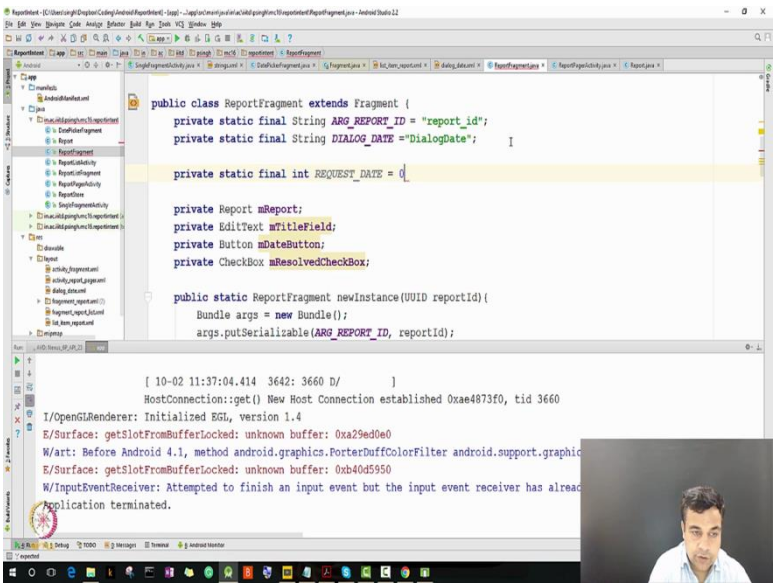

So, we will try to do the same thing with the fragment, so we need to pass the data from the date picker fragment to the report fragment. So, here our report fragment would be the target

fragment of date picker fragment. Now this is what we have done showing our code in order to pass the data. So, there is a method called set target fragment which enables it so will be now be using set target fragment to enable this functionality. So, let us go to the report fragment and a first some basic word which is nothing but another private static finial int request date = zero and then we set the target.

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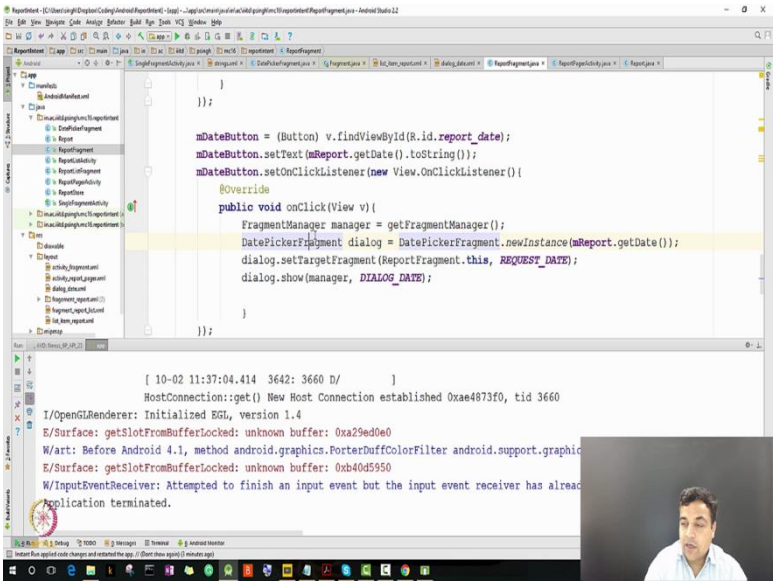

So, in the set in the oncreate view if you remember for the date button we have done a set on quick listener get write to date picker fragment dialogue. So, here we were creating the dialogue, so just after we have created this dialogue which is a date picker fragment we will set the type we will set the target of this fragment. So, we set target fragment and the set target fragment is nothing but the report fragment, this is and now we will just fill in our value, but later we will get it correct. So, with this line the set target fragment, now the date picker fragment is now related to the report fragment to the report fragment and the data from the data picker fragment will go to the report fragment.

And as we know that when the incorrect text on a mobile device the android system manages which fragment to be destroyed to recreation, pausing, etc, same thing for activities but once our relationship established the system will maintain the relationship whenever the user comes back. So, this may be after you have received the call and then come back and once should back, system will make sure that the relation is reached that distance okay. So, set target fragment does that work for us. Now this sets up the link now let us set send the data, so for this we would like to use a method, which is similar to the earlier method and this

method is called activity.on activity result and this is a method that the activity manger false on the parent activity after the child activity rise.

So, this is this becomes the activity manager's job and after the activity has received the call, the activities fragment manager than calls fragment.onactivity result on the appropriate fragment. So, because in this case we are dealing with 2 fragments which are of the same activity. So, we will try to use the same method that is onactivity result the respective fragment. So, we will barrow it will say fragment.onactivity result and call it directly on the target fragment to pass like the data okay.

So, this is same as when we pass the data back in the activity here we are calling it on the fragment rather than an activity. So, we have already done this target fragment and set target fragment uses the code that is passed and this code we are passing and based on this code we will take the action, so yeah. So, let us go to date picker fragment and let us add to few more strings and you just make sure that this is string is identified as a unique string because using the intent to pass the data.

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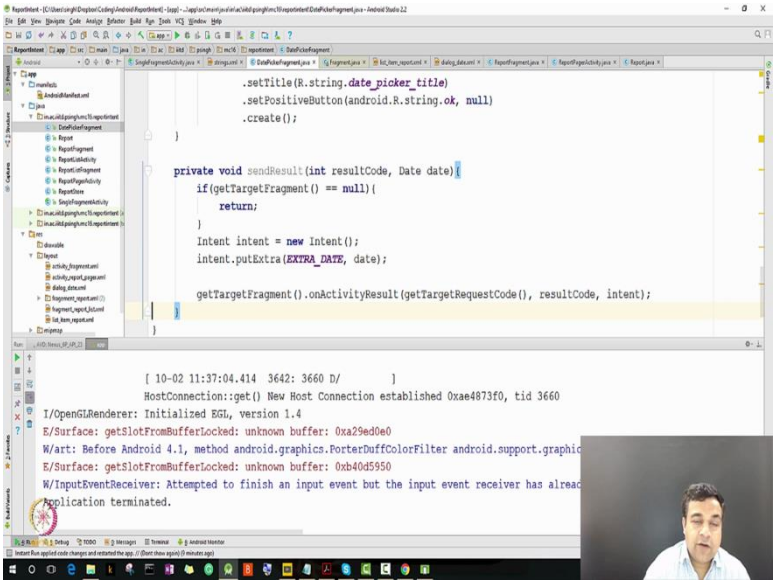

So, I will just say it in a (())(31:35) ac.psingh.mc16.report intent date and then we need to create the same result method just like we had created in our earlier activity the math quiz. So, here let the me creating up from a dialogue this which like a looked place creates. So, private void private void sent result int result code date date if that target fragment is = null than do nothing else create intent intent = new intent and then in that intent put extra extra date, the date that we have picked and then slight we put some than get target

fragment.onactivity result, get target request code a result code result code and pass the intent.

As you see that this is very similar to our first application there we have use where we have used the similar method to pass the result from one activity to another activity and now we have send it and now we will have to make use of this new method. So, when the user places new date the data is passed and then this data is used in the in the program so, that we can set data in our list in our original list that you set talk in on order to do that we have to come back and you see that here we were saying set positive button and we were passing it null because so far we will not handling anything here.

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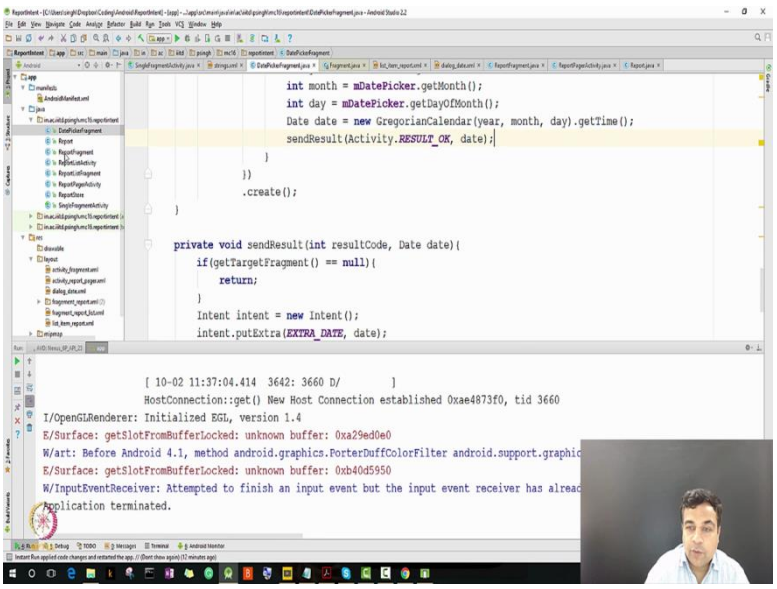

But now we want to set the new method and pass it when the user select some. So, we will remove this null and instead what we will do is we will write a listener here. So, watch carefully new dialogue interface.onclick listener and in this we will do override, in this we will write the onclick method public void onclick dialogue interface dialogue int w int year = m date picker.get year int month = m date picker.month int date = m date.get day of month, then set the set the date = new Gregorian calendar year month day get time and then use our new method that we have just done.

So, activity.uhh result okay and the data, so yes so, now we have done something very useful we now know that when the set positive button is pressed, this code should take care of using our send result method to send some data. Now only thing that we are left to do it is to go into the report fragment again it means the data which has been send and use it and update. So,

that in the list in the list when we come back we see the new modified date which user not seen so far.

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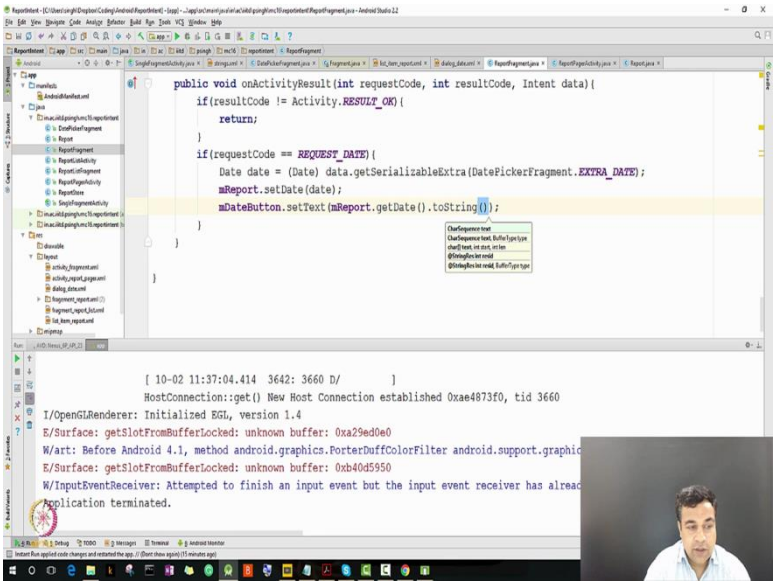

So, let us go to the report fragment and let us implement the method on activity result let us override that method and do that will solve it. So, @override this is very similar to what we get in earlier respected to the activities. Now we are doing it to onactivity result int request code, int result code and the intent data. So, if result code is not = activity.result okay returned date date = date. So, now you will get the data so gets realizable extra you take picker fragment.extra date. Now we will set it back, so m report.set the date m date button.set text m report.get date to the string okay. So, now we have sent the data we have received the data and we have set it up. So, only thing that is left is may be just quickly run the program and see what happens.

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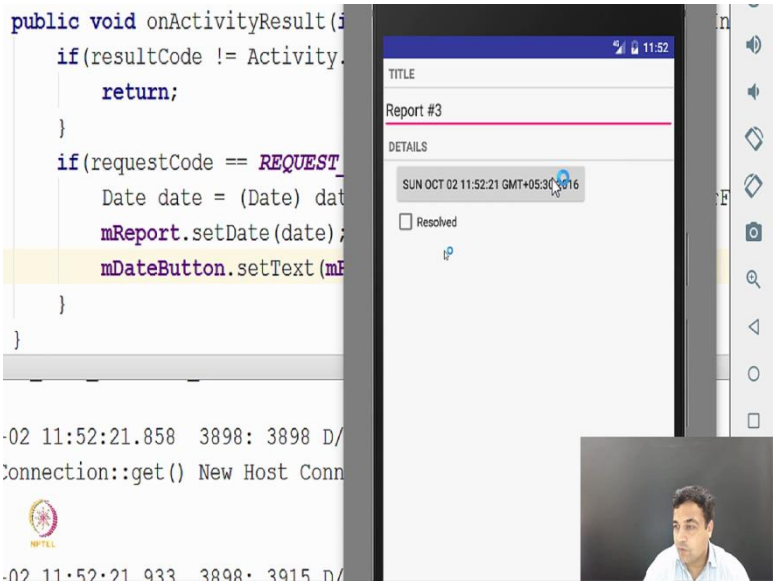

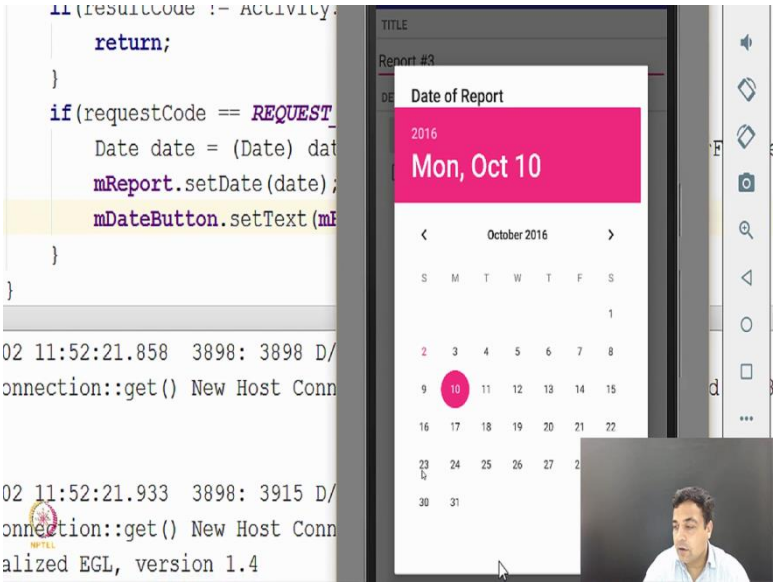

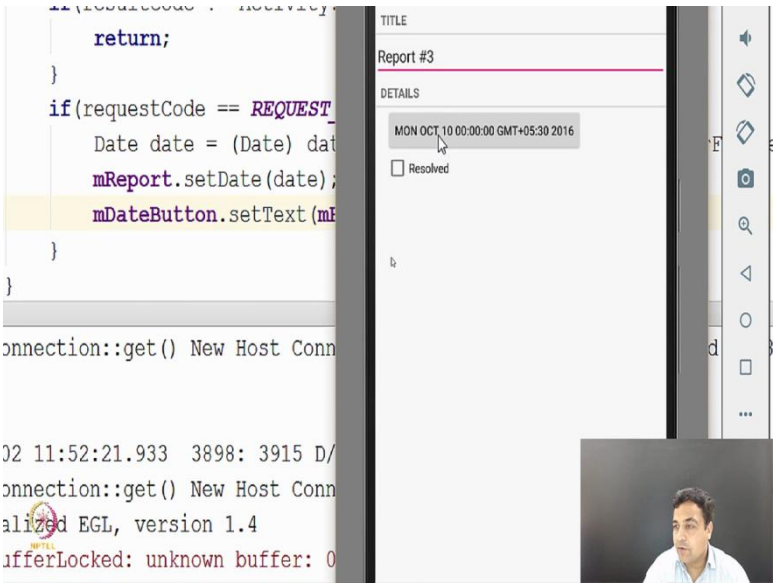

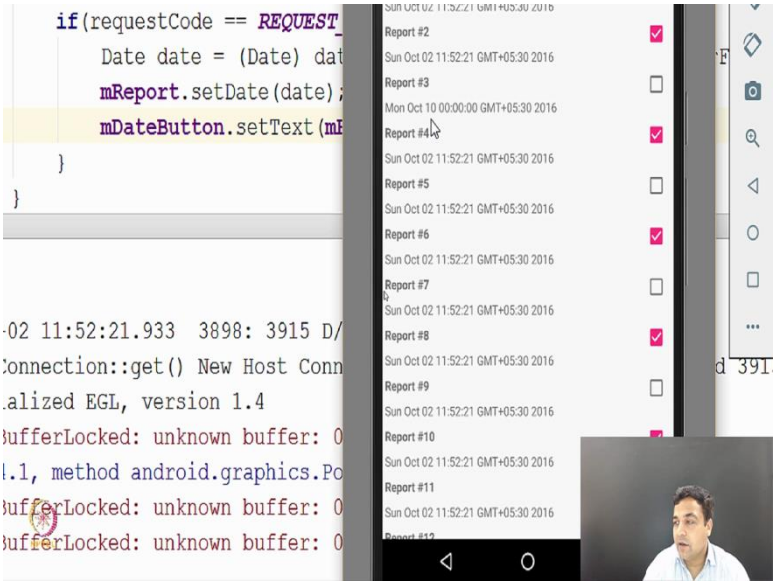

So, now will go to report to as you can see that report 2, report 5 or report 4 any report is taking Sunday October 2, Sunday October 2 how just magnify it. So, looking see currently it is saying Sunday October 2 let me click let me choose Sunday October 10 press okay and now you see that I will see Sunday October 10 for report number three and I see that it has been update.

So, this is something which was not happening earlier but now it is happening after we use the intent to pass the data for one fragment to another and from back. So, the methodology was very similar to what we used when we pass data from one activity to another and get back. So, that was (())(41:11) in the fragment and that sort of completes this example, in this example you learned how to use the dialogue, how to set the view of that dialogue and how to pass data and receive data and use that data between 2 fragments. Thank you.