L26: JavaScript Introduction | Uses, First JavaScript Program with Example | Web Engineering Hindi

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## Web Engineering: JavaScript Lecture.1

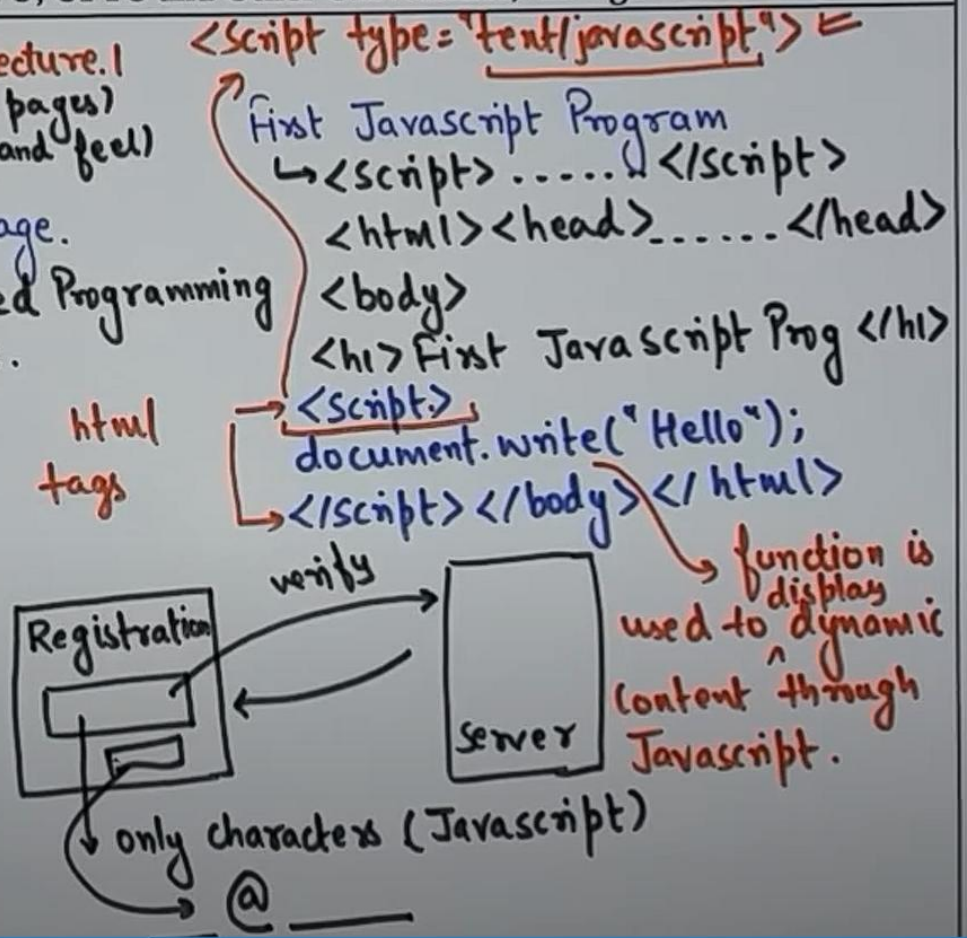
JavaScript website
- Html (web pages)
- CSS (Look and feel)
- Javascript

↳ i) Object based Scripting language.
- ii) Lightweight
- iii) Cross-platform.

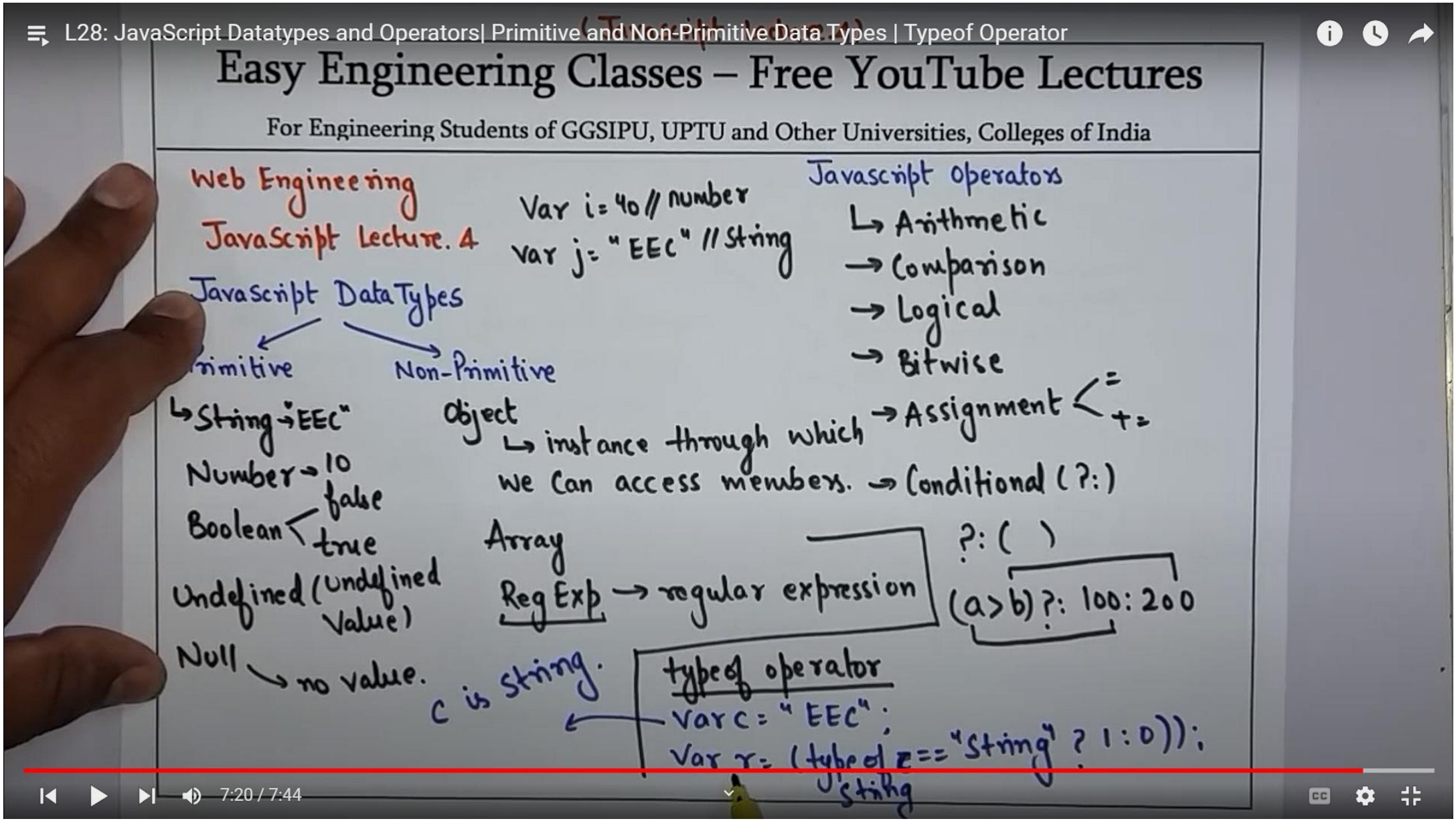
] Interpreted Programming Language.

Why Javascript? ~~Advantages~~.
- → Less Server Interaction.
- → Immediate feedback.
- → Increased Interactivity
- → Richer Interfaces.

Uses of Javascript
- → Client-Side Validation
- → Dynamic drop-down menus
- → display date / time
- → dialog boxes.....




11:42 / 12:04


L28: JavaScript Datatypes and Operators| Primitive and Non-Primitive Data Types | Typeof Operator
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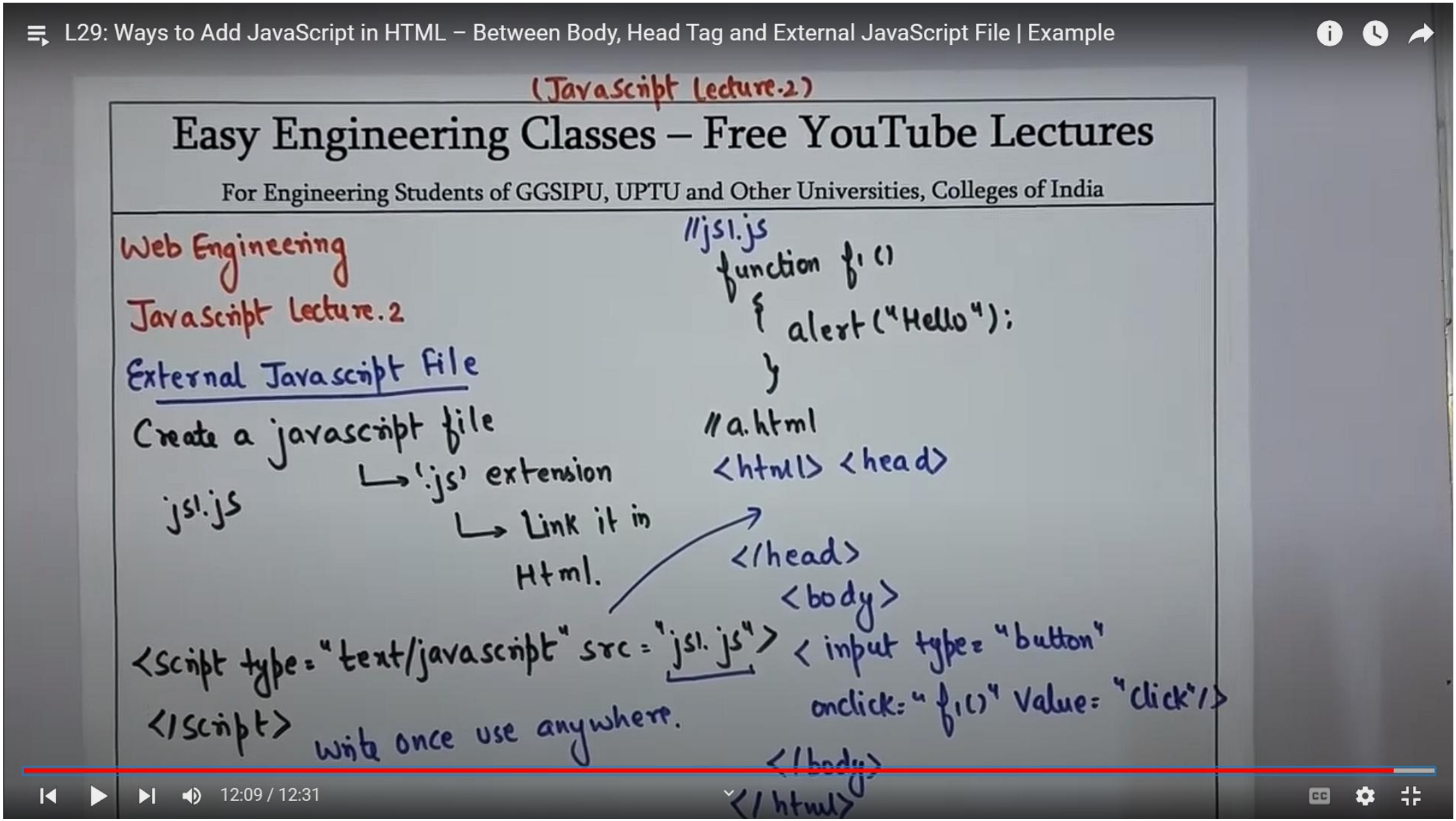
Web Engineering
JavaScript Lecture. 4
JavaScript DataTypes
Primitive
Non-Primitive
String → "EEC"
Number → 10
Boolean → false
true
Undefined (Undefined Value)
Null → no value.
Object
→ instance through which we can access members.
Array
RegExp → regular expression
Var i = 40 // number
var j = "EEC" // String
Javascript Operators
→ Arithmetic
→ Comparison
→ Logical
→ Bitwise
→ Assignment = += <
→ Conditional (?:)
?: ( )
(a>b)?: 100: 200
typeof operator
var c = "EEC";
var r = (typeof c == "String" ? 1 : 0));
c is string.
7:20 / 7:44


L29: Ways to Add JavaScript in HTML – Between Body, Head Tag and External JavaScript File | Example
(Javascript Lecture.2)
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Web Engineering
Javascript Lecture.2
External Javascript File
Create a javascript file
'.js' extension
Link it in Html.
js1.js
<script type="text/javascript" src="js1.js">
</script>
write once use anywhere.
//js1.js
function f1()
{ alert("Hello");
}
//a.html
<html> <head>
</head>
<body>
<input type="button"
onclick="f1()" Value="Click"/>
</body>
</html>
12:09 / 12:31

L27: JavaScript Variables | Local and Global Variable with Example | Web Technology Lectures Hindi

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Web Engineering

JavaScript Lecture.3

JavaScript Variable

int i;
String s;
var i;

Variable is a name of storage location.

Variables

**Local Variable**

declared inside a block or function.

```
<script>
function f1()
{ var i=10; // local var.
}
</script>
```

**Global Variable**

Can be accessed from any function.

window object

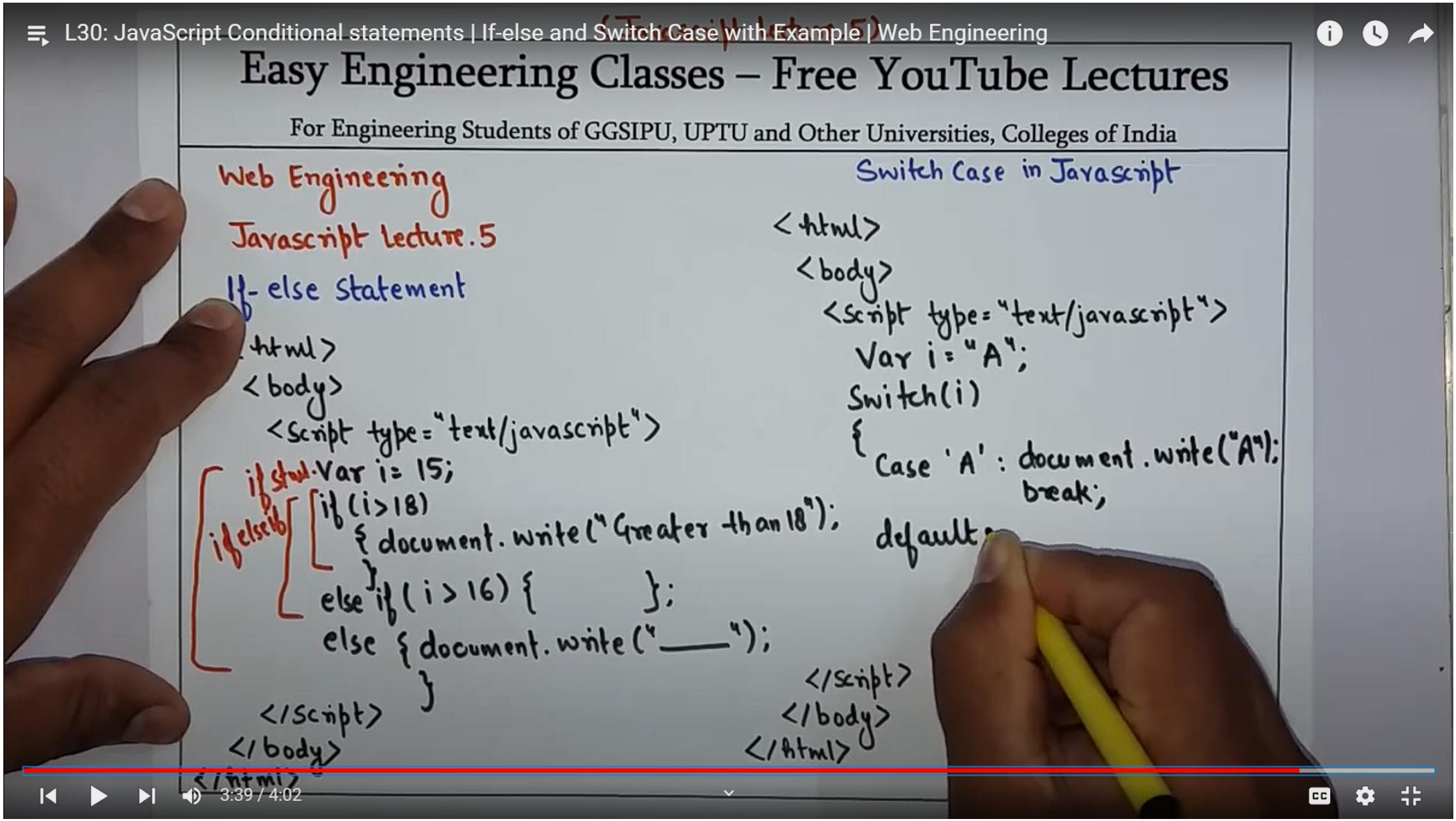
Can declare a Global var. inside a function.

Rules for declaring a Javascript Variable :-

i) Name must start with letter, underscore or $ sign.
ii) var i1 → number
iii) Are Case Sensitive. var i, var I ] different.

```
<script>
var i=100; // Global variable.
function f1()
{ document.write(i); → 100
  window.j=200; // Global.
}
function f2()
{ document.write(i); → 100.
  document.write(window.j);
}
f1(); f2();
</script>
```

6:44 / 7:18


L30: JavaScript Conditional statements | If-else and Switch Case with Example | Web Engineering
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Web Engineering
Javascript lecture.5
If- else Statement
<html>
<body>
<Script type="text/javascript">
Var i= 15;
if(i>18)
{ document.write("Greater than 18");
}
else if(i>16){ };
else { document.write("____");
}
</Script>
</body>
</html>
Switch Case in Javascript
<html>
<body>
<Script type="text/javascript">
Var i="A";
Switch(i)
{
Case 'A' : document.write("A");
break;
default:
</Script>
</body>
</html>
3:39 / 4:02

(JavaScript Lecture 7)

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Web Engineering

JavaScript Lecture.7

Functions in JavaScript:

↳ i) Function is a group of reusable code which can be called anywhere in your program.

ii) Helps in Writting modular codes.

Syntax of Function in JavaScript:

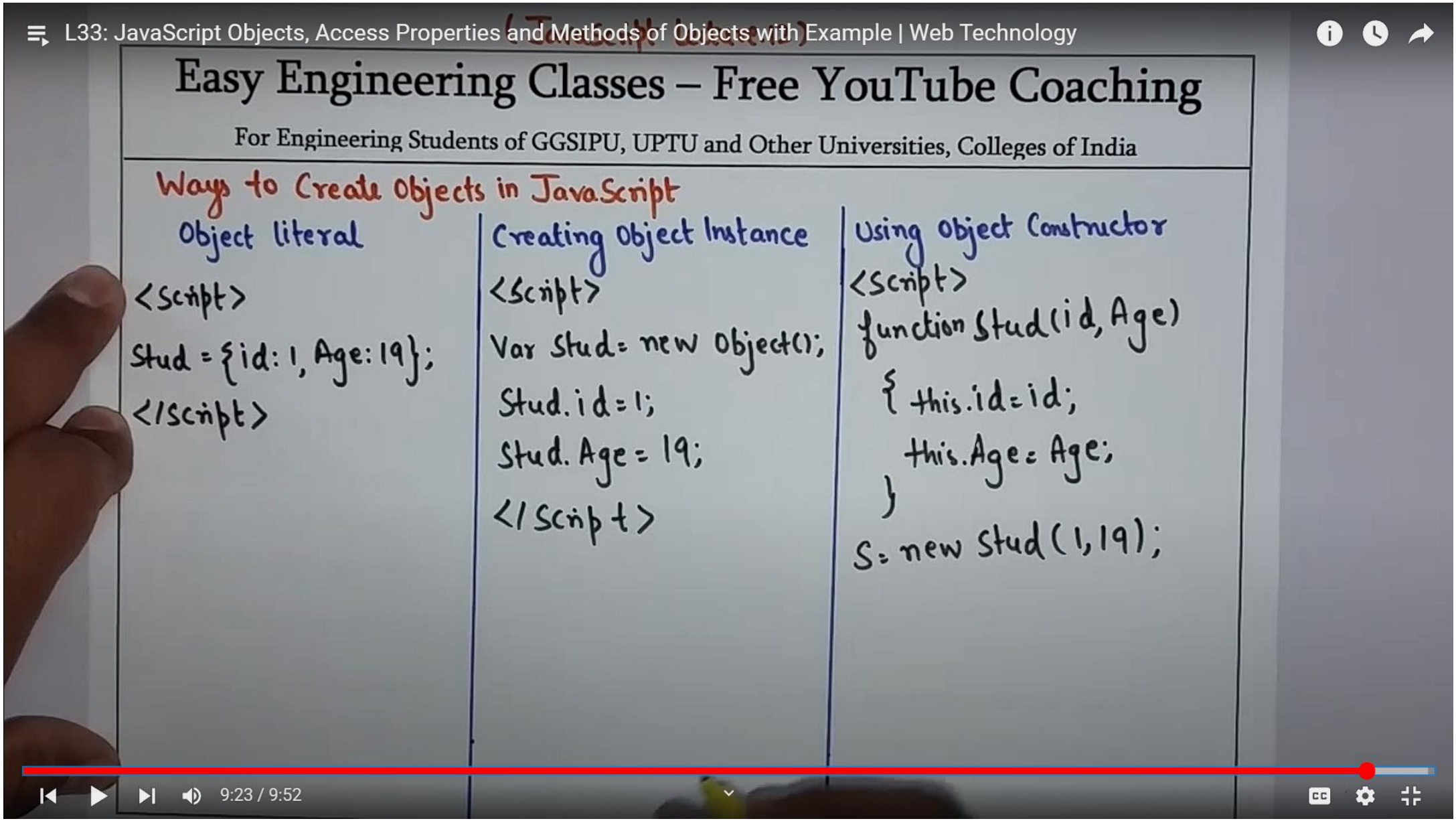
```
function functionname(parameters)
{
  function body
}
```

Keyword

Example of Function:

```
<html>
 <head>
  <script type="text/javascript">
   function f1(first, last)// func" with
                           EEC classes arguments
   { var f;
     f= first+last; EECclasses
     return f;
   }
  function f2() // function w/o arguments.
   { var result;
     result= f1('EEC','classes');
     document.write(result);
   }
  </script>
 </head>
 <body>
  <form>
   <input type="button" onclick="f2"
          value="Merge">
  </form>
 </body>
</html>
```

o/p:- EECclasses.


L33: JavaScript Objects, Access Properties and Methods of Objects with Example | Web Technology
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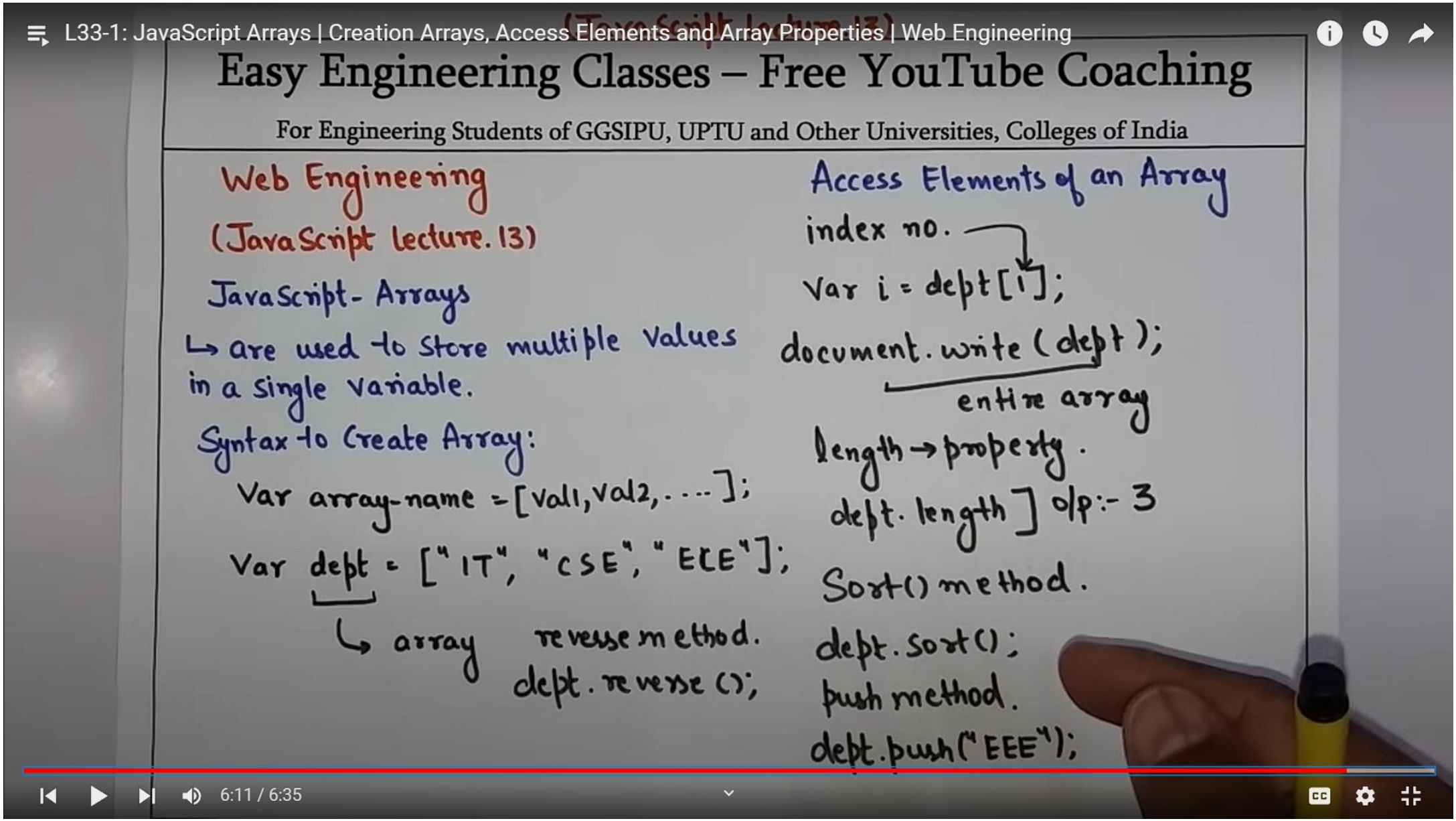
Ways to Create Objects in JavaScript
Object literal
<Script>
Stud = {id: 1, Age: 19};
</Script>
Creating Object Instance
<Script>
Var Stud= new Object();
Stud.id = 1;
Stud. Age = 19;
</Script>
Using Object Constructor
<Script>
function Stud(id, Age)
{ this.id=id;
this.Age= Age;
}
S= new Stud(1,19);
9:23 / 9:52


L33-1: JavaScript Arrays | Creation Arrays, Access Elements and Array Properties | Web Engineering
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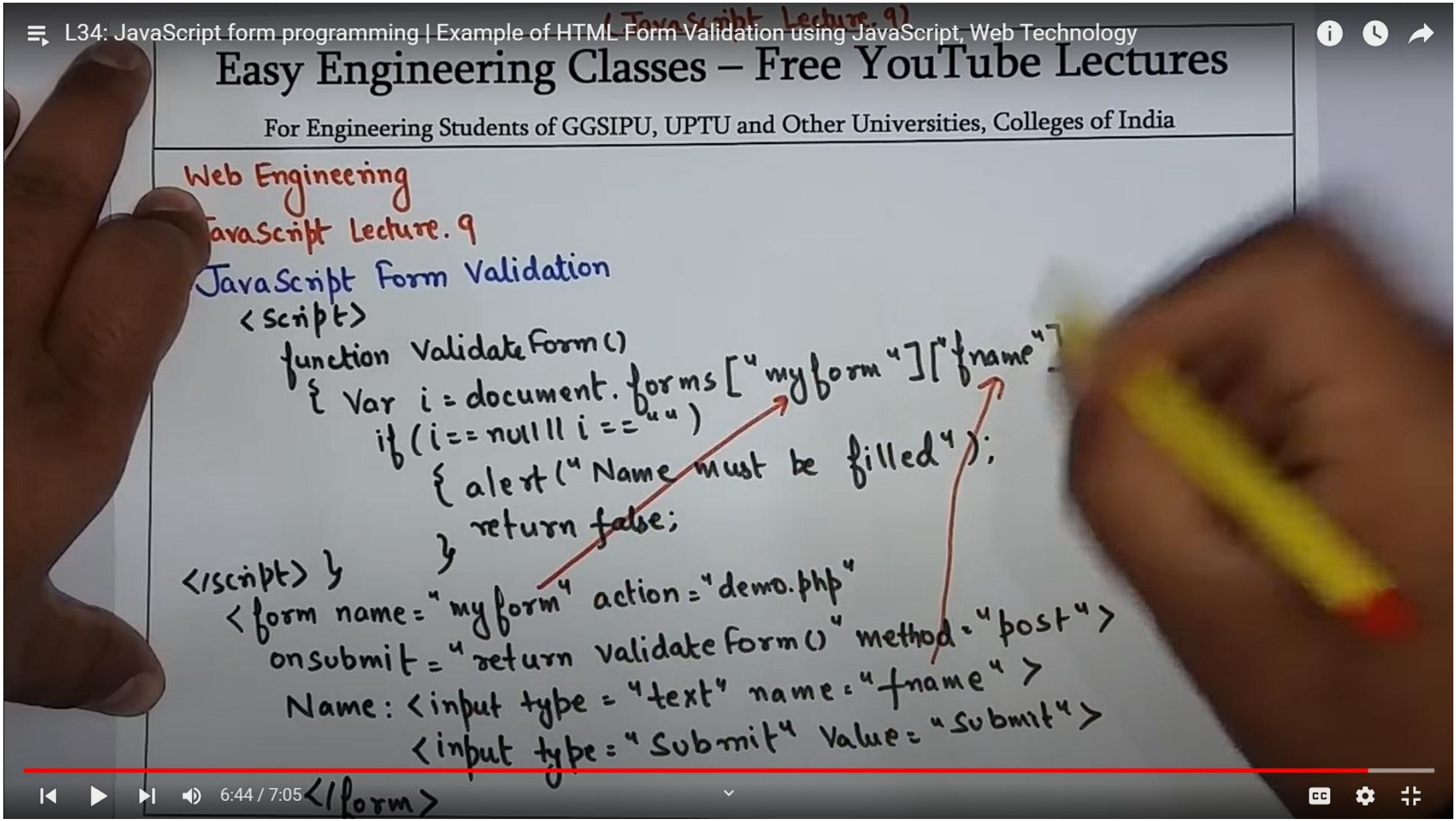
Web Engineering
(JavaScript lecture. 13)
JavaScript- Arrays
↳ are used to store multiple values in a single variable.
Syntax to Create Array:
Var array-name = [val1, val2, ....];
Var dept = ["IT", "CSE", "ECE"];
↳ array
reverse method.
dept.reverse();
Access Elements of an Array
index no.
Var i = dept[1];
document.write(dept);
entire array
length → property.
dept.length] o/p:- 3
Sort() method.
dept.sort();
push method.
dept.push("EEE");
6:11 / 6:35


L34: JavaScript form programming | Example of HTML Form Validation using JavaScript, Web Technology
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For Engineering Students of GGSIPU, UPTU and Other Universities, Colleges of India
Web Engineering
JavaScript Lecture. 9
JavaScript Form Validation
<script>
function ValidateForm()
{ Var i = document.forms["myform"]["fname"]
if(i==null || i=="")
{ alert("Name must be filled");
return false;
}
}
</script>
<form name="myform" action="demo.php"
onsubmit="return validateForm()" method="post">
Name: <input type="text" name="fname">
<input type="Submit" Value="Submit">
</form>
6:44 / 7:05

L36: JavaScript Document Object Model (DOM) | DOM Tree of Objects with Example | Web Engineering

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## Web Engineering

## JavaScript Lecture.10

### Methods of Document Object

i) write("String") → on the document.

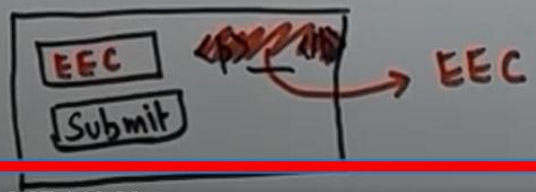
ii) writeln("String") → new line character

iii) getElementById() returns element by given id Value.

iv) getElementsByName() all elements given name.

v) getElementsByTagName()

vi) getElementsByClassName()

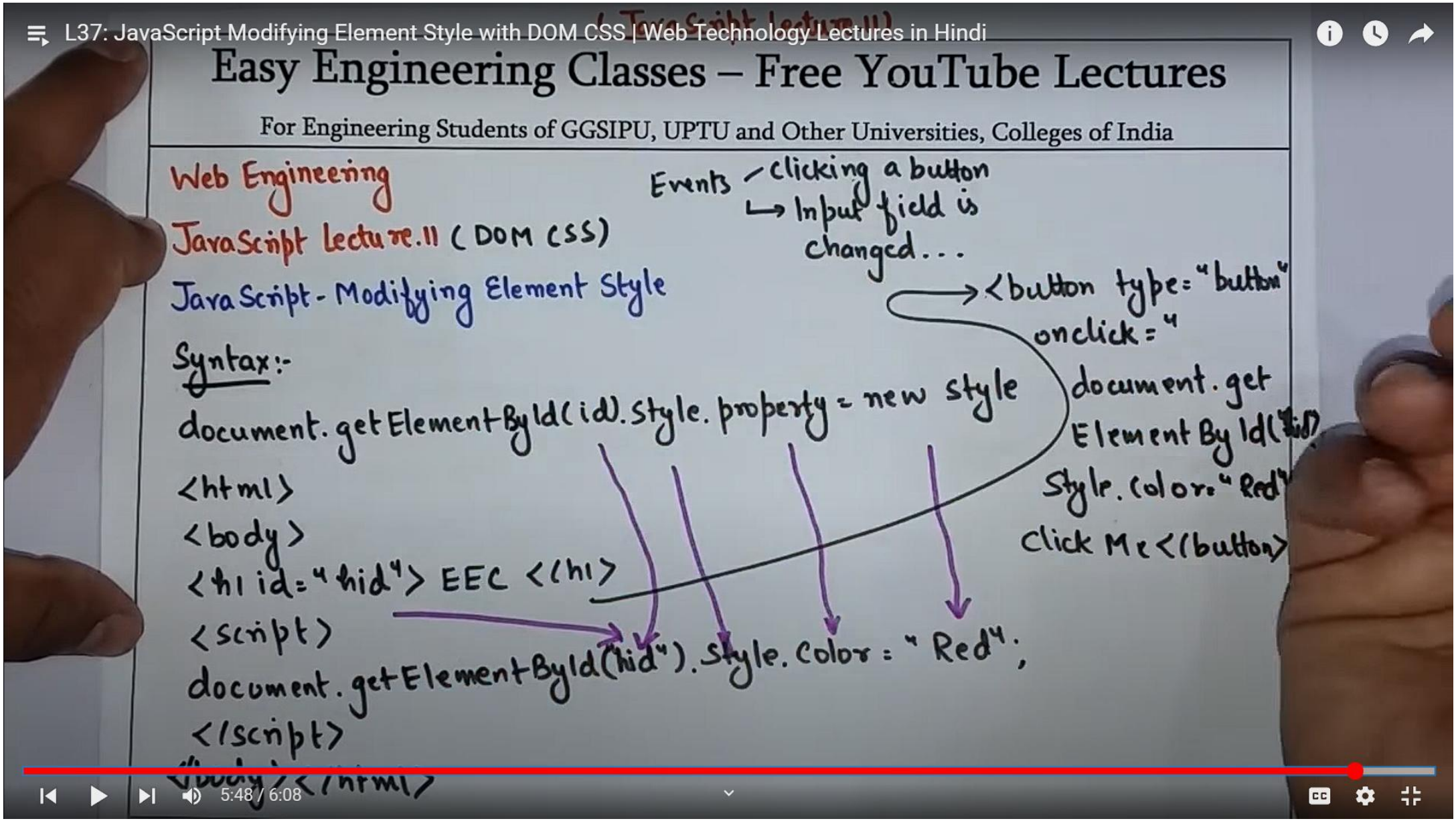



### Example of Accessing Field Value by document object:

```
<Script type="text/javascript">
  function f1()
  { Var i=document.f1.name.value;
    document.getElementById("p1").
      innerHTML = i;
  }
</Script>
  <body>
<form name="f1">
Name:<input type="text" name="name"/>
<input type="button" onclick="f1()"Value="
                                  Submit"/>
</form>
<p id="p1"></p>
</body>
```

EEC

12:37 / 13:00


L37: JavaScript Modifying Element Style with DOM CSS | Web Technology Lectures in Hindi
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Web Engineering
JavaScript lecture.11 (DOM CSS)
JavaScript - Modifying Element Style
Events - clicking a button
→ Input field is changed...
Syntax:-
document.getElementById(id).style.property = new style
<html>
<body>
<h1 id="hid"> EEC </h1>
<script>
document.getElementById("hid").style.color = "Red";
</script>
<button type="button" onclick="
document.get
Element By Id(
Style.color="Red"
Click Me</button>
5:48 / 6:08

L38: Java Servlet Introduction | Advantages of Servlet Over CGI, Uses of Servlet | Web Engineering

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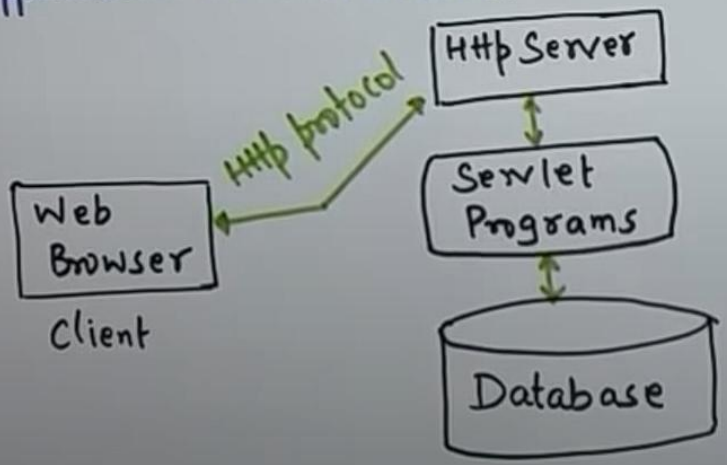
(Web Engineering - Java Servlet Lecture 1.)

## Introduction to Java Servlet

- Java Servlets are the programs that run on a web Application Sever. It acts as a middle layer b/w a requests from web browser/client and database/ application on HTTP Server.




## Advantages of Servlets over CGI

↳ Common Gateway Interface.

i) Better Performance
ii) Servlets executes within add. Space of Server.
iii) Platform-independent
iv) More Secure.
v) Communicate with other Appln with RMI.

## Uses of Servlet → HTML Form

i) Read explicit data Sent by browser.
ii) Read implicit HTTP request data.
iii) Process the data ↳ Cookies etc.
iv) Send explicit data
v) Send Implicit dat

8:03 / 8:26

L39: Java Servlet Life Cycle | init(), service(), destroy() methods | Web Technology Lectures

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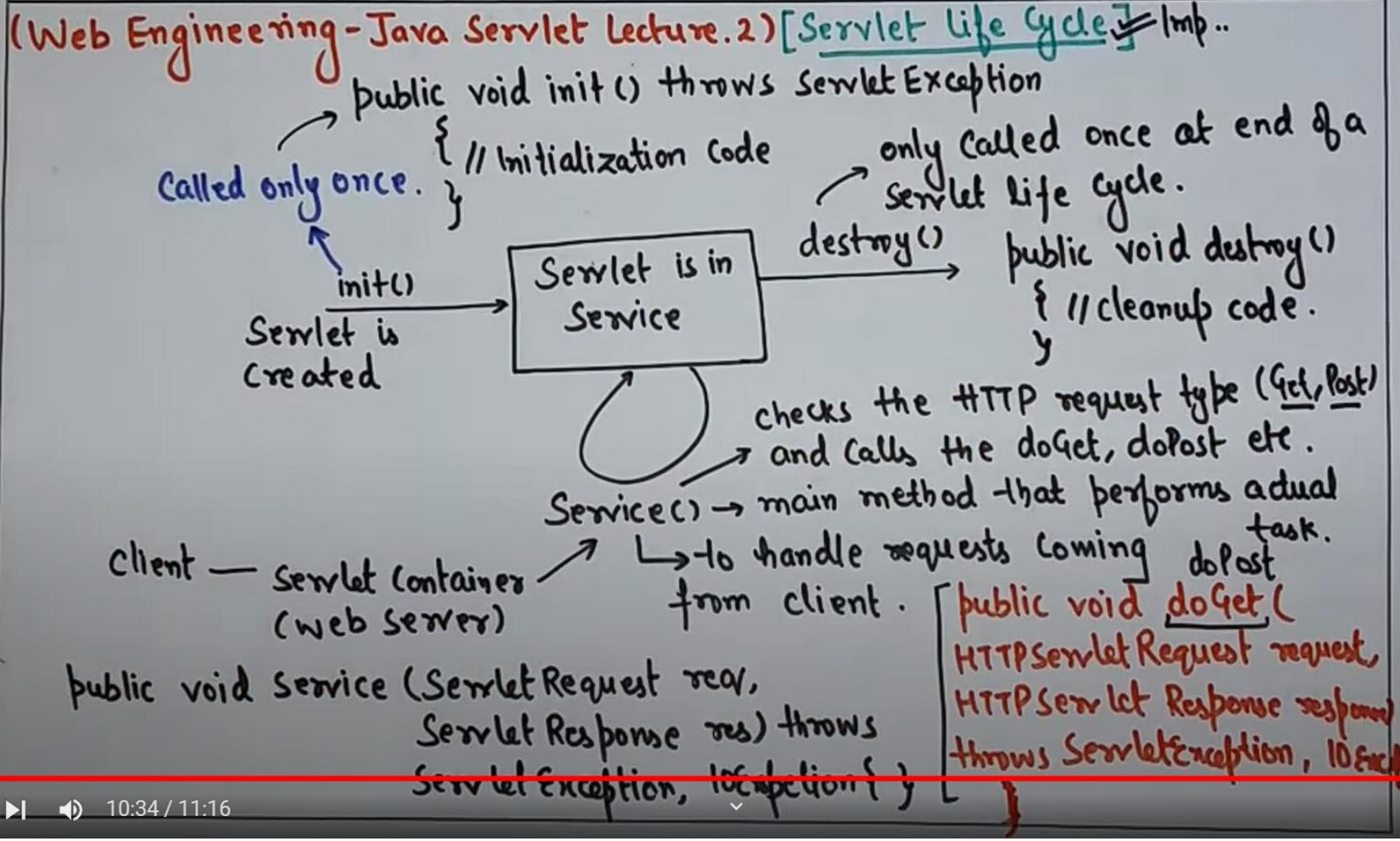
(Web Engineering - Java Servlet Lecture.2) [Servlet life cycle] ⇐ Imp..




10:34 / 11:16

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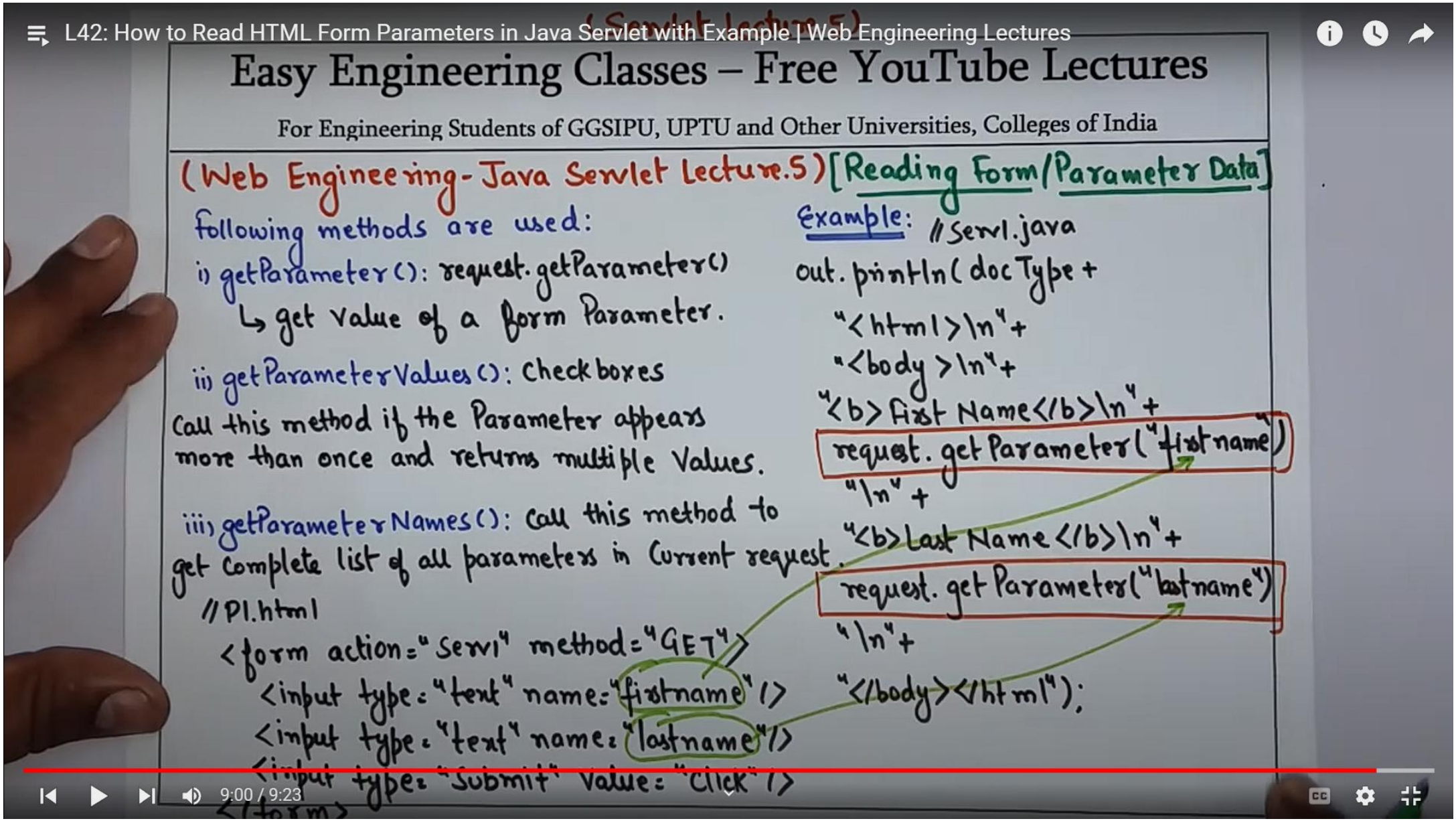
(Web Engineering - Java Servlet Lecture.4) [Servlet First Example]

```
// Helloworld.java
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class Helloworld extends HttpServlet
{ private String message;
  public void init() throws ServletException
  { message = "Hello World";
  }
  public void doGet(HttpServletRequest request, HttpServletResponse response)
  throws ServletException, IOException
  { response.setContentType("text/html");
    PrintWriter out = response.getWriter();
    out.println("<h1>"+
    message + "</h1>"); }
  public void destroy() { } }
```

doPost

web.xml → Configuration.

```
<servlet>
<servlet-name> HelloWorld </s___ >
<servlet-class> Helloworld </s___>
</servlet>
<servlet-mapping>
<servlet-name> Helloworld </s___>
<url-pattern> /Helloworld </___>
</servlet-mapping>
```


L42: How to Read HTML Form Parameters in Java Servlet with Example | Web Engineering Lectures
(Servlet Lecture 5)
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(Web Engineering - Java Servlet Lecture.5) [Reading Form/Parameter Data]
following methods are used:
i) getParameter(): request.getParameter()
↳ get value of a form Parameter.
ii) getParameterValues(): Checkboxes
Call this method if the Parameter appears more than once and returns multiple Values.
iii) getParameterNames(): Call this method to get Complete list of all parameters in Current request.
// PI.html
<form action="Servl" method="GET">
<input type="text" name="firstname" />
<input type="text" name="lastname" />
<input type="Submit" value="Click" />
</form>
Example: // Servl.java
out.println(docType +
"<html>\n" +
"<body>\n" +
"First Name\n" +
request.getParameter("firstname")
"\n" +
"Last Name\n" +
request.getParameter("lastname")
"\n" +
"</body></html");
9:00 / 9:23

L44: Java Servlet Cookies | How to Set and Read Cookie in Java Servlet with Example | Web Technology

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(Web Engineering- Servlet lecture.6)

## Example to Set Cookie

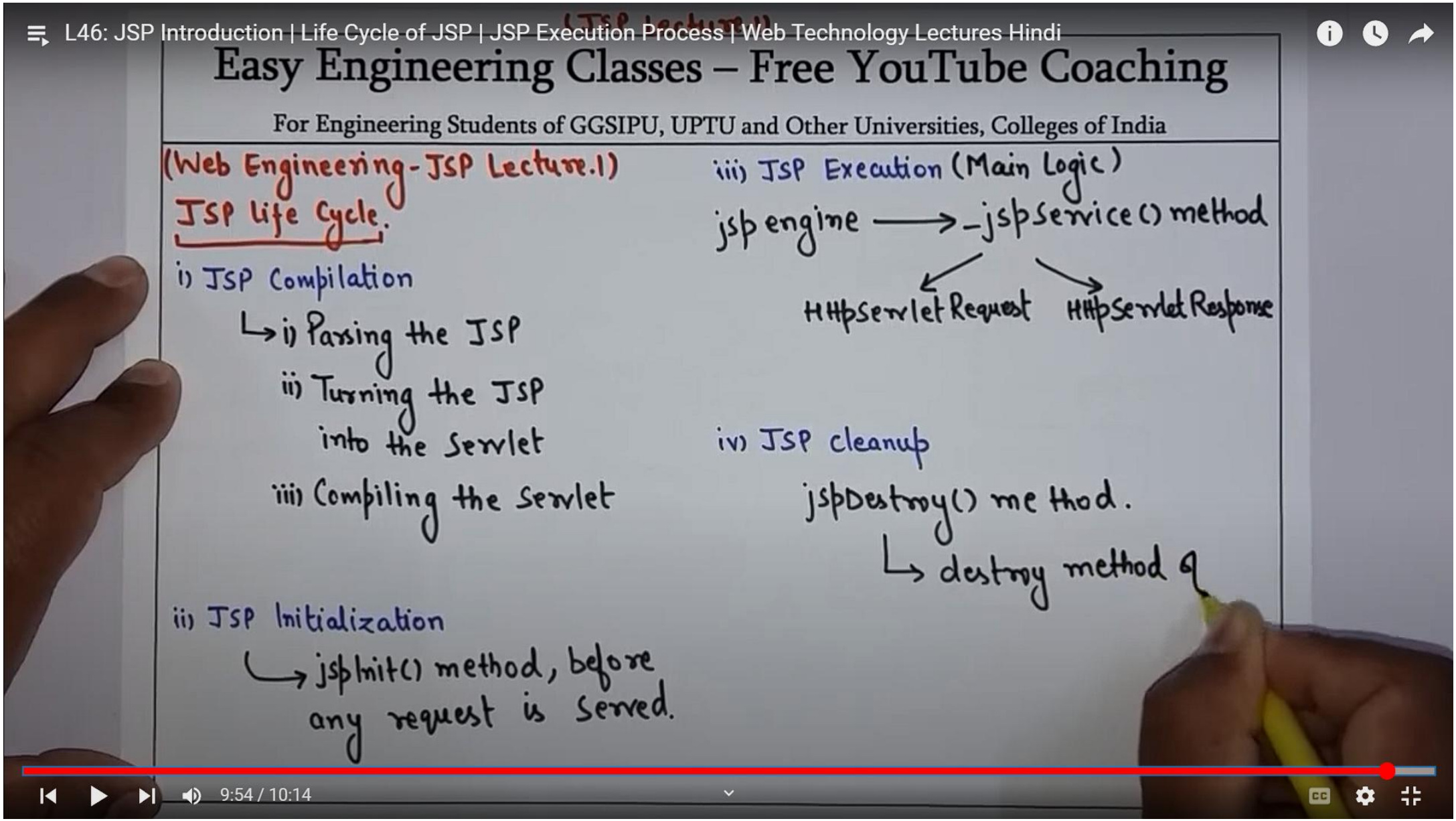
```
Cookie firstname = new Cookie("f_name",
        request.getParameter("first_name"));
firstname.setMaxAge(60*60*24);
response.addCookie(firstname);
```

## Example to Read Cookie

```
Cookie CK[] = request.getCookies();
out.println(CK[0].getName());
out.println(CK[0].getValue());
```

o/p:- f_name

12:37 / 13:02


L46: JSP Introduction | Life Cycle of JSP | JSP Execution Process | Web Technology Lectures Hindi
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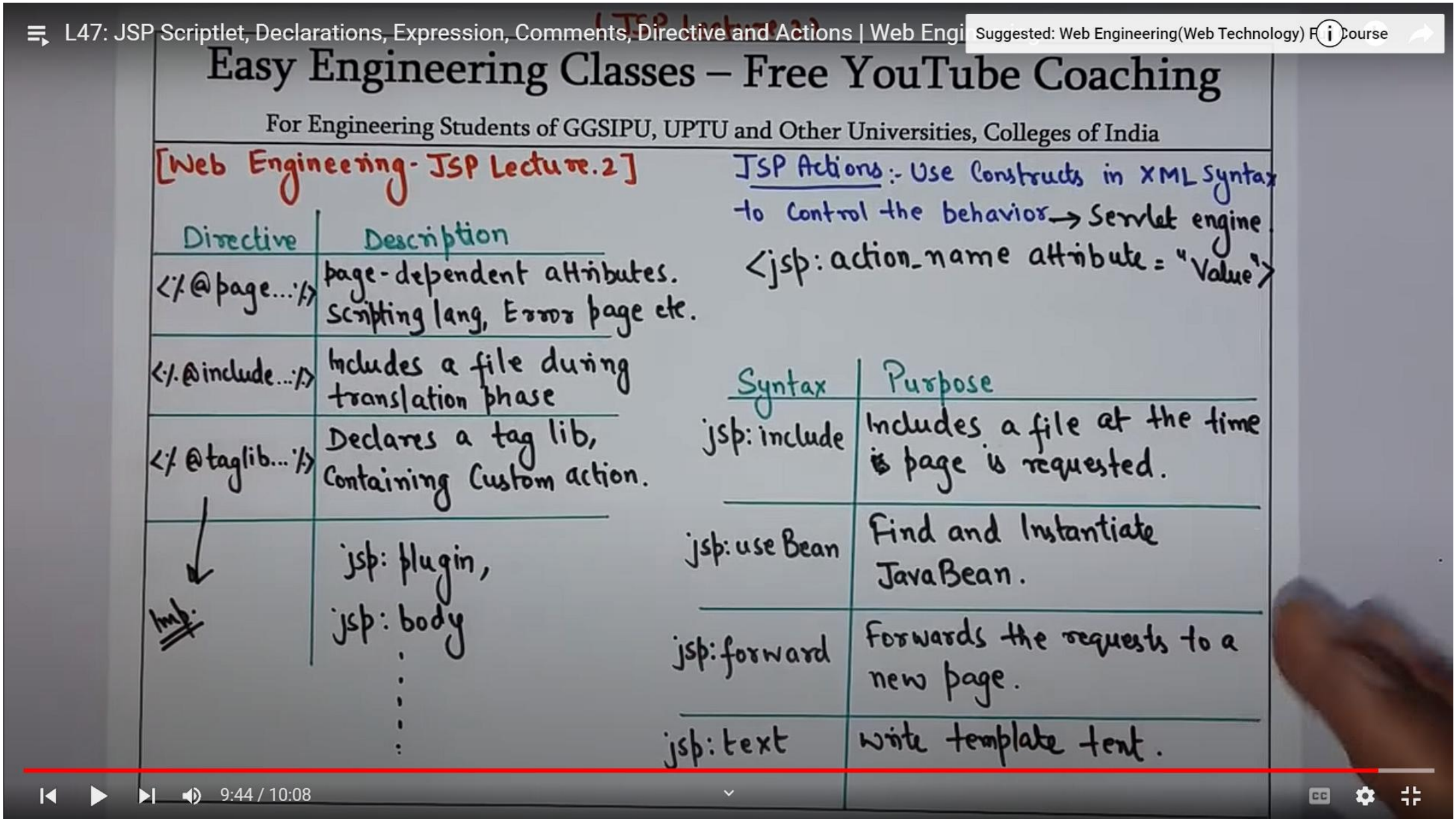
(Web Engineering - JSP Lecture.1)
JSP life Cycle.
i) JSP Compilation
↳ i) Parsing the JSP
ii) Turning the JSP into the Servlet
iii) Compiling the Servlet
ii) JSP Initialization
↳ jspInit() method, before any request is served.
iii) JSP Execution (Main Logic)
jsp engine → _jspService() method
HttpServletRequest
HttpServletResponse
iv) JSP cleanup
jspDestroy() method.
↳ destroy method
9:54 / 10:14


L47: JSP Scriptlet, Declarations, Expression, Comments, Directive and Actions | Web Engi
Suggested: Web Engineering(Web Technology) F Course
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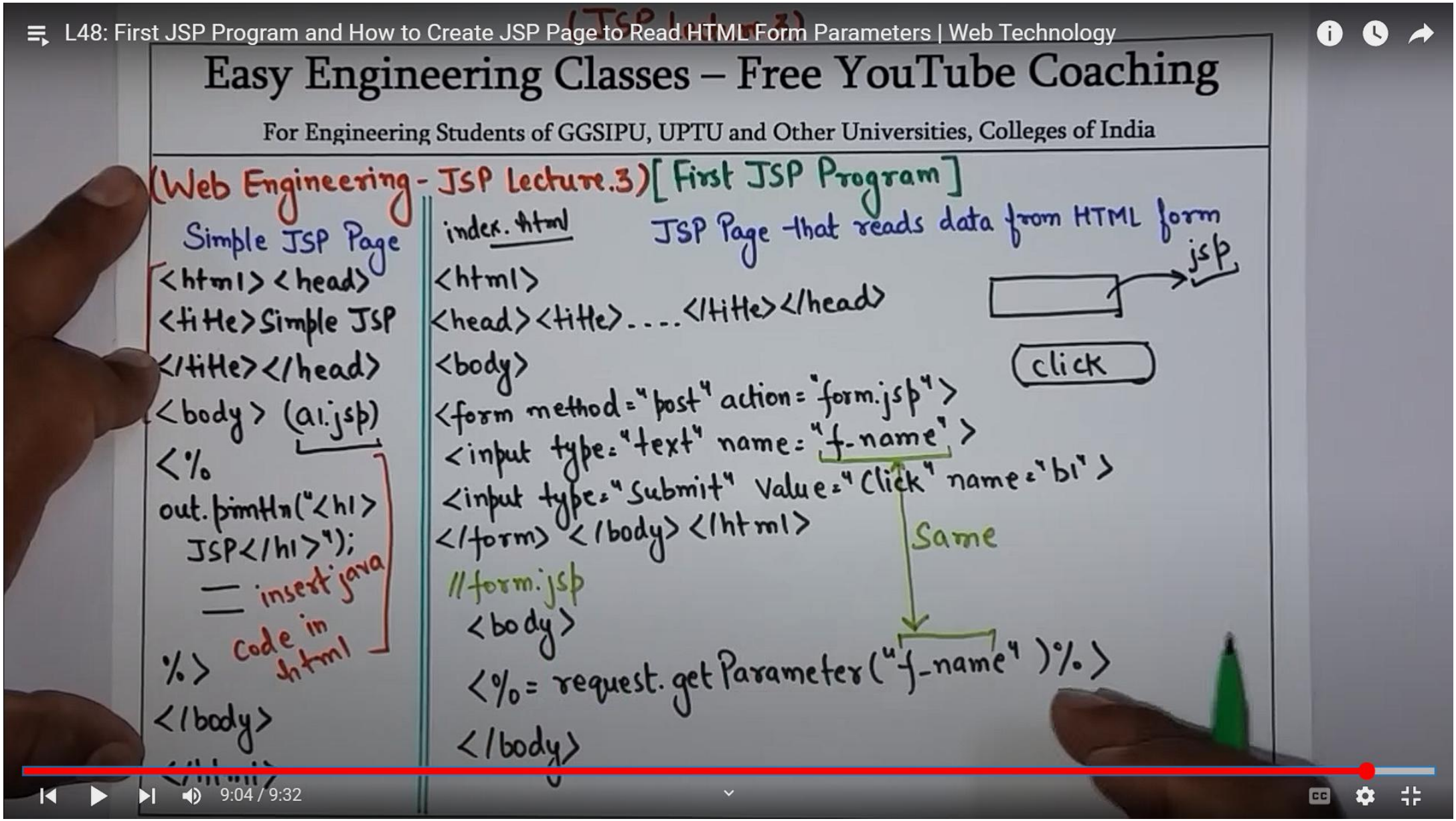
[Web Engineering - JSP Lecture.2]
JSP Actions :- Use Constructs in XML Syntax to Control the behavior → Servlet engine.
<jsp: action_name attribute = "Value">
Directive | Description
<%@page...%> | page-dependent attributes. Scripting lang, Error page etc.
<%@include...%> | Includes a file during translation phase
<%@taglib...%> | Declares a tag lib, Containing Custom action.
xml: | jsp: plugin, jsp: body
Syntax | Purpose
jsp: include | Includes a file at the time page is requested.
jsp: useBean | Find and Instantiate JavaBean.
jsp: forward | Forwards the requests to a new page.
jsp: text | write template text.
9:44 / 10:08


L48: First JSP Program and How to Create JSP Page to Read HTML Form Parameters | Web Technology
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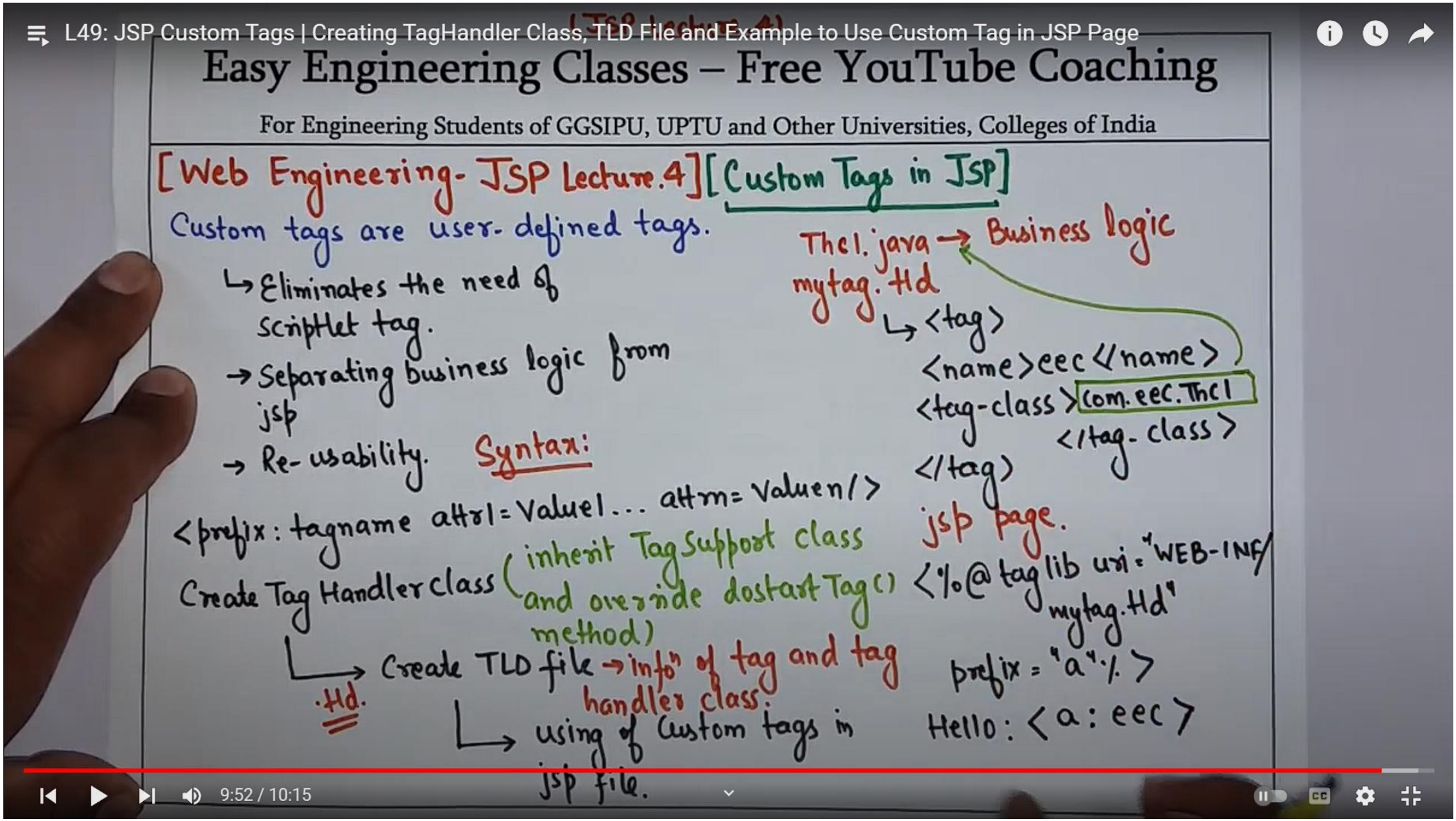
(Web Engineering - JSP Lecture.3) [First JSP Program]
Simple JSP Page
<html><head>
<title>Simple JSP
</title></head>
<body> (a1.jsp)
<%
out.println("<h1>
JSP</h1>");
insert java
code in
html
%>
</body>
index.html
JSP Page that reads data from HTML form
jsp
click
<html>
<head><title>....</title></head>
<body>
<form method="post" action="form.jsp">
<input type="text" name="f-name">
<input type="Submit" Value="Click" name="b1">
</form> </body> </html>
Same
//form.jsp
<body>
<%= request.getParameter("f-name") %>
</body>
9:04 / 9:32


L49: JSP Custom Tags | Creating TagHandler Class, TLD File and Example to Use Custom Tag in JSP Page
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[Web Engineering- JSP Lecture.4][Custom Tags in JSP]
Custom tags are user-defined tags.
↳ Eliminates the need of scriptlet tag.
→ Separating business logic from jsp
→ Re-usability.
Syntax:
<prefix:tagname attr1=value1... attrn=valuen/>
Create Tag Handler class (inherit TagSupport class and override doStartTag() method)
↳ Create TLD file → info of tag and tag handler class.
.tld.
↳ using of Custom tags in jsp file.
The1.java → Business logic
mytag.tld
↳ <tag>
<name>eec</name>
<tag-class>com.eec.The1</tag-class>
</tag>
jsp page.
<%@ taglib uri="WEB-INF/mytag.tld" prefix="a" %>
Hello: <a:eec>
9:52 / 10:15