Struts 2

What is struts 2

Web application framework used for developing java ee web applications

Enterprise level web apps in java

Apps developed for enterprises – scalable

Mvc pattern

What is a framework

What is mvc

What is mvc ?

Model view controller

Architectural pattern – governs the whole architecture of our application

Broad scope – larger architectural problems

Affects architecture of application

Model -

View -

Controller -

Shape, square

Description automatically generated

Client will send request to server

When req comes to server 🡪 there is a guy standing at the front, he will take request from client and go to db and get the list of products from db and send it back to the client

But there is another guy called red, who is in charge of getting stuff from the db

Diagram

Description automatically generated

But the data that blue has is raw data, coz it might be jus plain text data

So we have another guy , who specializes in presenting data to the client

Blue gives data to green, green will take data and arrange it nicely and then send back to client

Diagram

Description automatically generated

This is how an mvc works

Red- mode

Greem view

Blue controller

Model interacts with database and deals with data

View is what user sees on the screen – generates ui for the user

Controller takes user input – interacts with model and view

Controller is middleman between model and view

Model – java class

View – jsp

Controller – servlet or a servlet filter

Diagram

Description automatically generated

What is a framework ? – collection of foundation classes and libraries which makes app development easier

Library – is simply a piece of reusable code

Library in java is jar file – which is collection of .class files

Lets say a data exporter is in a library (a jar file)

For jar files, the flow of control starts in our project, goes to the jar, and then comes back to our code

Our application code is in control !

For framework it is different

Flow of control will start from the framework 🡪 go thru code 🡪 and comes back to framework

The framework is in control

This is the main difference between a library and a framework

Framework – u dun need to write main method - coz flow of control is not in your hands – its in the framework!!!!

Benefits of framework

1. Forces us to follow a pattern
2. We dun have to worry about application design – we just focus on business logic
3. Frameworks make application maintainable in future

Intro to struts 2

What does struts 2 do ?

When user does an action, an action object is created

As many user actions, we need to write that many action classes

Mapping information will be stored in an xml file

-Action class

-Jsp page

-struts.xml file

Diagram

Description automatically generated

Struts 2 architecture

Diagram

Description automatically generated