

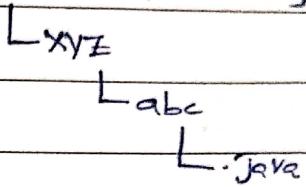
Project Management Tool (Java)

Build Tool

Manage Dependencies

Java Project Structure

- Source code
- Test code
- Project structure [assets, directories, Resources]
- Dependencies / Library
- Configuration
- Task runner → build / Test / Run
- Reporting



Maven → Maven is an automation and Project Management Tool developed by Apache Software foundation.
it is Based on POM (Project Object Model)

Maven can build any no. of projects into desired output such as .jar, .war, Metadate

Mostly Used for Java based Projects

it was initially released on 12th July 2004 @ March

Meaning of Maven is "Accumulator of knowledge"

M	T	W	T	F	S	S
					1	2
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

"Logic will get you from A to B. Imagination will take you everywhere."

Wednesday
FEBRUARY 2024
WK - 5, Day - 28

28

Maven helps in getting the right jar file for each project as they may be different version of separate packages. To download dependencies it is no more needed to visit the official website of each software. It could now be easily done by visiting "Mavenrepository.com".

Dependencies → It refers to the jar libraries that are needed for the project.

Repositories → Refers to the directories of packaged jar files.

Build Tools

- c, c++ : Make file
- onlet : Visual studio
- Java : Ant, Maven, gradle

① → Problems without Maven
Adding sets of Jars in each projects →
in case of Struts, spring we need to add jar files in each project it must include all the dependencies of Jars also.

March

M	T	W	T	F	S	S
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Thursday
FEBRUARY 2024
WEEK - 9, Day - 29

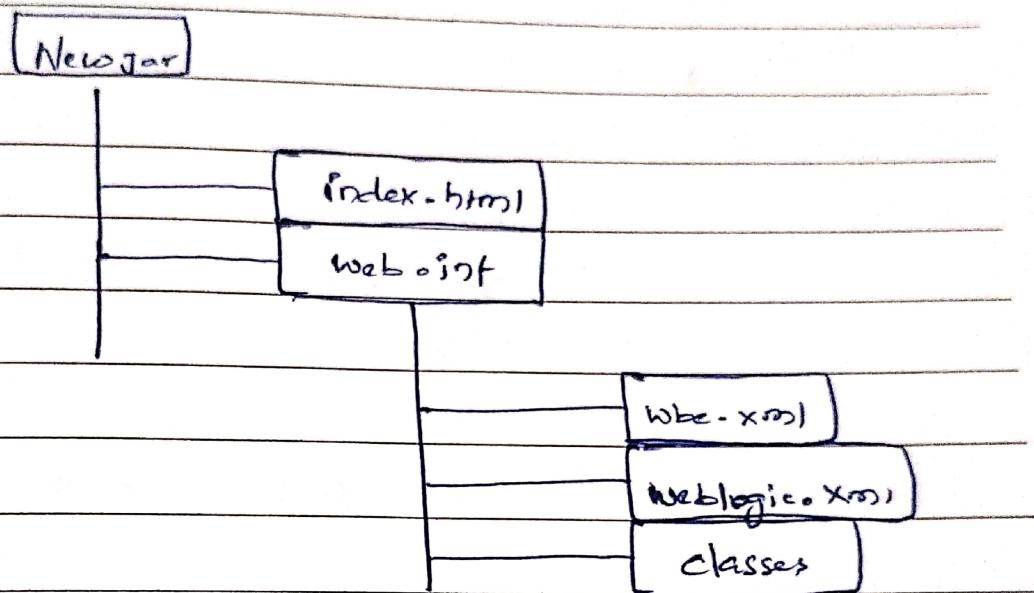
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Q → Creating The right Project Structure →

we must create the right project structure in

Servlet, struts etc, otherwise it will not be executed

For ex :- war file layout



Pom [Project object Model] :-

Pom refers to The XML files that have all the information regarding project and configuration details

Main configuration file is Pom.xml



@

March

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"Doing what you like is freedom. Liking what you do is happiness."

it has the description of the project details
regarding the versioning and configuration management
of the project

The XML file is in the project home directory

Pomo.XML Contains

- Metadata
- Dependencies
- kind of Project
- kind of Output [- Jar, War]
- Description

one project → one workspace → one Pomo.XML

Requirement to build

- * Source code [present in workspace]
- * Compiler
- + Dependencies
 - [Remote Repo → Local Repo → workspace]
 - [Remote Repo → Local Repo → workspace]

"Be honest"

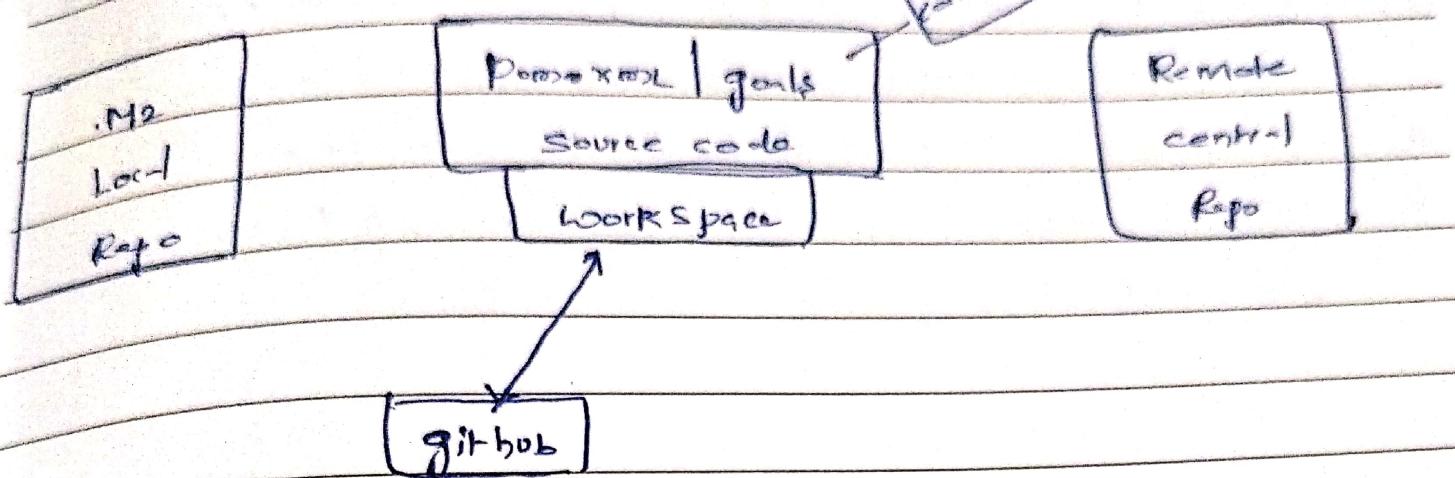
@ April

M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21

Saturday
MARCH 2024
WK - 1, Day - 2

2

Architecture of Maven



Maven Build life-cycle

Goals :-

- 1 → Generate Resources [Dependencies]
 - 2 → Compile code
 - 3 → Unit Test
 - 4 → Package [build()]
 - 5 → install [into local Repo & artifactory]
 - 6 → Deploy [to server]
 - 7 → clean [delete all run time files]
- eg: ^{MVN}
mvn ~~reaper~~ install

mvn clean package

1 to 6 → Default and sequence order

7 → Not default ~~or~~ and it won't allow sequence

April

M	T	W	T	F
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8	9	10	11	1
15	16	17	18	1
22	23	24	25	

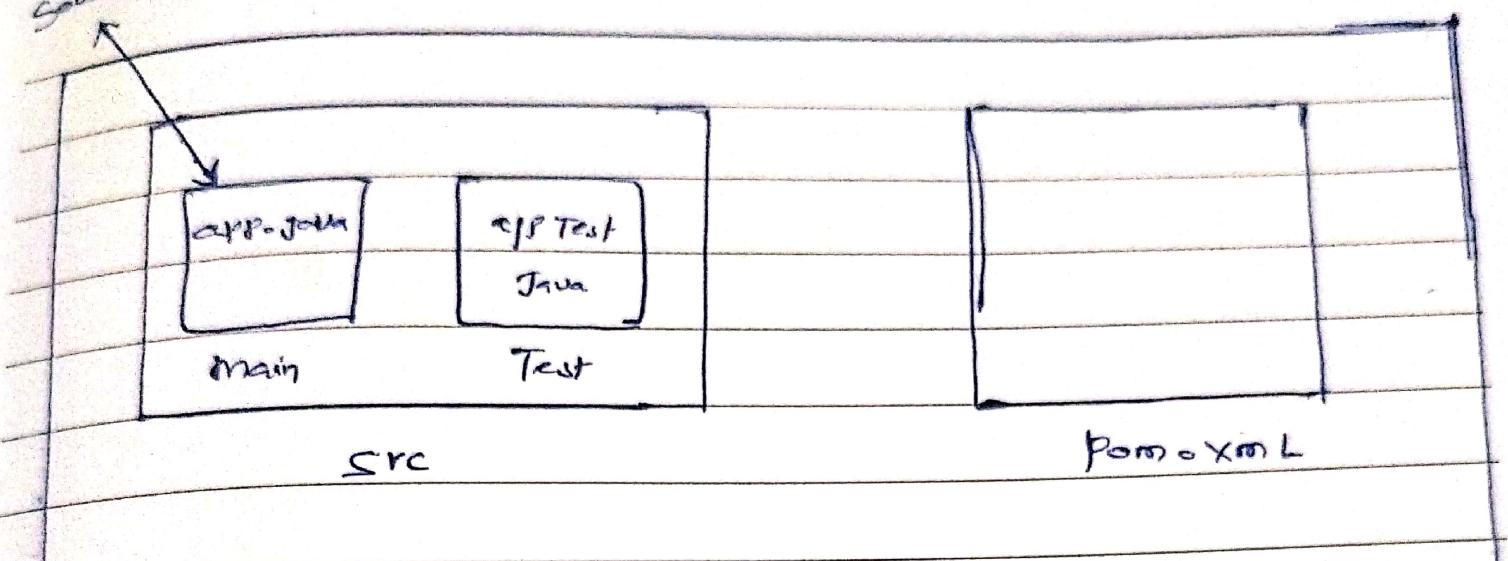


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Maven Directory Structure

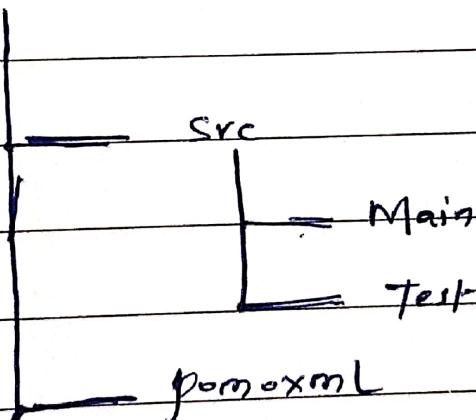
New project

source code



pom.xml L

New project



@

April

M	T	W	T	F	S
1	2	3	4	5	6
8	9	10	11	12	13
15	16	17	18	19	20
22	23	24	25	26	27
29	30				

"Much of the stress that people feel doesn't come from having too much to do.
It comes from not finishing what they've started."



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