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      a) Software Vendor Company.
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ear: Microsoft, cearle core, ameson, google and att.

bi6oftware SErvices Company

Different types of JAVA frameworks

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- => Based on the kind of Apps we develop there are 4 types of Java Frameworks in java
- a) ORM frameworks (Object Relational Mapping Frameworks) b) MVC Frameworks (Model View Controller Frameworks) c) Web Services Frameworks/Distributed App frameworks d) JEE Frameworks /Application Frameworks

d) JEE Frameworks /Application Frameworks

=>These frameworks provide abstraction on multiple JAVA,JEE Technologies and multiple JAVA frameworks to simplify the process different Apps development

eg: spring ----> from interface21 (pivotal team)

Spring boot ----> from interface21 (pivotal team)

JAVA Technologies :: JDBC, JNDI, RMI and etc..

JEE Technologies :: servlet,jsp, ejb, jta and etc..

=> spring/spring boot frameworks provide abstraction on multiple java, jee technologies

and multiple java frameworks

=> Using Spring/Spring boot frameworks we can simplify the process of standalone apps, Web applications, Distributed Apps and etc..

There are two types of frameworks in JAVA based on the kind/mode of programming we do

- a) Invasive Frameworks
- b) Non Invasive Frameworks
- a) Invasive Frameworks

(Frameworks with Tight Coupling)

- => While working with these frameworks, the classes we develop as part of Projects development should implement /extend the framework API classes/interfaces
- => Here the App/Project Development process is tight coupled with framework APIs
- => Invasive Framework says, programmer come to me,use me in Project development and keep that code for ever with me

eg:: Struts

b) Non Invasive Frameworks (Frameworks with Loose Coupling)

While working with these frameworks, classes of the App

development need not to implement /extend from framework

API classes/interfaces

- =>These Frameworks based Coding /App development is loosely coupled development with Frameworks API
- =>These frameworks say, hey programmer come to me,use me in Projects Development

if ur not not comfortable with my framework u can move ur code to another frameworks

eg:: JSF, hibernate, spring, spring boot and etc..

API (Application Programming Interface)

====

- => It is base for the Programmers to develop the software apps using programming languages,technologies and frameworks
- => In java, API means set of packages having classes, interfaces, enums and annotations
- => In c++, API means set of header files having classes & functions
- => In C, API means set of header files having functions

3 types of APIs

a)pre-defined APIs

Ready made APIs given language, technology and frameworks

eg:: jdbc api (java.sql, javax.sql), servlet api (Jakarta.servlet, Jakarta.servlet.http)

b)user-defined APIs

=>create by the programmers manually

eg: user-defined packages with user-defined classes

- c) Third party APIs
- => APIs given by Third party companies / Vendor
- eg: Lombok api, printing API, java zoom API and etc...

while developing projects/apps prefer using APIs in the following order a) pre-defined apis b) user-defined apis c) third party apis

Can explain the following terminologies?

- a) Software Vendor Company b)Software Services Company c) Software Products Company d) Client Organization
- a) Software Vendor Company
- => It is the company who creates and releases the softwares to the market eg:: Microsoft, oracle corp, amazon, google and etc..
- b)Software Services Company
- => It is the company who gathers the requirements from Client organizations

and develops the software projects (services projects) for them

eg: Infosys, wipro, CTS, TCS and etc..

=> The s/w services projects will be designed and developed exclusively for certain client organization

c) Software Products Company

=> This company designs, develops Project/Project by understand certain gap in market by having self funding.. Once the project/product is ready they keep that product/project open for multiple client organization to purchase

eg:: Druva soft (Tally s/w), Uber

rapido,

Microsoft (Ms-office), Sum Total

- d) Client Organization
- => The organization whose requirements are gathered and developed the Projects by software services

companies

eg:: AirBus, SBI, TG State, Cntral Govt, Indian Passport

Conclusion:: Software services company or Software product company uses the

Vendor

softwares given by Software companies to develop the projects/products to release them to Client organizations