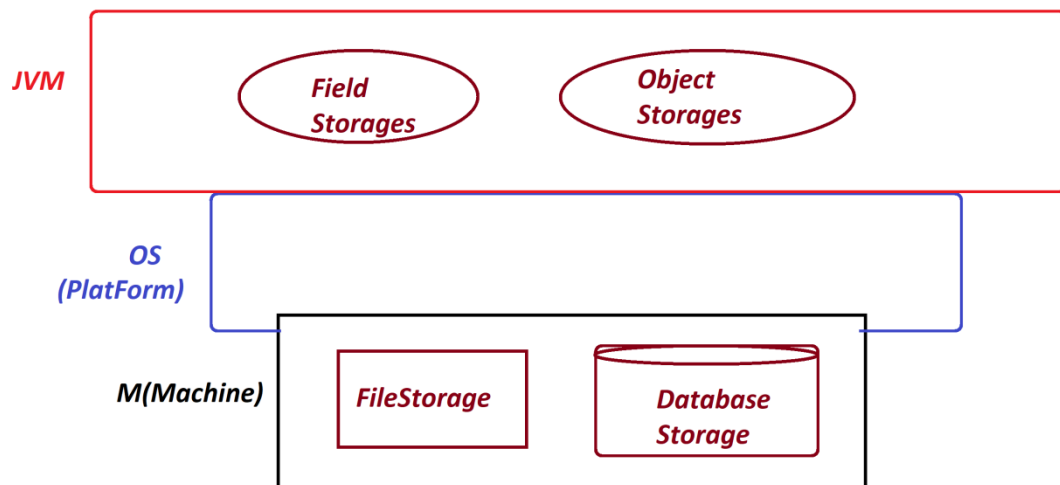*Dt : 1/1/2024(day-3)*

Note:

=>The Field-Storages and the Object-Storages,which are generated part of JVM while

application execution will be destroyed automatically when JVM ShutDowns.

=>When we want to have permanent storage for applications,then we take the support of

any one of the following:

    ::File Stotage

    ::DataBase Storage

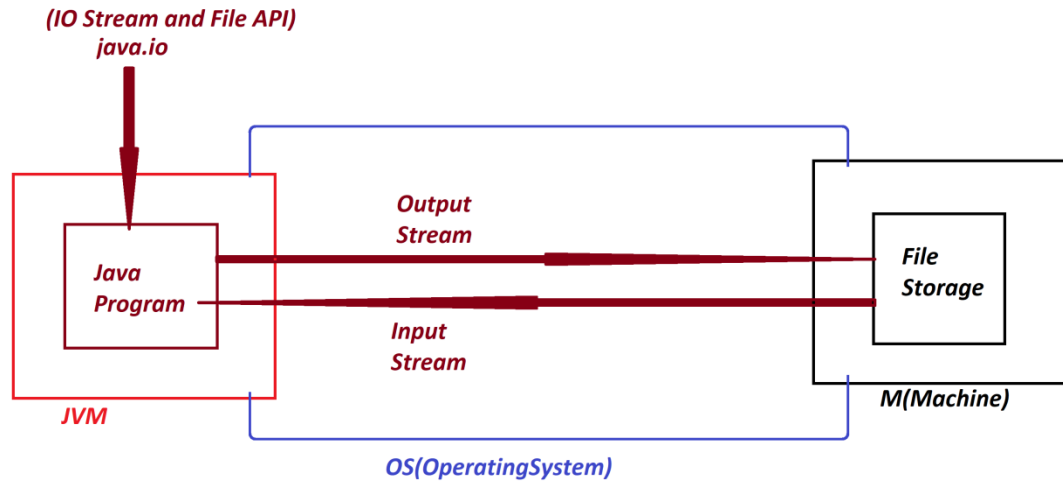--

3.File Storage:

  =>The smallest permanent storage of ComputerSystem which is 'controlled and managed' by

   the OperatingSystem is known as File-Storage

  =>In the process of establishing communication b/w JavaProgram and FileStorage,the

  JavaProgram must be constructed using 'Classes and Interfaces' available from 'java.io'

package(IO Stream and File API)

Daigram:

DisAdvantages of File Storage:

 (a)Data redundancy

 (b)Data Inconsistency

 (c)Difficulty in accessing data

 (d)Limited data sharing

 (e)File System corruption

 (f)Security Problems

(a)Data redundancy:

   =>Same information will be duplicated in different files.

   (data duplication)

(b)Data Inconsistency:

   =>data can be inconsistent due to data redundancy

(c)Difficulty in accessing data:

=>Difficulty in accessing data,because the data is available in scattered form and there

is no quering process.

(d)Limited data sharing:

=>Limited data sharing because data in scattered form.

(e)File System corruption:

=>File System can be Corrupted due to fragmentation or metadata corruption.

(f)Security Problems:

=>File System will have Security Problems.

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Note:

=>Because of DisAdvantages,the file-storage is not preferable as BackEnd Storage for

Server-based-Applications in Java.

=>This DisAdvantages of File Storage can be Overcomed using Database Storage.

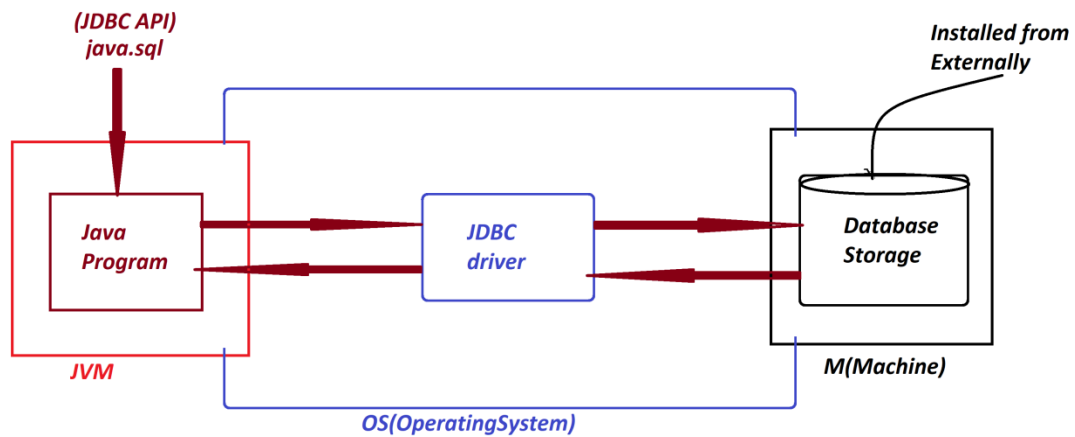*---*

*imp

4.DataBase Storage:

=>The largest permanent storage of ComputerSystem which is installed from externally is

known an DataBase Storage.

=>In the process of establishing Communication b/w JavaProgram and Database product,the

JavaProgram must be Constructed using 'Classes and Interfaces' available from 'java.sql'

package(JDBC API),and the JavaProgram must take the support of JDBC-Driver.

Diagram:

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faq:

define driver?

  =>The Small s/w program part of OperatingSystem,which establishes connection b/w two

   end-points is known as driver.

  Ex:

  Audio driver

  Video driver

  N/W driver

  ...

  --

faq:

define JDBC driver?

=>The driver which establish connection b/w JavaProgram and Database product is known as

JDBC driver.

Types of JDBC drivers:

=>JDBC drivers are categorized into four types:

1.JDBC-ODBC bridge driver(Type-1)

2.Native API driver(Type-2)

3.Network protocol driver(Type-3)

4.Thin driver(Type-4)

Note:

=>In realtime for application development we use only Thin driver(Type-4)