DAY-4 JAVA DEMO CLASS

-------------------------------------

----->JAVA FEATURES

1.PLATFORM INDEPENDENT

1.1...> PLATFORM DEPENDENT:IF A PROGRAM IS EXECUTED IN O.S AND IF IT EXECUTED ONLY IN SAME O.S THEN IT IS CALLED AS PLATFORM DEPENDENT.

HERE PLATFORM REFERS TO OPERATING SYSTEM.

1.2...>PLATFORM INDEPENDENT NATURE OF JAVA

IF A PROGRAM IS EXECUTED IN ONE O.S AND IF IT POSSIBLE TO EXECUTE IT IN DIFFRENT O.S THEN IT IS CALLED AS PLATFORM INDEPENDENT.

HERE PLATFORM REFERS TO OPERATING SYSTEM.

NOTE:JAVA PROGRAMS ARE WORA[WRITE ONCE RUN ANYWHERE]

-----------------------------------------------------------------------------------------------------------------------------------------------

2.INTERPRETIVE IN NATURE/IT IS BYTECODE LANGUAGE.

----->JAVA PROGRAMS IS HIHGLEVEL PROGRAMMING LANGUAGE.THESE PROGRAMS ARE GIVEN TO JAVA COMPILER WHICH WILL PRODUCE BYTE CODE OR INTERMEDIATE CODE

AS THE OUTPUT AND THAT BYTE CODE IF WE GIVE IT TO JVM[JAVA VIRTUAL MACHINE]IT WILL ACTS LIKE INTERPRETER AND GENERATE MLL AND WE WILL GET THE OUPUT

BY THE MP.

BYTE CODE:IT IS NETHIER A HLL NOR A MLL IT IS A INTERMEDIATE LANGUAGE.IT IS PLATFORM INDEPENDENT IN NATURE.

JVM:JAVA VIRTUAL MACHINE WHICH ACTS LIKE INTERPRETER.IT IS PALTFORM DEPENDENT IN NATURE.

WHY JVM IS PLATFORM DEPENDENT?

JVM IS DEVELOPED USING C PROGRAMMING LANGUAGE.

NOTE:JAVA PROGRAM EXECUTION CONSIST OF BOTH COMPILATION AND INTERPRETATION HENCE WE WILL CALL THIS LANGUAGE AS HYBRID LANGUAGE.HOWEVER IF WE LOOK AT

IT FROM THE EXECUTION PHASE PONIT OF VIEW IT IS INTERPRETED LANGUAGE.

JAVA IS ALSO CALLED AS BYTECODED LANGUAGE.

JAVA PROGRAM EXECUTION IS RELATIVLEY SLOW WHEN COMPARE WITH C PROGRAMMING LANGUAGE.

C....... HLL---->MLL

JAVA..... HLL---->BYTECODE---->MLL

JAVA PROGRAM:PLATFORM INDEPENDENT

BYTECODE:PLATFORM INDEPENDENT

JVM:PLATFORM DEPENDENT

MLL:PLATFORM DEPENDENT

---------------------------------------------------------------------------------------------------------------------------------------------------

------>3.ARCHITECTURAL NEUTRAL

ANY CHANGES MADE IN THE ARCHITECTURE OF THE COMPUTER DOES NOT AFFECT THE JAVA APPLICATION/PROGRAMS.

---------------------------------------------------------------------------------------------------------------------------------------------------

-------->4.SIMPLE

JAVA IS SIMPLE PROGRAMMING LANGUAGE WHERE THE SYNTAX USED IN JAVA IS ALMOST SAME AS C AND C++.HOWEVER THE COMPLEX CONCEPTS LIKE

POINTERS AND MULTIPLE INHERITANCE IS NOT PRESENT.

------------------------------------------------------------------------------------------------------------------------------------------------

------->5.JAVA IS PORTABLE IN NATURE:

JAVA BYTECODE ARE PORTABLE IN NATURE IE BYTECODE CAN BE SENT TO ANOTHER COMPUTER WITH A DIFFRENT O.S BUT STILL

WE CAN OBTAIN THE OUTPUT IN THAT COMPUTER.

IF A PROGRAMMING LANGUAGE IS PLATFORM INDEPENDENT THEN IT WILL BE PORTABLE IN NATURE AND VICE VERSA.

--------------------------------------------------------------------------------------------------------------------------------------------------

------->6.JAVA IS OBJECT ORIENTED PROGRAMMING LANGUAGE

IN JAVA EVERYTHING IS TREATED AS OBJECTS.JAVA PROVIDE DATA SECUIRTY AND CODE REUASBALITY FEATURES WITH THE HELP OF CONCEPTS LIKE

ENCAPSULATION,POLYMORPHISM,INHERITENCE.

------------------------------------------------------------------------------------------------------------------------------------------------

---->7.JAVA IS MULTITHREADED PROGRAMMING LANGUAGE

JAVA SUPPORTS MULTITHREADED AND THIS CAN BE ACHIVED USING THREAD IN BUILT CLASS AND RUNNABLE INTERFACE.

THREAD IS A PATH OF EXECUTION.IN JAVA BY DEFAULT SERIAL EXECUTION HAPPENS WITH THE HELP OF THREAD AND RUNNABLE WE CAN CREATE

MULTITHREAD AND EXECUTE MULTI TASK IN THE PROGRAM.

---------------------------------------------------------------------------------------------------------------------------------------------

1.PLATFORM INDEPENDENT

2.INTERPRETIVE/BYTECODE

3.SIMPLE

4.ARCHITECTURAL NEUTRAL

5.PORTABLE

6.OBJECT ORIENTED

7.MULTITHREADED

8.ROBUST

9.DISTRIBUTIVE

10.HIGH PERFORMANCE

11.DYNAMIC

12.SECURED

--------------------------------------------------------------------------------------------------------------------------------------------------