DAY-41

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IMPORT STATEMENTS

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// EXAMPLE:1

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class Demo

{

public static void main(String[] args)

{

Scanner sc = new Scanner(System.in);

//System.out.println("Hello World!");

}

}

class Test

{

Scanner sc = new Scanner(System.in);

}

OUTPUT:

-------

compilation error

NOTE: In the above program when compile, we will get compilation eror because we have not specify the location of the Scanner class.

This problem can be overcome by 'fully qualified name'.

// EXAMPLE:2 fully qualified name

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class Demo

{

public static void main(String[] args)

{

java.util.Scanner sc = new java.util.Scanner(System.in);

}

}

class Test

{

java.util.Scanner sc = new java.util.Scanner(System.in);

}

NOTE: Usage of fully qualified names in the program leads to readablity probelm and also the code length will increase.

To overcome this problem we will use import statements in the java programs

// EXAMPLE:3 import statement

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

import java.util.Scanner;

class Demo

{

public static void main(String[] args)

{

Scanner sc = new Scanner(System.in);

}

}

class Test

{

Scanner sc = new Scanner(System.in);

}

NOTE: Import statements are used to import the class into the program or to bring class into visibility inside the program.

TYPES OF IMPORT STATEMENTS:

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REFER THE DIAGRAM

There are two types of import statements :

1. EXPLICIT import statements eg: import java.util.Scanner;

2 IMPLICIT import statements eg: import java.util.\*;

AMBIGUITY PROBLEM IN IMPORT STATEMENTS:

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import java.util.\*;

import java.sql.\*;

class Demo

{

public static void main(String[] args)

{

Date d = new Date(1);

}

}

output:

compilation error

Flow of execution of import statements:

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1. Always Explicit import statements will execute first

EXAMPLE:

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import java.util.Date;

import java.sql.\*;

class Demo

{

public static void main(String[] args)

{

Date d = new Date(1);

System.out.println(d.getClass().getName());

}

}

OUTPUT:

-------

java.util.Date

2.CLASS present in the current working folder will get executed

EXAMPLE:

---------

import java.util.\*;

import java.sql.\*;

class Demo

{

public static void main(String[] args)

{

Date d = new Date(1);

System.out.println(d.getClass().getName());

}

}

OUTPUT:

-------

inside the Date constructor.

3. Implicit import statements wil be executed.

EXAMPLE:

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import java.util.\*;

//import java.sql.\*;

class Demo

{

public static void main(String[] args)

{

Date d = new Date(1);

System.out.println(d.getClass().getName());

}

}

OUTPUT:

----------

java.util.Date

NOTE: If in case if we use both as explicit import statements then we will get compilation error.

SYSTEM.OUT.PRINTLN();

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EXAMPLE:

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class Demo

{

static String str = "studyOnline";

}

// Demo.str.length();

// Demo --> class Name

// str --> Static variable in Demo class

// length() --> method present in the string class

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class System

{

static PrintStream out

}

System.out.println();

// System --> is a class present in java.lang package

// out --> static variable present in system class

// println() --> method present in printstream class

STATIC IMPORT:

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From the 1.5 version of java static import statemnts we can use to access the static members [methods and variables] without using the class name.

EXAMPLE FOR NORMAL IMPORT:

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class Demo

{

public static void main(String []args)

{

System.out.println(Math.sqrt(4));

}

}

OUTPUT:

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2.0

EXAMPLE FOR STATIC IMPORT :

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import static java.lang.Math.\*;

class Demo

{

public static void main(String []args)

{

System.out.println(sqrt(4));

}

}

output:

--------

2.0

EXAMPLE:

----------

class Demo

{

public static void main(String []args)

{

System.out.println("hi ");

System.out.println("welocme to ");

System.out.println("studyOnline ");

}

}

EXAMPLE:

---------

import static java.lang.System.\*;

class Demo

{

public static void main(String []args)

{

out.println("hi ");

out.println("welocme to ");

out.println("studyOnline ");

}

}

DIFFERENCE B/W IMPORT STATEMENT AND STATIC IMPORT STATEMENT :

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IMPORT STATEMENTS:

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1. Import classes and interface present in package

2. provide more readblity

eg: System.out

Math.sqrt()

STATIC IMPORT:

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1. Import static members without using the class name

2. less readability