Dt : 8/9/2023

2.Checked Exceptions:

  =>The Exceptions which are identified by the compiler and raised at

compilation stage are known as Checked Exceptions or CompileTime Exceptions.

  =>These Checked Exceptions are categorized into two types:

    (a)Pre-defined Checked Exceptions

    (b)User defined Checked Exceptions

(a)Pre-defined Checked Exceptions:

  =>The Checked Exceptions which are defined and available from JavaLib

    are known as Pre-defined Checked Exceptions or Built-in Checked

    Exceptions.

  Ex:

    java.lang.ClassNotFoundException

    java.lang.InstantiationException

    java.lang.IllegalAccessException

    java.io.IOException

    ...

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faq:

define forName() method?

  =>forName() method is used to load the class at runtime or execution

time,which is not available at compilation stage.

=>forName() is a pre-defined method from "java.lang.Class".

Method Signature:

public static java.lang.Class<?> forName(java.lang.String)

throws java.lang.ClassNotFoundException;

syntax:

Class c = Class.forName("Loading_Clas_name");

```
Access
within
the                                      throws specify to raise the
Project                                  exception at method call

              return_type
                    Method_name

    public static Class<?> forName(String) throws ClassNotFoundException;

          Class_Level    Generic      with_parameter
```

Note:

=>"throws" keyword in method signature will specify to raise the

exception at method call.

=>when exception raised at method call,the compiler will identify the

exception and which comes under Checked Exception or Compile time

exception.

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DisAdvantage of "new" keyword:

=>"new" keyword will create object for the class available at compilation,

but cannot create object for the class loaded at runtime or execution time.

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faq:

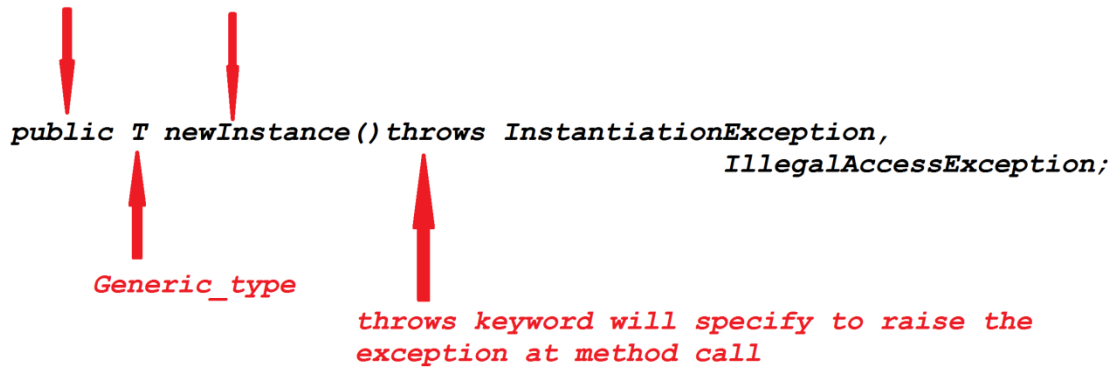*define newInstance() method?*

  =>newInstance() method is used to create object for the class loaded at

   runtime or execution time.

  =>This newInstance() method is available from "java.lang.Class".

Method Signature:

public T newInstance() throws java.lang.InstantiationException,

                     java.lang.IllegalAccessException;

Ex:

ProjectName : App_Exception2

packages,

p1 : Display.java

```java
package p1;
public class Display {
    public void dis(int k) {
        System.out.println("****Display-dis(k)****");
        System.out.println("The value k:"+k);
    }
}
```

p2 : DemoException2.java(MainClass)

```java
package p2;
public class DemoException2
{
```

```java
        public static void main(String[] args)
        {
            try
            {
                Class c = Class.forName("p1.Display");
                p1.Display ob =
(p1.Display)c.newInstance();
                ob.dis(123);

            }
            catch(ClassNotFoundException cnfe)
            {
                cnfe.printStackTrace();
            }
            catch(InstantiationException ie)
            {
                ie.printStackTrace();
            }
            catch(IllegalAccessException iae)
            {
                iae.printStackTrace();
            }

        }
}
```

o/p:

****Display-dis(k)****

The value k:123

===
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Assignment:

wap to read 6 sub marks,and display totMarks and percentage.

Note:

=>Sub Marks must be in b/w 0 to 100,else raise the Exception-msg as

Invalid Marks

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