# Java Training Center

(No.1 in Training & placement)

# Java 7 WorkBook

Master the Content...

W.B-4

**Author** 

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### **Topic**

- Jtc 1: Binary Literals.
- **Jtc 2: Underscores in Numeric Literals.**
- Jtc 3: Strings in switch Statements.
- **Jtc 4: Generic Instance Creation (Diamond Operator).**
- **Jtc 5: Catching Multiple Exception Types.**
- Jtc 6: Try-with-resources.
- Jtc 7: Rethrowing Exceptions with Improved Type Checking.

#### **Jtc 1: Binary Literals**

```
public class Jtc1{
/*
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             : www.jtcindia.org
            :+91-9990399111
*@Call
* */
public static void main(String JtcArgs[]){
byte by1=111;
System.out.println(by1);
System.out.println(bv1+20);
byte by2=0b10101;
System.out.println(by2);
int in=0B0111011010101;
System.out.println(in);
//int bn=0b01102;
int mn1=1237;
int mn2=01237:
System.out.println(mn1);
System.out.println(mn2);
int xy1=8;
//int xy2=08;
byte by11=98;
short sh=7845:
int val=984584;
long val1=8569854;
System.out.println(by11);
System.out.println(sh);
System.out.println(val);
System.out.println(val1);
//int val3=786a87:
int val4=0x745f2a4;
System.out.println(val4);
System.out.println("-----");
int ad1=2147483647;
System.out.println(ad1);
//int ad2=2147483648;
//System.out.println(2147483648);
//long rt1=2147483648;
long rt2=2147483648L;
```

#### **Jtc 2: Underscores in Numeric Literal**

```
public class Jtc2{
/*
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*@Call
* */
public static void main(String JtcArgs[]){
long val1=87878987656L;
long val2=87 87 89 87 656L;
System.out.println(val1);
System.out.println(val2);
System.out.println(val2+152000);
//long val3=98987 L;
//int ab1=0b 10001010;
//int ab2=0b10001010_;
int xy=0b1_00_01_01_01_101;
System.out.println(xy);
//int mn1=_06765;
//int mn2=06765 ;
int mn3=0 6765;
int mn4=06 765;
System.out.println(mn3);
System.out.println(mn4);
int 123=303030;
System.out.println(123);
int rt= 123;
System.out.println(rt);
//int hx1=0x 78f7a4;
int hx2=0x7_8f7a4;
```

System.out.println(hx2);

```
int ad=12____876;
System.out.println(ad);
float f1=1_23_452.5_678F;
System.out.println(f1);
//float f2=1452_.58F;
//float f3=1452._58F;
}
}
```

#### **Jtc 3:** Strings in switch Statements

```
public class Jtc3{
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* */
public static void main(String JtcArgs[]){
String cou="JAVA";
switch(cou){
case "JDBC":
System.out.println("Course is Jdbc");
case "EJB":
System.out.println("Course is Ejb");
case "JAVA":
System.out.println("Course is Java");
```

#### Jtc 4: Instance Creation (Diamond Operator).

```
import java.util.*;
/*

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* */
public class Jtc4{
public static void main(String JtcArgs[]){
//Before Java 7
List<String> list=new ArrayList<String>();
```

```
Map<Integer,String> map=new HashMap<Integer,String>();
Student<Integer,String,Long,String> st=new Student<Integer,String,Long,String>();
//From Java 7
List<String> list2=new ArrayList<>();
Map<Integer,String> map2=new HashMap<>();
Student<Integer,String,Long,String> st2=new Student<>();
}
class Student<I,N,P,A>{
I id;
N name;
P phone;
A add;
}
```

#### **Jtc 5:** Catching Multiple Exception Types

```
public class Jtc5 {
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*@Call
* */
public static void main(String[] args) {
System.out.println("-- Main Started --");
System.out.println("No of Arg\t:" + args.length);
try {
int ab = Integer.parseInt(args[0]);
System.out.println("-- ab value is\t:" + ab);
int res = 123 / ab;
System.out.println("-- Result is\t:" + res);
} catch (ArithmeticException e) {
System.out.println(''\n* Value should not be 0 *'');// Task 1
} catch (NumberFormatException | ArrayIndexOutOfBoundsException ex) {
System.out.println("\n* Provide one int Value as CLA *");// Task 2
} catch (Exception e) {
System.out.println("\n* Other Exception Occured *");// Task 3
System.out.println("\nAfter Catch Block");
System.out.println("Main Completed");
```

#### Jtc 6: Try-with-resources.

```
import java.io.FileInputStream;
/*
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             :+91-9990399111
*@Call
* */
public class Jtc6 {
public static void main(String[] args) {
long res1 = ResourceUser.readFile("info.txt");
System.out.println("In main Result\t:" + res1);
System.out.println();
long res3 = ResourceUser.readFile("Empty.java");
System.out.println("In main Result\t:" + res3);
class ResourceUser {
static long readFile(String fileName) {
System.out.println("-- File Name in Method\t:" + fileName);
long length = 0;
try (JtcResource resource = new JtcResource();
FileInputStream fis = new FileInputStream(fileName);
/* JtcAnotherResource other=new JtcAnotherResource(); */) {
while (true) {
int x = fis.read();
if (x == -1)
break;
length++;
long res = 13 / length;
System.out.println("Result\t:"+ res);
} catch (Exception e) { e.printStackTrace(); }
return length;
} }
class JtcResource implements AutoCloseable {
public void close() throws Exception {
System.out.println("** close method() of JtcResource **\t:" + this);
} }
class JtcAnotherResource { }
```

#### Jtc 7: Rethrowing Exceptions with Improved Type Checking.

#### Before Java 7

```
public class ObjectCreator {
public static Object getInstance(String className)
throws Exception {
Object ref = null;
trv {
Class cl = Class.forName(className);
ref = cl.newInstance();
} catch (Exception e) {
// Send mail to Mail ID
throw e:
return ref;
From Java 7
public class ObjectCreator {
public static Object getInstance(String className)
throws ClassNotFoundException, IllegalAccessException,
InstantiationException {
Object ref = null;
try {
Class cl = Class.forName(className);
ref = cl.newInstance();
} catch (Exception e) {
// Send mail to Mail ID
throw e;
return ref; }}
```