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18M19CS008

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Week 10

classmate

Date

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7) Demonstrate generics with multiple object parameters.

A) import java.util.Scanner;

class twoGen<T, V>

{ T ob1;

V ob2;

twoGen(T ob1, V ob2)

{ ob1 = ob1;

ob2 = ob2;

void showTypes()

{ System.out.println("Type of T is " + ob1.getClass().getName());

System.out.println("Type of V is " + ob2.getClass().getName());

T getob1() { return ob1; }

V getob2() { return ob2; }

class multipleGen

{ public static void main(String args[])

{ twoGen<Integer, String> tg = new twoGen<Integer, String>(10, "hello world");

tg.showTypes();

int v = tg.getob1();

System.out.println("value of int : " + v);

String str = tg.getob2();

System.out.println("value of string : " + str);

twoGen<Boolean, Float> tg1 = new twoGen<Boolean, Float>(true, 3.14f);

tg1.showTypes();

boolean b = tg1.getob1();

System.out.println("value of boolean : " + b);

float f = tg1.getob2();

System.out.println("value of float : " + f);

8) Exceptions in inheritance tree. Father → Son derived in Father, constructor takes age and throws exception wrong age() when input age < 0. in Son, constructor throws exception if son age >= 100.

A) class WrongAge extends Exception

{ private int a;

WrongAge(int b)

{ a = b;

}

public String toString() { return "WrongAge (" + a + ")"; }

class father

{ int fatherage;

father() throws WrongAge

{ Scanner sc = new Scanner(System.in);

System.out.print("Enter father's age");

fatherage = sc.nextInt();

```
if (fatherage < 0)
    throw new WrongAge(fatherage);
} else System.out.println("correct father's age");
}
```

```
class son extends father
{
    int sonage;
    son() throws WrongAge
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("enter son's age");
        sonage = sc.nextInt();
        if (sonage >= fatherage)
            throw new WrongAge(sonage);
        else System.out.println("No error");
    }
}
```

```
class exception-tree
{
    public static void main(String args[])
    {
        try { son s = new son();
            } catch (WrongAge e)
            {
                System.out.println("Caught " + e);
            }
    }
}
```