|  |  |
| --- | --- |
|  | public class ParentException extends Exception{ |
|  | protected String msg; |
|  | public ParentException(Object o){ |
|  | msg=o.toString(); |
|  | } |
|  | public String toString(){ |
|  | return "Parent: "+msg; |
|  | } |
|  | } |

|  |  |
| --- | --- |
|  | public class BadThing{ |
|  | private String msg=null; |
|  | private int num; |
|  | public BadThing(int i){ |
|  | num=i; |
|  | } |
|  | public void badMethod() throws Exception{ |
|  | if(num<11){ |
|  | throw new ArrayIndexOutOfBoundsException(); |
|  | } |
|  | if(num%2==0){ |
|  | throw new ParentException(new BadThing(num)); |
|  | }else{ |
|  | throw new ChildException(new BadThing(num)); |
|  | } |
|  | } |
|  | public String toString(){ |
|  | if(num%2==0){ |
|  | return "Even "+num; |
|  | }else{ |
|  | return "Odd "+num; |
|  | } |
|  | } |
|  | } |

|  |  |
| --- | --- |
|  | public class ChildException extends ParentException{ |
|  | public ChildException(Object o){ |
|  | super(o); |
|  | } |
|  | public String toString(){ |
|  | return "Child: "+msg; |
|  | } |
|  | } |

|  |  |
| --- | --- |
|  | public class GoodThing{ |
|  | public static void goodMethod(Object o) throws Exception{ |
|  | try{ |
|  | ((BadThing)o).badMethod();  Output:   1. Main RuntimeException 2. goodThing: Child: Odd 11 3. main: Child: Odd 11 4. goodThing: Parent: Even 14 5. Main Exception 6. goodThing: Child: Odd 17 7. main: Child: Odd 17 8. goodThing: Parent: Even 20 9. Main Exception 10. goodThing: Child: Odd 23 11. main: Child: Odd 23 |
|  | }catch(ParentException p){ |
|  | System.out.println("goodThing: "+p); |
|  | throw p; |
|  | }catch(Exception e){ |
|  | throw(e); |
|  | } |
|  | } |
|  | public static void main(String[]args){ |
|  | int i=0; |
|  | for(i=8;i<24;i+=3){ |
|  | try{ |
|  | goodMethod(new BadThing(i)); |
|  | }catch(ChildException p){ |
|  | System.out.println("main: "+p); |
|  | }catch(RuntimeException e){ |
|  | System.out.println("Main RuntimeException"); |
|  | }catch(Exception e){ |
|  | System.out.println("Main Exception"); |
|  | } |
|  | } |
|  | } |
|  | } |