

Platform-based Programming

#9 exception handling

1) try/catch block

2) User-defined exception

2019년 2학기

Problem

❖ Its output should be

Enter a command: [create width height, zoom id ratio or quit]

create 10 10

Rectangle: width 10, height 10 is added at 0

Enter a command: [create width height, zoom id ratio or quit]

create 20 20

Rectangle: width 20, height 20 is added at 1

Enter a command: [create width height, zoom id ratio or quit]

showAll

Rectangle: width 10, height 10

Rectangle: width 20, height 20

Enter a command: [create width height, zoom id ratio or quit]

zoom 0 3

Before: Rectangle: width 10, height 10

After: Rectangle: width 30, height 30

Enter a command: [create width height, zoom id ratio or quit]

showAll

Rectangle: width 30, height 30

Rectangle: width 20, height 20

Problem (Cont'd)

Enter a command: [create width height, zoom id ratio or quit]

zoom 2 5

존재하지 않는 배열의 원소를 접근했습니다.java.lang.IndexOutOfBoundsException: Index: 2, Size: 2

Enter a command: [create width height, zoom id ratio or quit]

create 20 -10

사각형의 넓이와 높이는 양수이어야 합니다. 20 -10

Enter a command: [create width height, zoom id ratio or quit]

create 10 ab

입력된 인자의 형식이 맞지 않습니다.

Enter a command: [create width height, zoom id ratio or quit]

Enter a command: [create width height, zoom id ratio or quit]

quit

Bye

Instructions

❖ Instruction #1: define an user-defined exception

```
class InvalidRectangleException extends Exception {  
    private int width, height ;  
    public InvalidRectangleException(int width, int height) {  
        this.width = width ; this.height = height ;  
    }  
    public int getWidth() { return width; }  
    public int getHeight() { return height; }  
}
```

Instructions

❖ Instruction #2: just revise the following main function !

```
public class RectangleManager {  
    private ArrayList<MyRectangle> rectangles = new ArrayList<>() ;  
    private Scanner scannerObject ;  
  
    public static void main(String[] args) {  
        Scanner scannerObject = new Scanner(System.in) ;  
        RectangleManager manager = new RectangleManager(scannerObject) ;  
        while ( true ) {  
            System.out.println("Enter a command: [create width height, zoom id ratio or quit]") ;  
            final String command = scannerObject.next() ;  
            if ( command.equalsIgnoreCase("create")) { manager.create() ; }  
            else if ( command.equalsIgnoreCase("zoom")) { manager.zoom() ; }  
            else if ( command.equalsIgnoreCase("showAll")) { manager.showAll() ; }  
            else if ( command.equalsIgnoreCase("quit")) { System.out.println("Bye") ; break ; }  
        }  
    }  
}
```