

CSSE 220 – Object-Oriented Software Development  
**Rose-Hulman** Institute of Technology

Worksheet 15

Name (Print): \_\_\_\_\_ Section: \_\_\_\_\_

### 1. Program execution models

Identify the type of programming represented by each flow.

- Start → Step 1 → Step 2 → Step 3 → End \_\_\_\_\_
- Start → WAIT → WAIT → WAIT → (something happens) → react \_\_\_\_\_

2. **Event definition.** An event is \_\_\_\_\_ that describes something that happened in the program or its environment.

### 3. Event types

For each user action below, write the type of event that is generated.

- Clicking a button \_\_\_\_\_
- Pressing Enter in a text field \_\_\_\_\_
- Pressing a key on the keyboard \_\_\_\_\_
- Resizing a window \_\_\_\_\_

### 4. Event anatomy

An event object contains three main pieces of information. Fill in the blanks below.

- \_\_\_\_\_ – the component that generated it
- \_\_\_\_\_ – what kind of action occurred
- \_\_\_\_\_ – event details (like coordinates or command text)

### 5. Lambda action listener

Complete the code so that clicking the button calls the method `increment()`.

```
1 JButton countButton = new JButton("Count");
2
3 countButton.addActionListener( _____ );
```

Why is a lambda appropriate in this case?

\_\_\_\_\_

## 6. Named inner action listener

Complete the code so that all three buttons use the same listener.

```
1 private class ButtonListener implements ActionListener {  
2     @Override  
3     public void actionPerformed(ActionEvent e) {  
4         handleClick(e);  
5     }  
6 }
```

```
1 ButtonListener bl = new ButtonListener();  
2 up.addActionListener( _____ );  
3 down.addActionListener( _____ );  
4 reset.addActionListener( _____ );
```

Why is using a class-based listener useful when handling multiple buttons?

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## 7. Final Project Team Checklist

- ☐ Team is formed (name): \_\_\_\_\_
- ☐ Team captain is identified (name) \_\_\_\_\_
- ☐ Team has exchanged schedules for meetings outside of class
- ☐ A shared Google Doc is created for project milestones (Note: Google doc is preferred over sharepoint word document)

## 8. Before You Leave

Write one question you still have about today's topic.

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