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0801CS221030

DEBUGGING MINI PROJECT

DEBUGGING USING PRINT STATEMENTS :

```java
public void actionPerformed(ActionEvent e) {

    // Check which button was clicked based on the event source

    if (e.getSource() == b1) {

        System.out.println("hello1");

        String label = b1.getLabel();

        // Check if the label can be moved to adjacent buttons

        if (b2.getLabel().equals("")) {

            b2.setLabel(label);

            b1.setLabel("");

        }

        if (b4.getLabel().equals("")) {

            b4.setLabel(label);

            b1.setLabel("");

        }

    }

    if (e.getSource() == b2) {

        System.out.println("hello2");

        String label = b2.getLabel();

        if (b1.getLabel().equals("")) {

            b1.setLabel(label);

            b2.setLabel("");

        }

        if (b3.getLabel().equals("")) {

            b3.setLabel(label);

            b2.setLabel("");
```

```java
        }

        if (b5.getLabel().equals("")) {

          b5.setLabel(label);

          b2.setLabel("");

        }

      }

      if (e.getSource() == b3) {

         System.out.println("hello3");

        String label = b3.getLabel();

        if (b2.getLabel().equals("")) {

          b2.setLabel(label);

          b3.setLabel("");

        }

        if (b6.getLabel().equals("")) {

          b6.setLabel(label);

          b3.setLabel("");

        }

      }

      if (e.getSource() == b4) {

         System.out.println("hello4");

        String label = b4.getLabel();

        if (b1.getLabel().equals("")) {

          b1.setLabel(label);

          b4.setLabel("");

        }

        if (b7.getLabel().equals("")) {

          b7.setLabel(label);
```

```java
        b4.setLabel("");

    }

    if (b5.getLabel().equals("")) {

      b5.setLabel(label);

      b4.setLabel("");

    }

  }

  if (e.getSource() == b5) {

    System.out.println("hello5");

    String label = b5.getLabel();

    if (b2.getLabel().equals("")) {

      b2.setLabel(label);

      b5.setLabel("");

    }

    if (b6.getLabel().equals("")) {

      b6.setLabel(label);

      b5.setLabel("");

    }

    if (b4.getLabel().equals("")) {

      b4.setLabel(label);

      b5.setLabel("");

    }

    if (b8.getLabel().equals("")) {

      b8.setLabel(label);

      b5.setLabel("");

    }

  }
```

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```java
        if (e.getSource() == b6) {

            System.out.println("hello6");

            String label = b6.getLabel();

            if (b9.getLabel().equals("")) {

                b9.setLabel(label);

                b6.setLabel("");

            }

            if (b3.getLabel().equals("")) {

                b3.setLabel(label);

                b6.setLabel("");

            }

            if (b5.getLabel().equals("")) {

                b5.setLabel(label);

                b6.setLabel("");

            }

        }

        if (e.getSource() == b7) {

            System.out.println("hello7");

            String label = b7.getLabel();

            if (b4.getLabel().equals("")) {

                b4.setLabel(label);

                b7.setLabel("");

            }

            if (b8.getLabel().equals("")) {

                b8.setLabel(label);

                b7.setLabel("");

            }
```

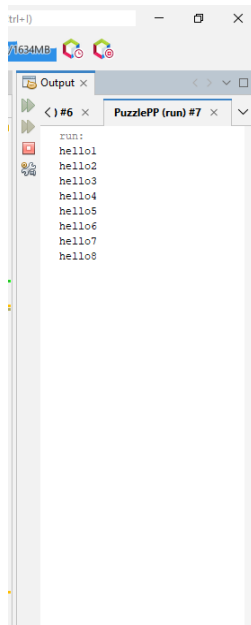```
        }

      if (e.getSource() == b8) {

          System.out.println("hello8");

        String label = b8.getLabel();

        if (b9.getLabel().equals("")) {

          b9.setLabel(label);

          b8.setLabel("");

        }

        if (b7.getLabel().equals("")) {

          b7.setLabel(label);

          b8.setLabel("");

        }

        if (b5.getLabel().equals("")) {

          b5.setLabel(label);

          b8.setLabel("");

        }

      }

      if (e.getSource() == b9) {

          System.out.println("hello9");

        String label = b9.getLabel();

        if (b6.getLabel().equals("")) {

          b6.setLabel(label);

          b9.setLabel("");

        }

        if (b8.getLabel().equals("")) {

          b8.setLabel(label);

          b9.setLabel("");
```

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```
        }

    }
```

OUTPUT :

REASON :

In this output hello9 in not printing in the console , this indicates that there is an error in the clicking of button 9 and that error is that we have not used action listener for button 9 after debugging this code , we figured out the mistake and corrected our code.