

# CSI3025 Application Development and Deployment Architecture

**Team name:** Trio dev

## **Team members:**

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## Digital Assignment:

### Question: Paint Software – DA Set – A

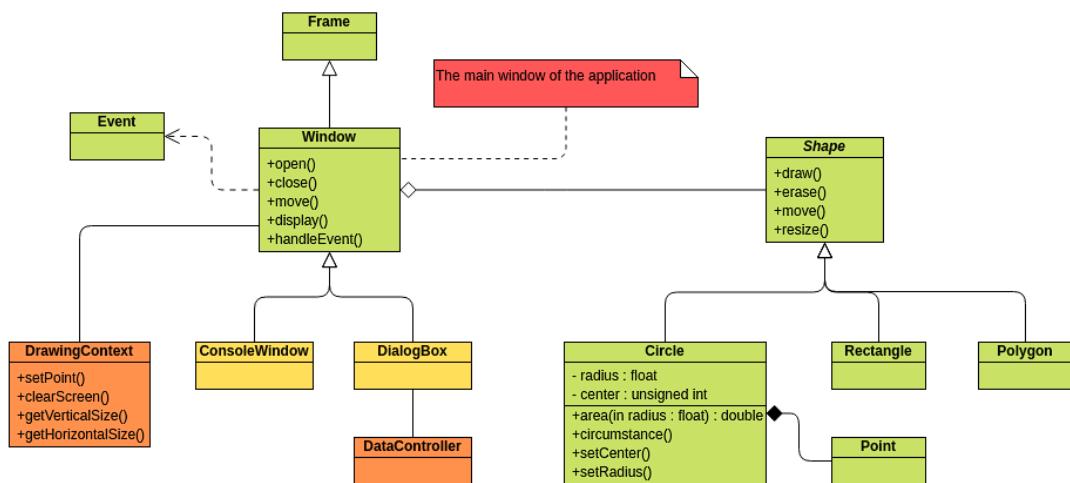
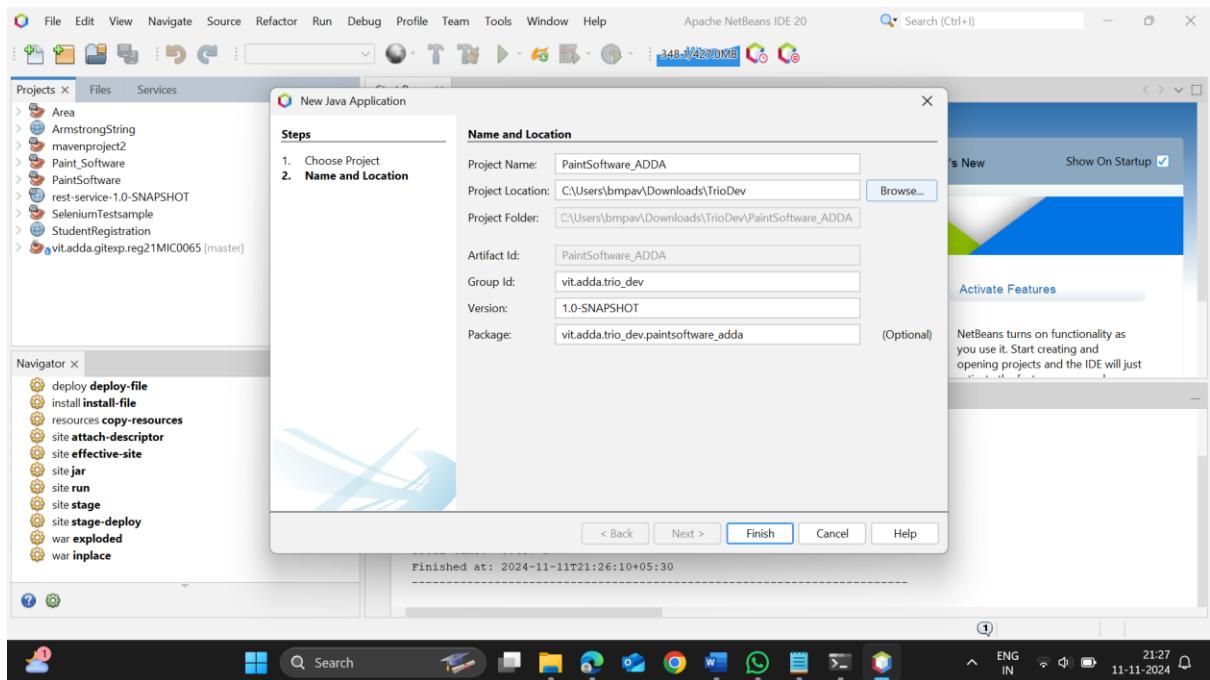


Figure 1: Paint Software

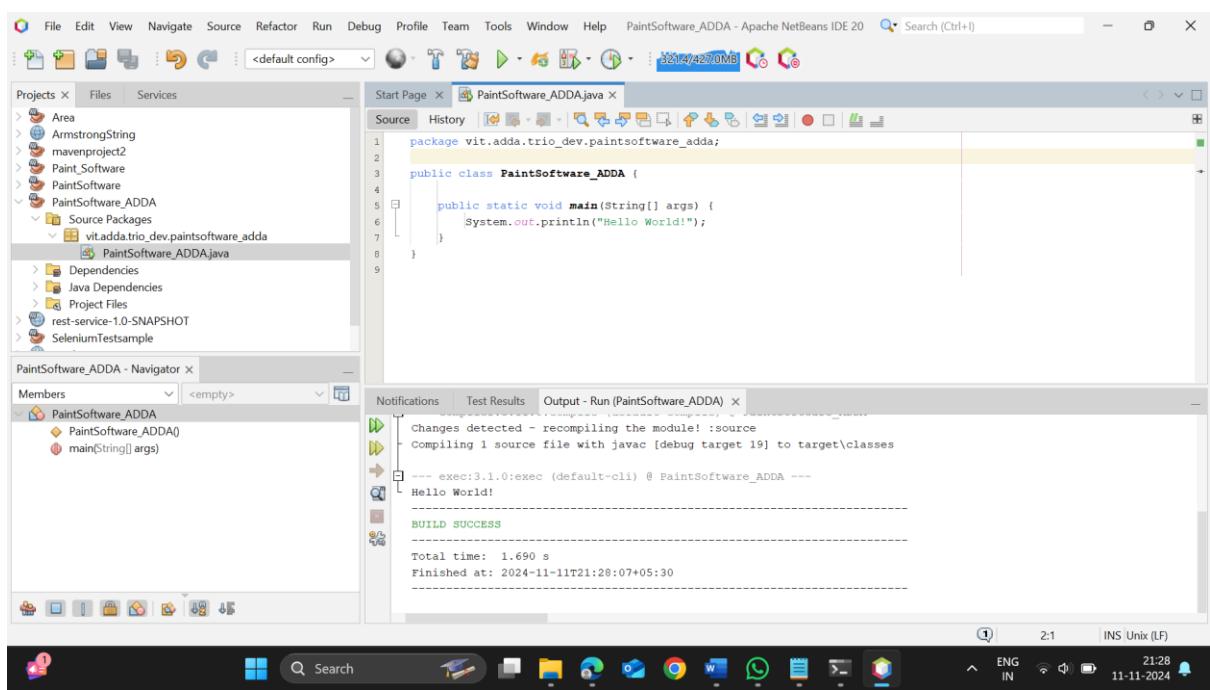
1. Create a folder with a phrase – Trio dev

A screenshot of a Windows Command Prompt window titled "C:\Windows\System32\cmd.e". The window shows the following text:  
Microsoft Windows [Version 10.0.22631.4317]  
(c) Microsoft Corporation. All rights reserved.  
C:\Users\bmpav\Downloads>mkdir TrioDev  
C:\Users\bmpav\Downloads>

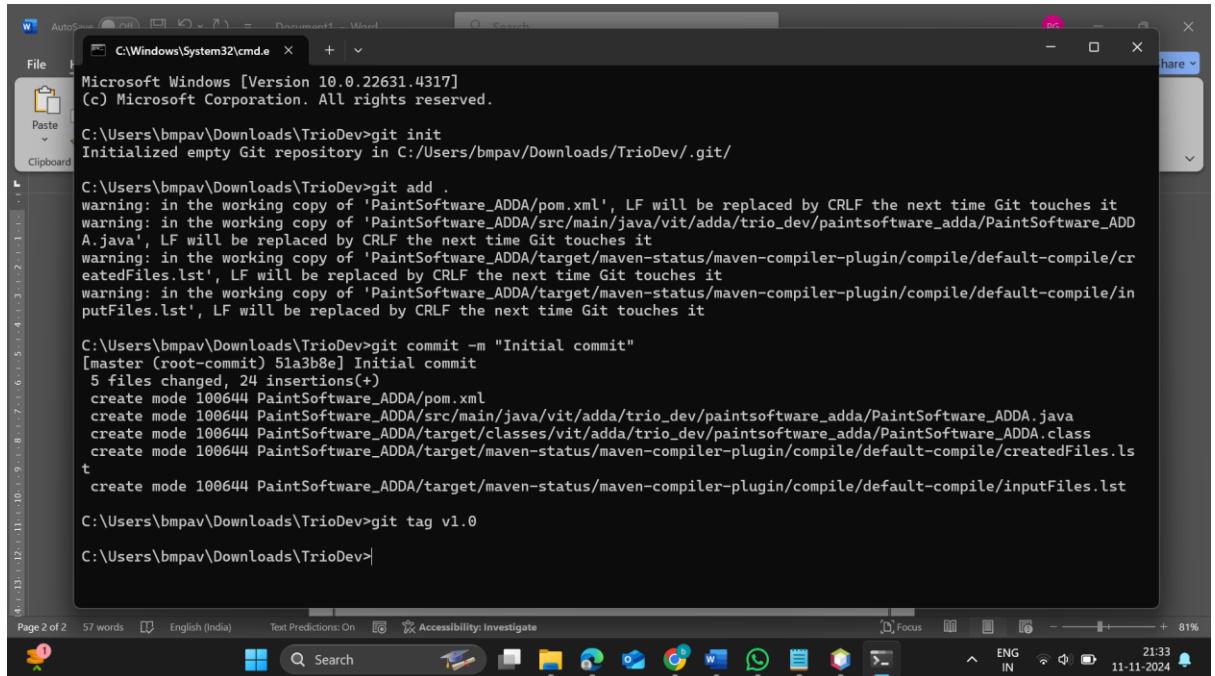
## 2. Create a project in netbeans



## 3. The initial code:



4. Initialise the git repo and with default code make an initial commit.  
Also add the release version.



```

C:\Windows\System32\cmd.exe x + v Microsoft Windows [Version 10.0.22631.4317]
(c) Microsoft Corporation. All rights reserved.

C:\Users\bmpav\Downloads\TrioDev>git init
Initialized empty Git repository in C:/Users/bmpav/Downloads/TrioDev/.git/

C:\Users\bmpav\Downloads\TrioDev>git add .
warning: in the working copy of 'PaintSoftware_ADDA/pom.xml', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/PaintSoftware_ADDA.java', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'PaintSoftware_ADDA/target/maven-status/maven-compiler-plugin/compile/default-compile/createdFiles.lst', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'PaintSoftware_ADDA/target/maven-status/maven-compiler-plugin/compile/default-compile/inputFiles.lst', LF will be replaced by CRLF the next time Git touches it

C:\Users\bmpav\Downloads\TrioDev>git commit -m "Initial commit"
[master (root-commit) 51a3b8e] Initial commit
 5 files changed, 24 insertions(+)
 create mode 100644 PaintSoftware_ADDA/pom.xml
 create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/PaintSoftware_ADDA.java
 create mode 100644 PaintSoftware_ADDA/target/classes/vit/adda/trio_dev/paintsoftware_adda/PaintSoftware_ADDA.class
 create mode 100644 PaintSoftware_ADDA/target/maven-status/maven-compiler-plugin/compile/default-compile/createdFiles.lst
 create mode 100644 PaintSoftware_ADDA/target/maven-status/maven-compiler-plugin/compile/default-compile/inputFiles.lst

C:\Users\bmpav\Downloads\TrioDev>git tag v1.0
C:\Users\bmpav\Downloads\TrioDev>

```

**Note:** The work distribution of D1, D2, D3.

D1	D2	D3
Circle.java Shape.java Rectangle.java Polygon.java Point.java Window.java Event.java Frame.java  CircleArea.java CircleCircumference.java WindowOpening.java FrameShowing.java	DrawingContext.java DataController.java  DrawingContextTesting.java	DialogBox.java Console Window.java PaintSoftware_ADDA.java

5. Now make a dev branch and create a branch in dev branch—feature/D1 and config it.

```
C:\Users\bmpav\Downloads\TrioDev>git checkout -b dev
Switched to a new branch 'dev'

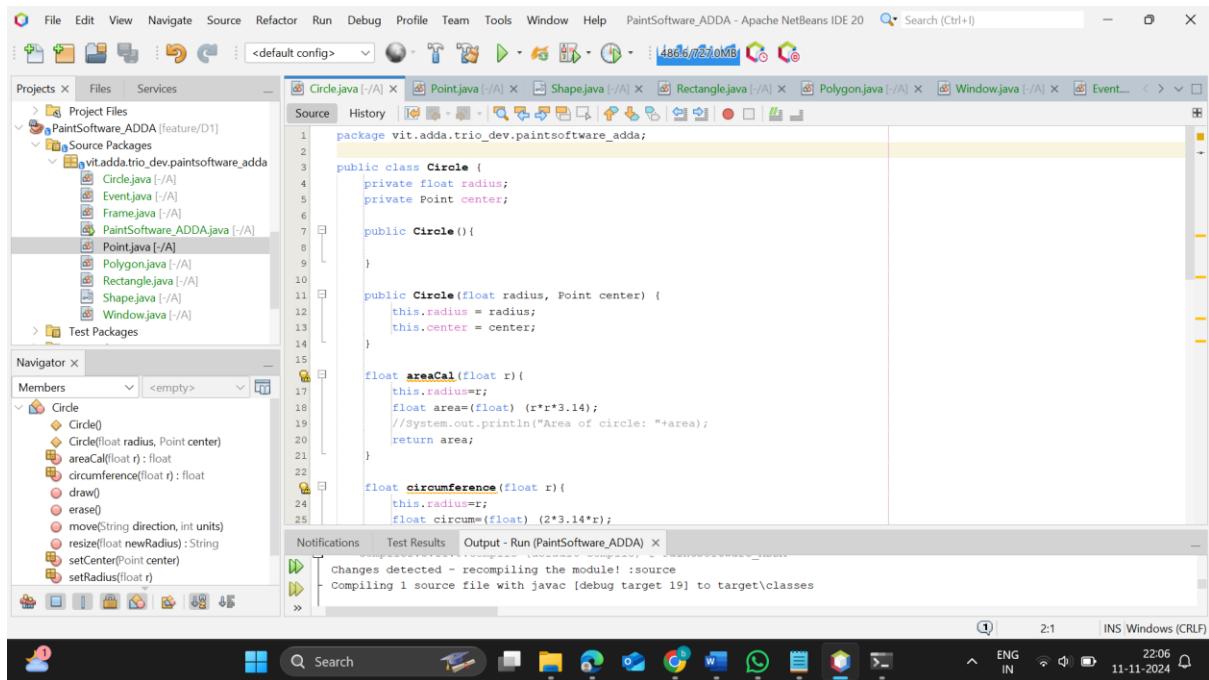
C:\Users\bmpav\Downloads\TrioDev>git checkout -b feature/D1
Switched to a new branch 'feature/D1'

C:\Users\bmpav\Downloads\TrioDev>git config --global user.name "Developer D1"
C:\Users\bmpav\Downloads\TrioDev>git config --global user.email "d1@gmail.com"

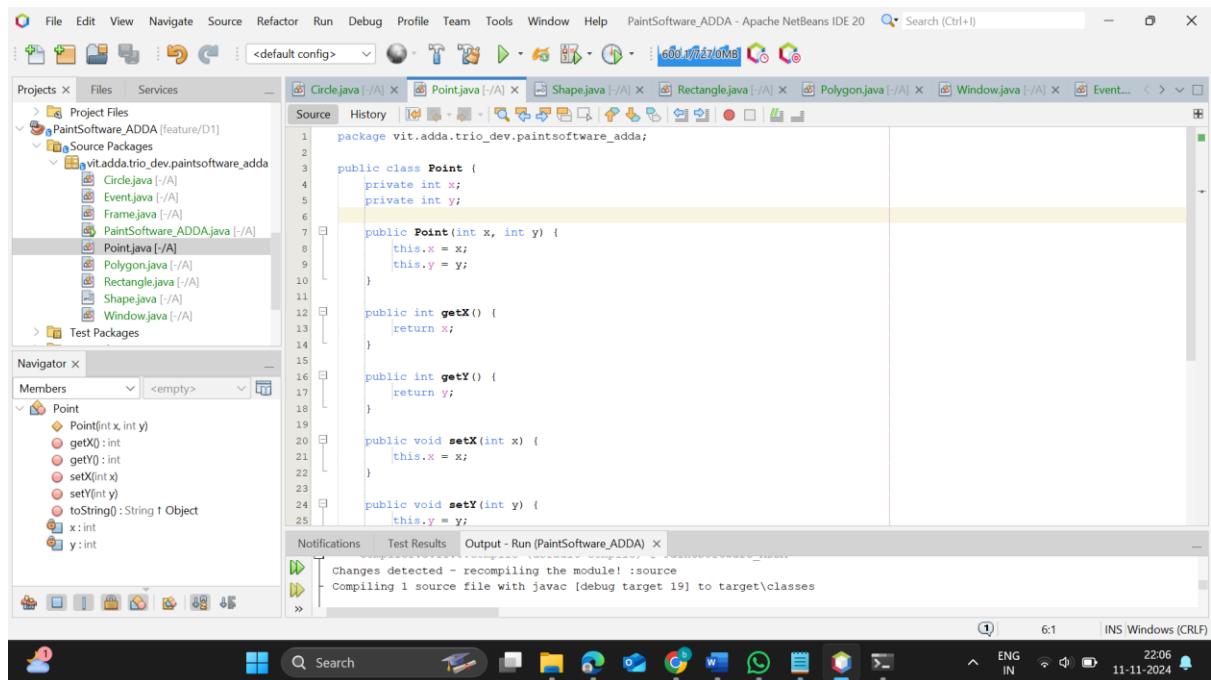
C:\Users\bmpav\Downloads\TrioDev>
```

6. Now create the necessary codes.

Circle.java:



## Point.java:

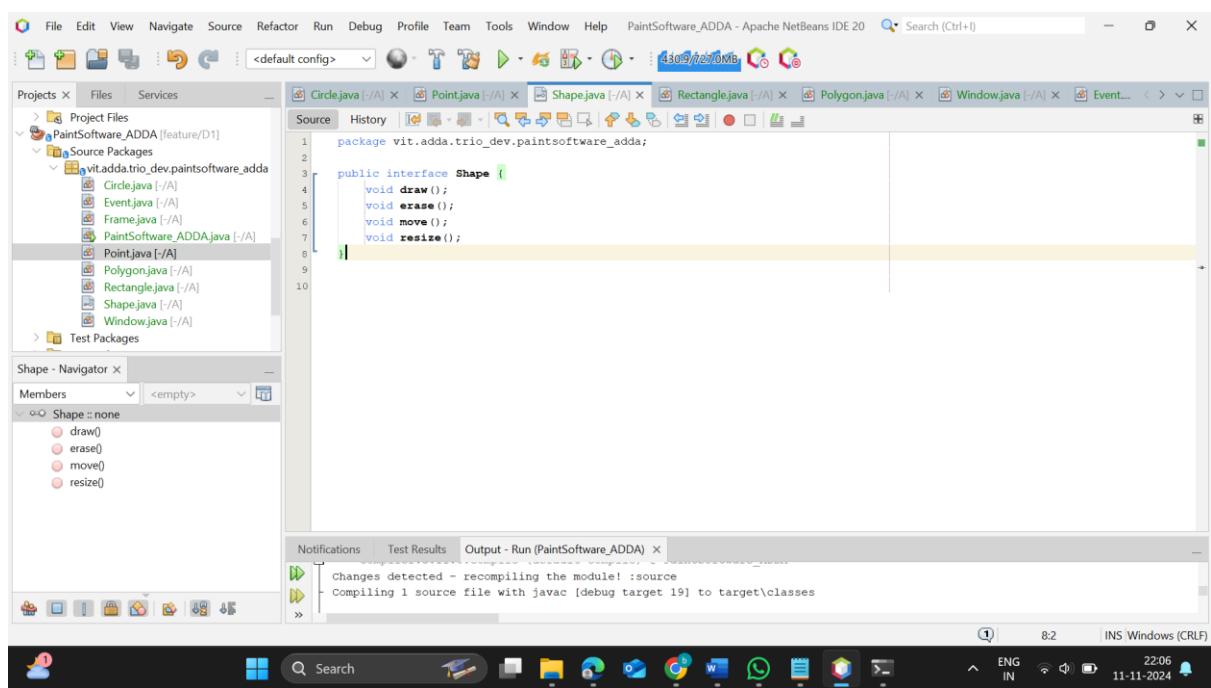


The screenshot shows the Apache NetBeans IDE 20 interface. The top menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help, and PaintSoftware\_ADDA - Apache NetBeans IDE 20. The status bar at the bottom shows memory usage (600.7/727.0MB), a search field (Search (Ctrl+I)), and the date/time (11-11-2024 22:06). The Projects tab in the left sidebar lists 'Project Files' and 'Source Packages' under 'PaintSoftware\_ADDA [feature/D1]'. The Navigator tab shows members of the 'Point' class, including Point(int x, int y), getX(), getY(), setX(int x), setY(int y), and toString(). The Source tab displays the Java code for the Point class:

```
1 package vit.adda.trio_dev.paintsoftware_adda;
2
3 public class Point {
4     private int x;
5     private int y;
6
7     public Point(int x, int y) {
8         this.x = x;
9         this.y = y;
10    }
11
12    public int getX() {
13        return x;
14    }
15
16    public int getY() {
17        return y;
18    }
19
20    public void setX(int x) {
21        this.x = x;
22    }
23
24    public void setY(int y) {
25        this.y = y;
26    }
27}
```

The Output tab shows compilation messages: "Changes detected - recompiling the module! :source" and "Compiling 1 source file with javac [debug target 19] to target\classes".

## Shape.java:

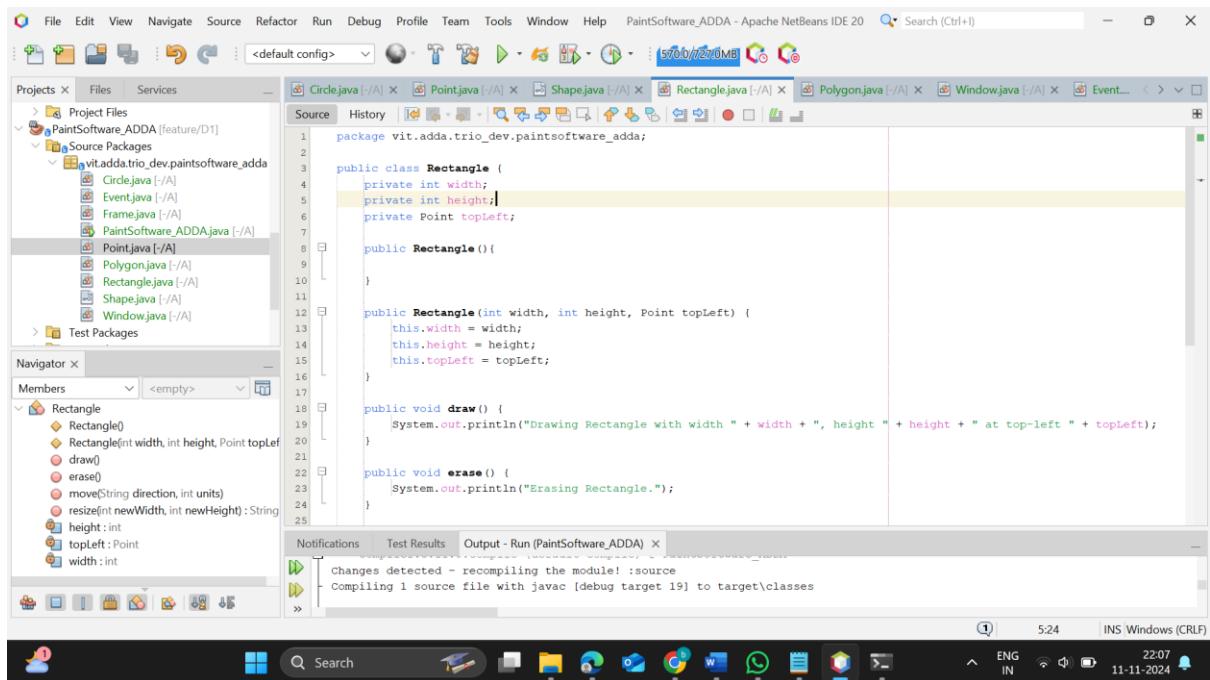


The screenshot shows the Apache NetBeans IDE 20 interface. The top menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help, PaintSoftware\_ADDA - Apache NetBeans IDE 20, and PaintSoftware\_ADDA - Apache NetBeans IDE 20. The status bar at the bottom shows memory usage (430.9/727.0MB), a search field (Search (Ctrl+I)), and the date/time (11-11-2024 22:06). The Projects tab in the left sidebar lists 'Project Files' and 'Source Packages' under 'PaintSoftware\_ADDA [feature/D1]'. The Navigator tab shows members of the 'Shape' interface, including draw(), erase(), move(), and resize(). The Source tab displays the Java code for the Shape interface:

```
1 package vit.adda.trio_dev.paintsoftware_adda;
2
3 public interface Shape {
4     void draw();
5     void erase();
6     void move();
7     void resize();
8 }
```

The Output tab shows compilation messages: "Changes detected - recompiling the module! :source" and "Compiling 1 source file with javac [debug target 19] to target\classes".

## Rectangle.java:



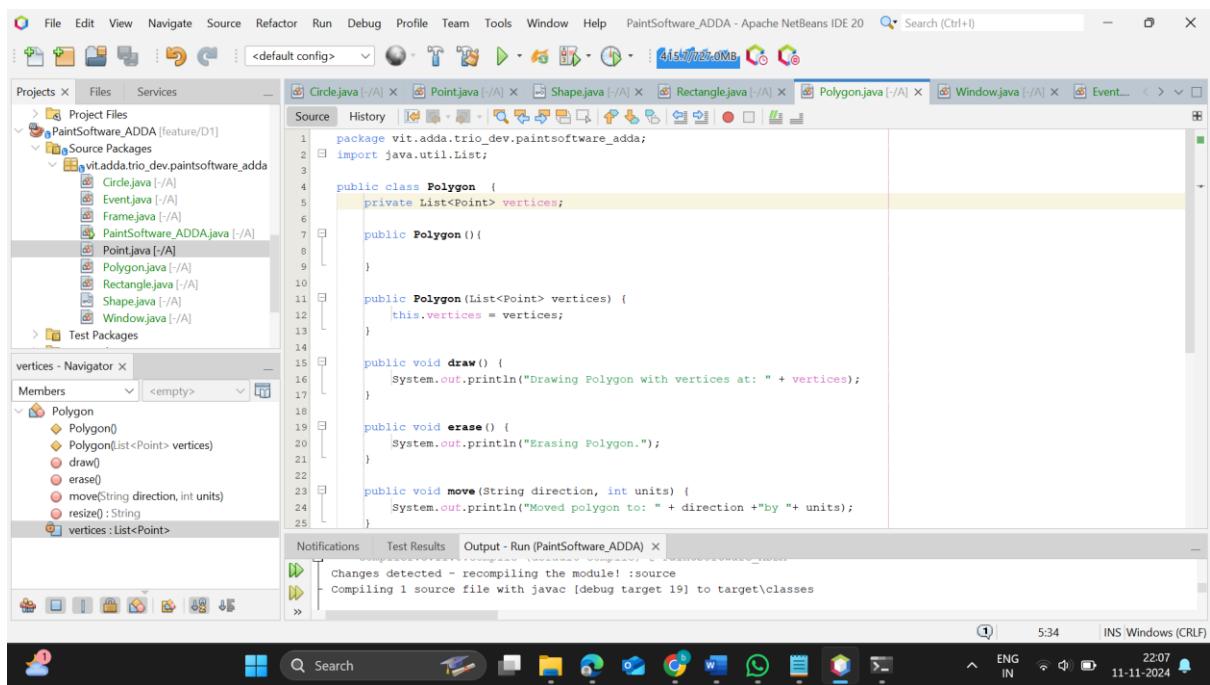
The screenshot shows the Apache NetBeans IDE interface with the Rectangle.java file open in the editor. The code defines a Rectangle class with methods for drawing, erasing, moving, and resizing. The Navigator pane shows the class members: width, height, and topLeft. The Output pane indicates changes detected and compilation progress.

```
1 package vit.adda.trio_dev.paintsoftware_adda;
2
3 public class Rectangle {
4     private int width;
5     private int height;
6     private Point topLeft;
7
8     public Rectangle() {
9     }
10
11     public Rectangle(int width, int height, Point topLeft) {
12         this.width = width;
13         this.height = height;
14         this.topLeft = topLeft;
15     }
16
17     public void draw() {
18         System.out.println("Drawing Rectangle with width " + width + ", height " + height + " at top-left " + topLeft);
19     }
20
21     public void erase() {
22         System.out.println("Erasing Rectangle.");
23     }
24
25 }
```

Notifications Test Results Output - Run (PaintSoftware\_ADDA) X

Changes detected - recompiling the module! :source  
Compiling 1 source file with javac [debug target 19] to target\classes

## Polygon.java:



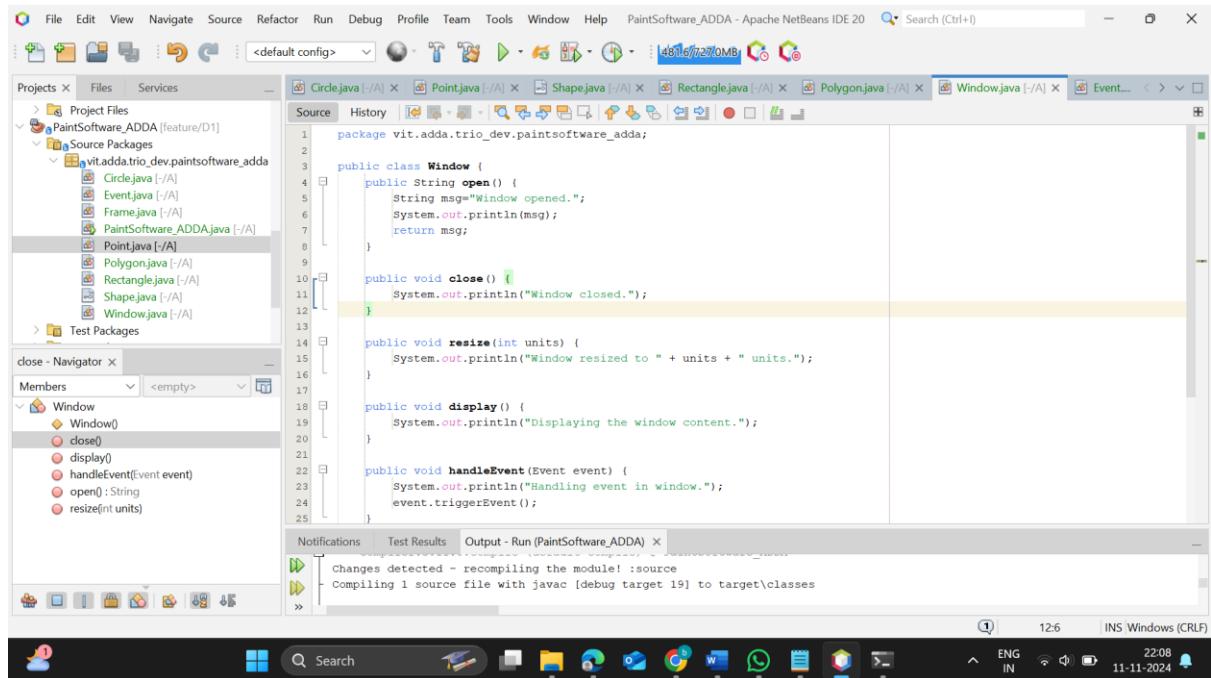
The screenshot shows the Apache NetBeans IDE interface with the Polygon.java file open in the editor. The code defines a Polygon class with methods for drawing, erasing, moving, and resizing, along with a vertices attribute. The Navigator pane shows the class members: vertices and the vertices field. The Output pane indicates changes detected and compilation progress.

```
1 package vit.adda.trio_dev.paintsoftware_adda;
2 import java.util.List;
3
4 public class Polygon {
5     private List<Point> vertices;
6
7     public Polygon() {
8     }
9
10    public Polygon(List<Point> vertices) {
11        this.vertices = vertices;
12    }
13
14    public void draw() {
15        System.out.println("Drawing Polygon with vertices at: " + vertices);
16    }
17
18    public void erase() {
19        System.out.println("Erasing Polygon.");
20    }
21
22    public void move(String direction, int units) {
23        System.out.println("Moved polygon to: " + direction +"by "+ units);
24    }
25 }
```

Notifications Test Results Output - Run (PaintSoftware\_ADDA) X

Changes detected - recompiling the module! :source  
Compiling 1 source file with javac [debug target 19] to target\classes

## Window.java:

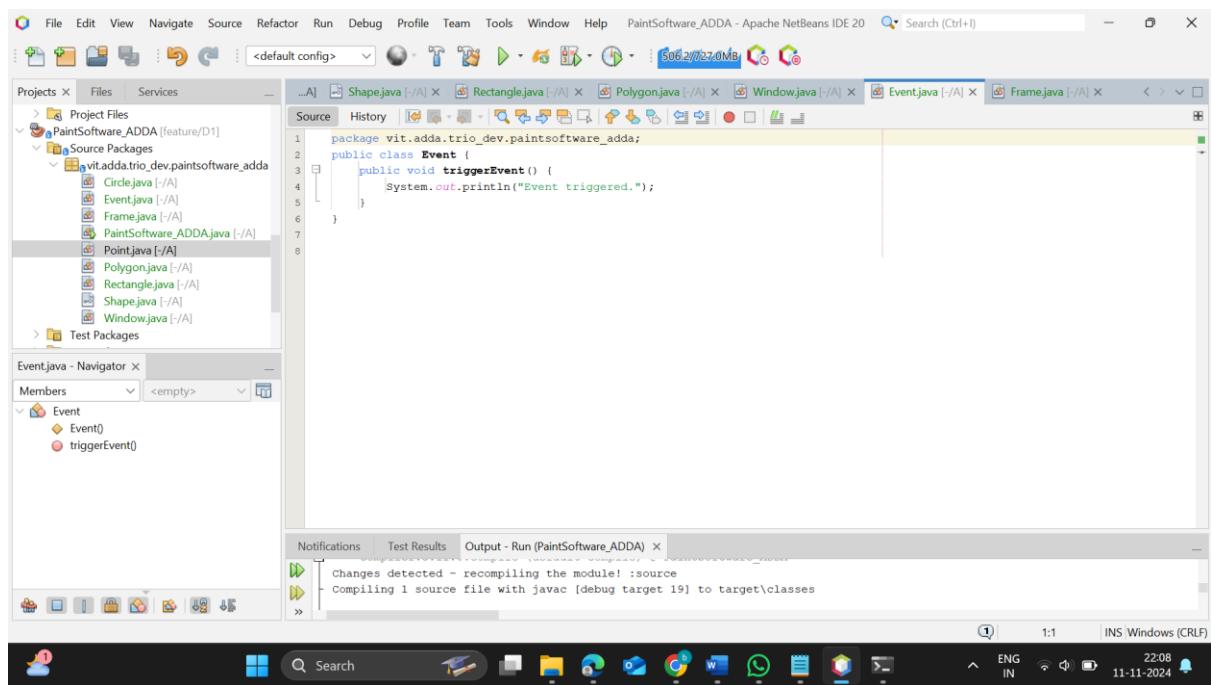


The screenshot shows the Apache NetBeans IDE 20 interface with the Window.java file open in the editor. The code defines a Window class with methods for opening, closing, resizing, displaying content, and handling events.

```
1 package vit.adda.trio_dev.paintsoftware_adda;
2
3 public class Window {
4     public String open() {
5         String msg="Window opened.";
6         System.out.println(msg);
7         return msg;
8     }
9
10    public void close() {
11        System.out.println("Window closed.");
12    }
13
14    public void resize(int units) {
15        System.out.println("Window resized to " + units + " units.");
16    }
17
18    public void display() {
19        System.out.println("Displaying the window content.");
20    }
21
22    public void handleEvent(Event event) {
23        System.out.println("Handling event in window.");
24        event.triggerEvent();
25    }
}
```

The Notifications panel shows a message about changes detected and recompiling the module. The system tray at the bottom right indicates it's 12:08 on 11-11-2024.

## Event.java:



The screenshot shows the Apache NetBeans IDE 20 interface with the Event.java file open in the editor. The code defines an Event class with a triggerEvent() method.

```
1 package vit.adda.trio_dev.paintsoftware_adda;
2
3 public class Event {
4     public void triggerEvent() {
5         System.out.println("Event triggered.");
6     }
7 }
```

The Notifications panel shows a message about changes detected and recompiling the module. The system tray at the bottom right indicates it's 22:08 on 11-11-2024.

## Frame.java:

The screenshot shows the Apache NetBeans IDE 20 interface. The top menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help, and PaintSoftware\_ADDA - Apache NetBeans IDE 20. The status bar at the bottom shows memory usage (3945/7290MB), file paths, and system information (ENG IN, 22:08, 11-11-2024).

The Projects tab shows the project structure under PaintSoftware\_ADDA [feature/D1]. The Source Packages section contains vit.adda.trio\_dev.paintsoftware\_adda package with classes Circle.java, Event.java, Frame.java, PaintSoftware\_ADDA.java, Point.java, Polygon.java, Rectangle.java, Shape.java, and Window.java.

The Editor tab displays the Frame.java code:

```
1 package vit.adda.trio_dev.paintsoftware_adda;
2 public class Frame {
3     private final Window w = new Window();
4
5     public String showFrame() {
6         System.out.println("Frame shown.");
7         w.display();
8         return "Frame shown.";
9     }
10}
11
12
```

The Navigator tab shows the members of the Frame class: Frame(), showFrame():String, and w:Window.

The Output tab shows notifications: Changes detected - recompiling the module! :source and Compiling 1 source file with javac [debug target 19] to target\classes.

## CircleAreaTest.java:

The screenshot shows the Apache NetBeans IDE 20 interface. The top menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help, PaintSoftware\_ADDA - Apache NetBeans IDE 20, and Search (Ctrl+I). The status bar at the bottom shows memory usage (5682/7290MB), file paths, and system information (ENG IN, 9:1, 22:14, 11-11-2024).

The Projects tab shows the project structure under PaintSoftware\_ADDA [feature/D1]. The Test Packages section contains vit.adda.trio\_dev.paintsoftware\_adda package with CircleAreaTest.java, CircleCircumferenceTest.java, FrameTesting.java, and WindowOpenTesting.java.

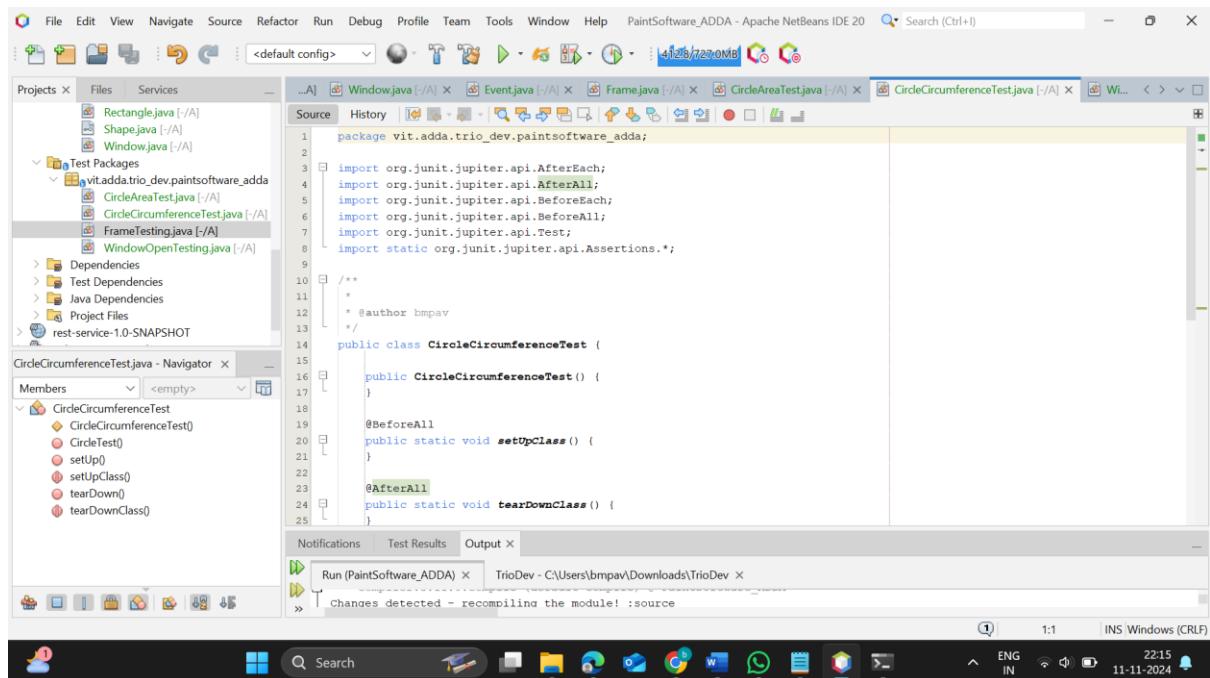
The Editor tab displays the CircleAreaTest.java code:

```
1 package vit.adda.trio_dev.paintsoftware_adda;
2
3 import org.junit.jupiter.api.AfterEach;
4 import org.junit.jupiter.api.AfterAll;
5 import org.junit.jupiter.api.BeforeEach;
6 import org.junit.jupiter.api.BeforeAll;
7 import org.junit.jupiter.api.Test;
8 import static org.junit.jupiter.api.Assertions.*;
9
10 public class CircleAreaTest {
11
12     public CircleAreaTest() {
13     }
14
15     @BeforeAll
16     public static void setUpClass() {
17     }
18
19     @AfterAll
20     public static void tearDownClass() {
21     }
22
23     @BeforeEach
24     public void setUp() {
25     }
26 }
```

The Navigator tab shows the members of the CircleAreaTest class: CircleAreaTest(), CircleTest(), setUp(), setUpClass(), tearDown(), and tearDownClass().

The Output tab shows notifications: Run (PaintSoftware\_ADDA) X, TrioDev - C:\Users\bmpav\Downloads\TrioDev X, and Changes detected - recompiling the module! :source.

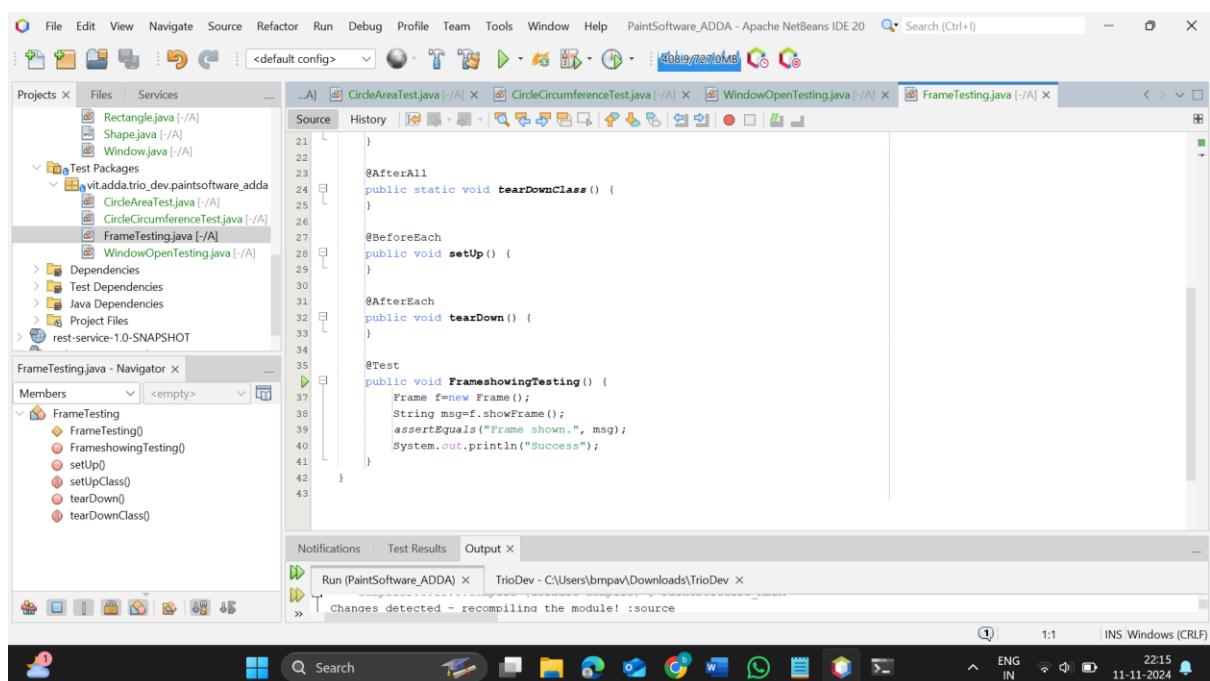
## CircleCircumference.java



The screenshot shows the Apache NetBeans IDE interface with the following details:

- Project Explorer:** Shows files like Rectangle.java, Shape.java, Window.java, and several test classes under the Test Packages section.
- Source Editor:** Displays the code for CircleCircumferenceTest.java. The code includes imports for JUnit Jupiter annotations and assertions, and defines a class CircleCircumferenceTest with setup and teardown methods.
- Output:** Shows a message indicating changes detected and recompiling the module.
- System Tray:** Shows standard Windows system icons for battery, network, and date/time (11-11-2024, 22:15).

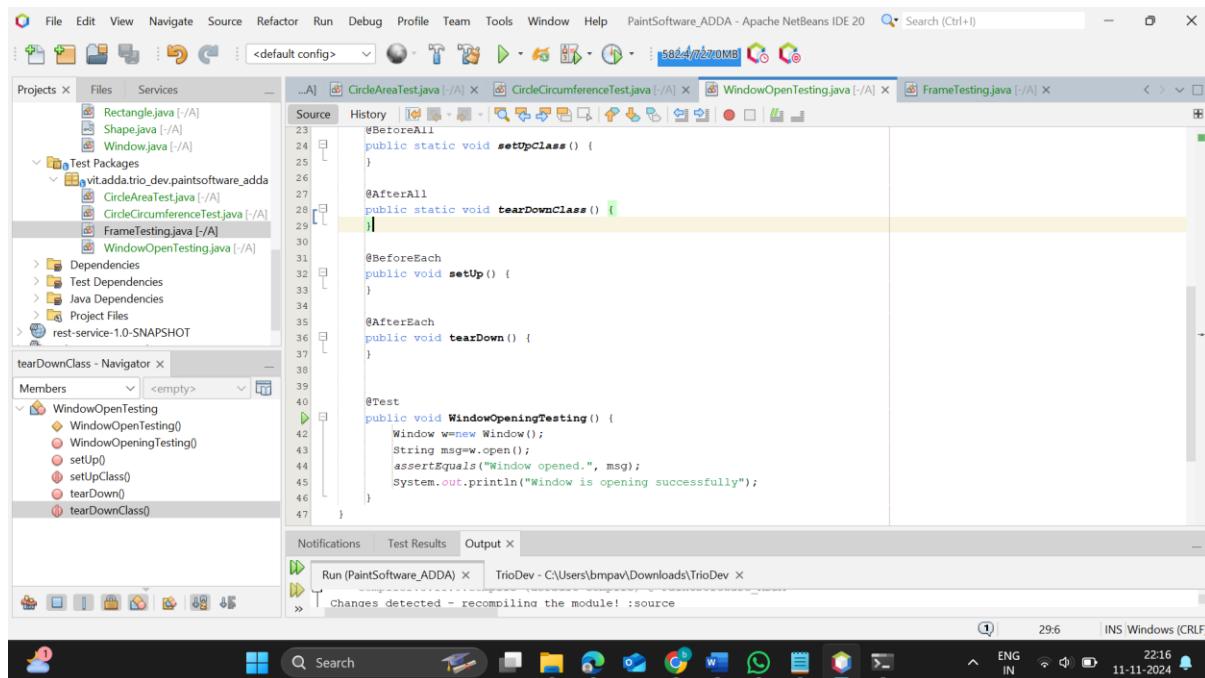
## FrameTesting.java:



The screenshot shows the Apache NetBeans IDE interface with the following details:

- Project Explorer:** Shows files like Rectangle.java, Shape.java, Window.java, and several test classes under the Test Packages section.
- Source Editor:** Displays the code for FrameTesting.java. The code includes annotations @AfterAll, @BeforeEach, and @Test, and defines a method frameshowingTesting that creates a new Frame object and asserts its showFrame method.
- Output:** Shows a message indicating changes detected and recompiling the module.
- System Tray:** Shows standard Windows system icons for battery, network, and date/time (11-11-2024, 22:15).

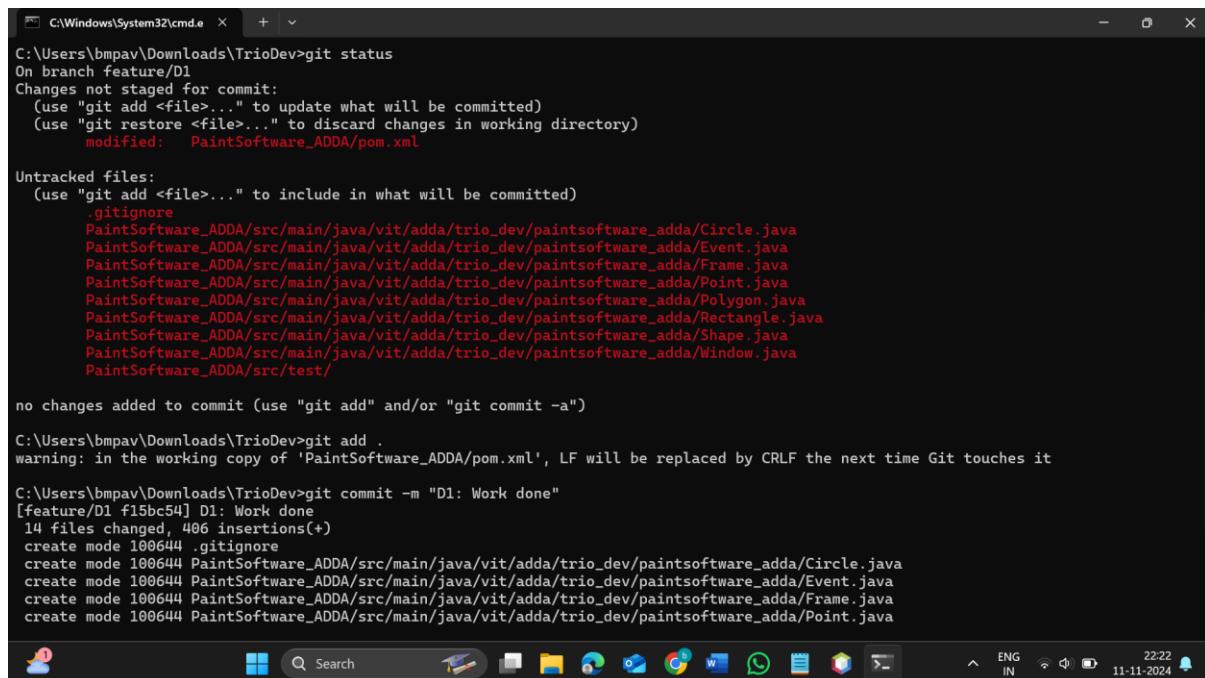
## WindowOpenTesting.java:



The screenshot shows the Apache NetBeans IDE interface. The title bar reads "PaintSoftware\_ADDA - Apache NetBeans IDE 20". The menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help. The toolbar has various icons for file operations. The Projects tab shows a package named "vit.adda.trio\_dev.paintsoftware\_adda" containing classes like Rectangle.java, Shape.java, Window.java, CircleAreaTest.java, CircleCircumferenceTest.java, FrameTesting.java, and WindowOpenTesting.java. The Files tab is selected, showing the source code for WindowOpenTesting.java. The code includes annotations @BeforeAll, @AfterAll, @BeforeEach, and @AfterEach, and a test method @Test named WindowOpeningTesting(). The Output tab shows a message about changes detected and recompiling the module. The system tray at the bottom right shows the date and time as 11-11-2024.

```
23  @BeforeAll
24      public static void setUpClass() {
25  }
26
27  @AfterAll
28      public static void tearDownClass() {
29  }
30
31  @BeforeEach
32      public void setUp() {
33  }
34
35  @AfterEach
36      public void tearDown() {
37  }
38
39
40  @Test
41      public void WindowOpeningTesting() {
42          Window w=new Window();
43          String msg=w.open();
44          assertEquals("Window opened.", msg);
45          System.out.println("Window is opening successfully");
46      }
47 }
```

## 7. Now add the files and commit the files.



The screenshot shows a Windows Command Prompt window titled "cmd" with the path "C:\Windows\System32\cmd.exe". The command "git status" is run, showing changes staged for commit (modified: PaintSoftware\_ADDA/pom.xml) and untracked files (multiple Java files in the PaintSoftware\_ADDA directory). The command "git add ." is run, followed by "warning: in the working copy of 'PaintSoftware\_ADDA/pom.xml', LF will be replaced by CRLF the next time Git touches it". Finally, "git commit -m "D1: Work done"" is run, resulting in 14 files changed, 406 insertions(+), and the creation of .gitignore, Circle.java, Event.java, Frame.java, Point.java, Polygon.java, Rectangle.java, Shape.java, and Window.java files.

```
C:\Users\bmpav\Downloads\TrioDev>git status
On branch feature/D1
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
    modified:   PaintSoftware_ADDA/pom.xml

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    .gitignore
    PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Circle.java
    PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Event.java
    PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Frame.java
    PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Point.java
    PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Polygon.java
    PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Rectangle.java
    PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Shape.java
    PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Window.java
    PaintSoftware_ADDA/src/test

no changes added to commit (use "git add" and/or "git commit -a")

C:\Users\bmpav\Downloads\TrioDev>git add .
warning: in the working copy of 'PaintSoftware_ADDA/pom.xml', LF will be replaced by CRLF the next time Git touches it

C:\Users\bmpav\Downloads\TrioDev>git commit -m "D1: Work done"
[feature/D1 f15bc54] D1: Work done
14 files changed, 406 insertions(+)
create mode 100644 .gitignore
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Circle.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Event.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Frame.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Point.java
```

## 8. Comeback to the dev branch and then create a branch in dev branch—feature/D2 and config it.

```
C:\Users\bmpav\Downloads\TrioDev>git checkout dev
Switched to branch 'dev'

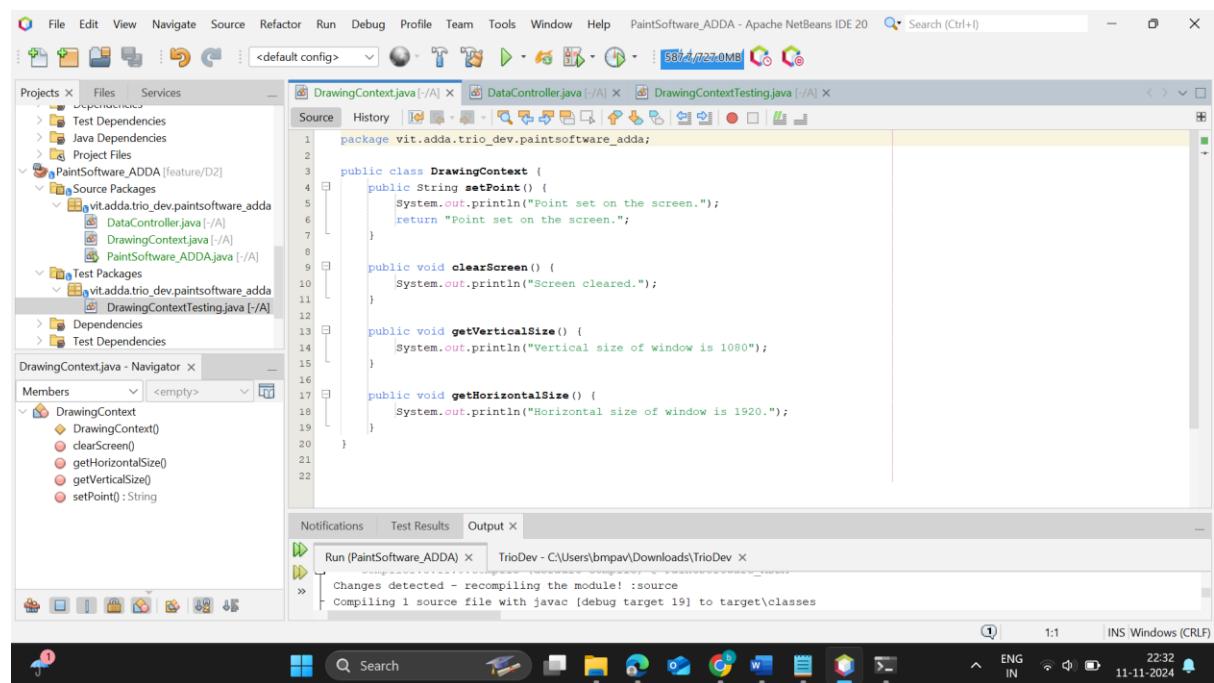
C:\Users\bmpav\Downloads\TrioDev>git checkout -b feature/D2
Switched to a new branch 'feature/D2'

C:\Users\bmpav\Downloads\TrioDev>git config --global user.name "Developer D2"
C:\Users\bmpav\Downloads\TrioDev>git config --global user.email "d2@gmail.com"

C:\Users\bmpav\Downloads\TrioDev>
```

## 9. Now create the necessary codes.

DrawingContext.java:



## DataController.java:

The screenshot shows the Apache NetBeans IDE interface. The top menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help, and PaintSoftware\_ADDA - Apache NetBeans IDE 20. The title bar displays <default config>, DrawingContext.java [-/A], DataController.java [-/A], and DrawingContextTesting.java [-/A]. The left sidebar has a Projects tab showing dependencies, Java Dependencies, Project Files, and a PaintSoftware\_ADDA module containing Source Packages (vit.adda.trio\_dev.paintsoftware\_adda) and Test Packages (vit.adda.trio\_dev.paintsoftware\_adda). The main editor window shows the DataController.java code:

```
1 package vit.adda.trio_dev.paintsoftware_adda;
2
3 public class DataController {
4     public void controlData() {
5         System.out.println("Controlling data.");
6     }
7 }
```

The Navigator panel on the left lists members: DataController, DataController(), and controlData(). The Output panel at the bottom shows a build log:

```
Run (PaintSoftware_ADDA) × TrioDev - C:\Users\bmmpav\Downloads\TrioDev ×
Changes detected - recompiling the module! :source
Compiling 1 source file with javac [debug target 19] to target\classes
```

The system tray at the bottom right shows the date and time as 11-11-2024.

## DrawingContextTesting.java:

The screenshot shows the Apache NetBeans IDE interface. The top menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help, and PaintSoftware\_ADDA - Apache NetBeans IDE 20. The title bar displays <default config>, DrawingContext.java [-/A], DataController.java [-/A], and DrawingContextTesting.java [-/A]. The left sidebar has a Projects tab showing dependencies, Java Dependencies, Project Files, and a PaintSoftware\_ADDA module containing Source Packages (vit.adda.trio\_dev.paintsoftware\_adda) and Test Packages (vit.adda.trio\_dev.paintsoftware\_adda). The main editor window shows the DrawingContextTesting.java code:

```
23
24
25 @BeforeEach
26 public void setUp() {
27 }
28
29 @AfterEach
30 public void tearDown() {
31 }
32
33 @Test
34 public void DrawingContextsetPoint() {
35     DrawingContext d= new DrawingContext();
36     String msg=d.setPoint();
37     assertEquals("Point set on the screen.",msg);
38     System.out.println("Success");
39 }
40
41 }
```

The Navigator panel on the left lists members: DrawingContextTesting, DrawingContextTesting(), DrawingContextSetPoint(), setUp(), setUpClass(), tearDown(), and tearDownClass(). The Output panel at the bottom shows a build log:

```
Run (PaintSoftware_ADDA) × TrioDev - C:\Users\bmmpav\Downloads\TrioDev ×
Changes detected - recompiling the module! :source
Compiling 1 source file with javac [debug target 19] to target\classes
```

The system tray at the bottom right shows the date and time as 11-11-2024.

## 10. Now add the files and commit the files.

```
C:\Users\bmpav\Downloads\TrioDev>git status
On branch feature/D2
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
    modified:   PaintSoftware_ADDA/pom.xml

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    PaintSoftware_ADDA/nbproject/
    PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/DataController.java
    PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/DrawingContext.java
    PaintSoftware_ADDA/src/test/

no changes added to commit (use "git add" and/or "git commit -a")

C:\Users\bmpav\Downloads\TrioDev>git add .
warning: in the working copy of 'PaintSoftware_ADDA/pom.xml', LF will be replaced by CRLF the next time Git touches it

C:\Users\bmpav\Downloads\TrioDev>git commit -m "D2: Work done"
[feature/D2 4abea54] D2: Work done
 5 files changed, 88 insertions(+)
 create mode 100644 PaintSoftware_ADDA/nbproject/project.properties
 create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/DataController.java
 create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/DrawingContext.java
 create mode 100644 PaintSoftware_ADDA/src/test/java/vit/adda/trio_dev/paintsoftware_adda/DrawingContextTesting.java

C:\Users\bmpav\Downloads\TrioDev>
```

## 11. Now comeback to dev branch and create a new branch feature/D3 and config it.

```
C:\Users\bmpav\Downloads\TrioDev>git checkout dev
Switched to branch 'dev'

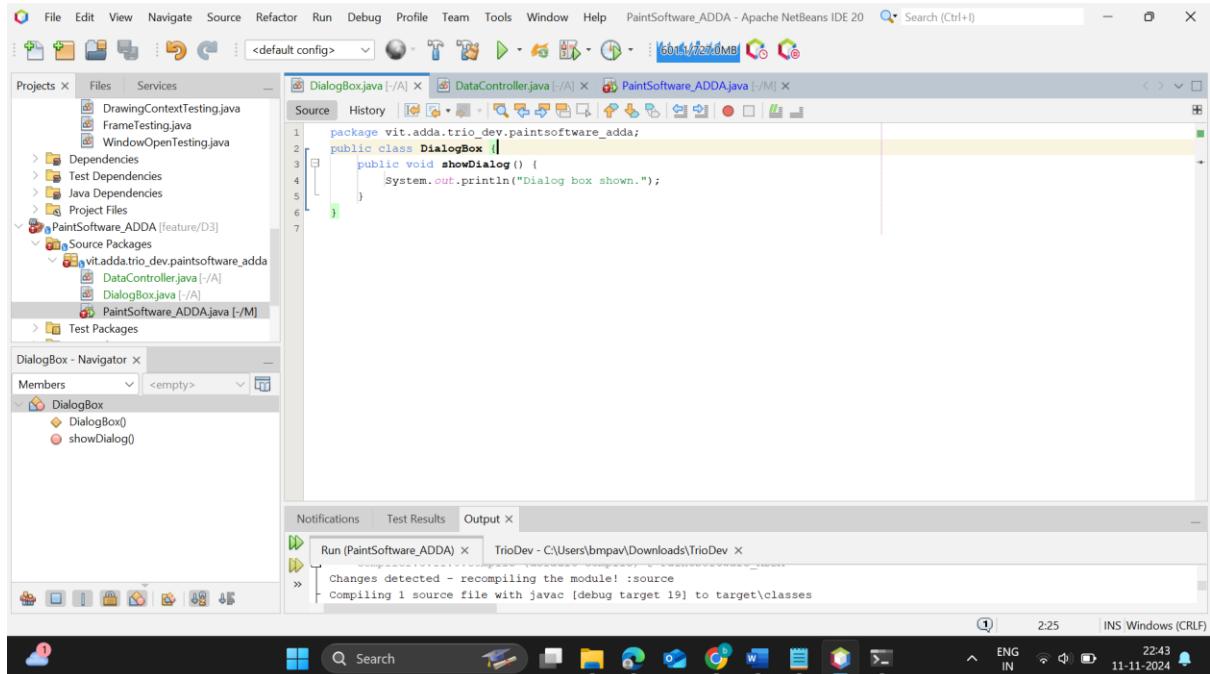
C:\Users\bmpav\Downloads\TrioDev>git checkout -b feature/D3
Switched to a new branch 'feature/D3'

C:\Users\bmpav\Downloads\TrioDev>git config --global user.name "Developer D3"
C:\Users\bmpav\Downloads\TrioDev>git config --global user.email "d3@gmail.com"

C:\Users\bmpav\Downloads\TrioDev>
```

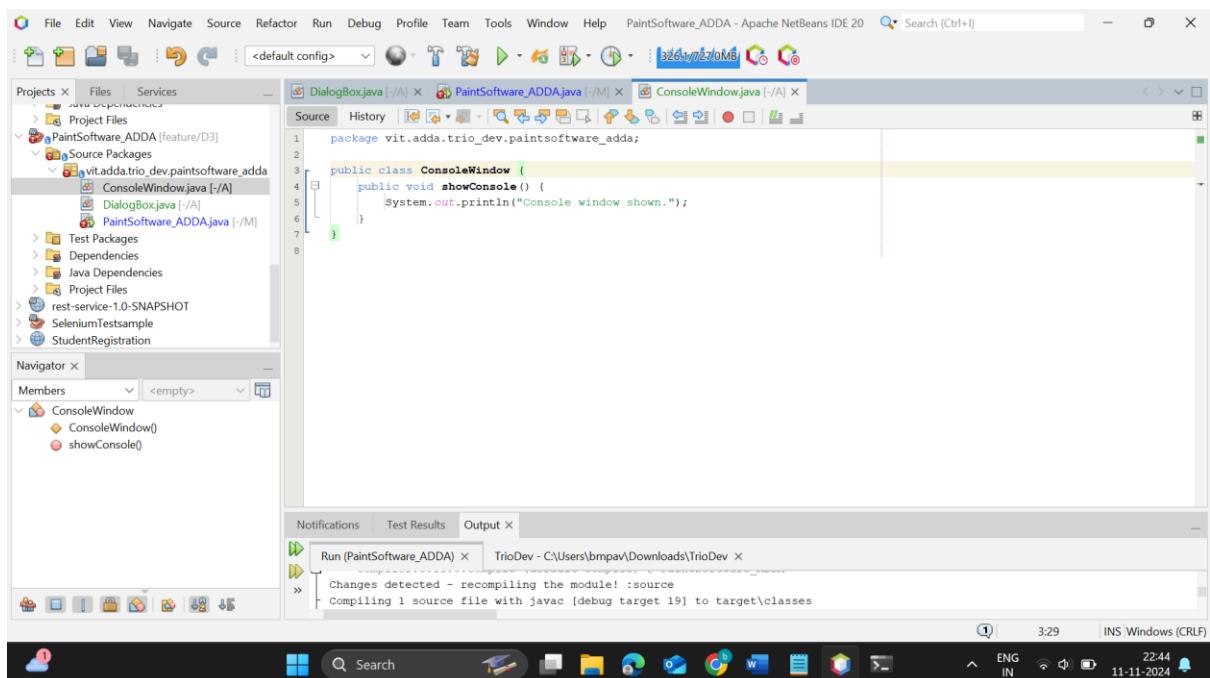
## 12. Add the necessary code files:

### DialogBox.java



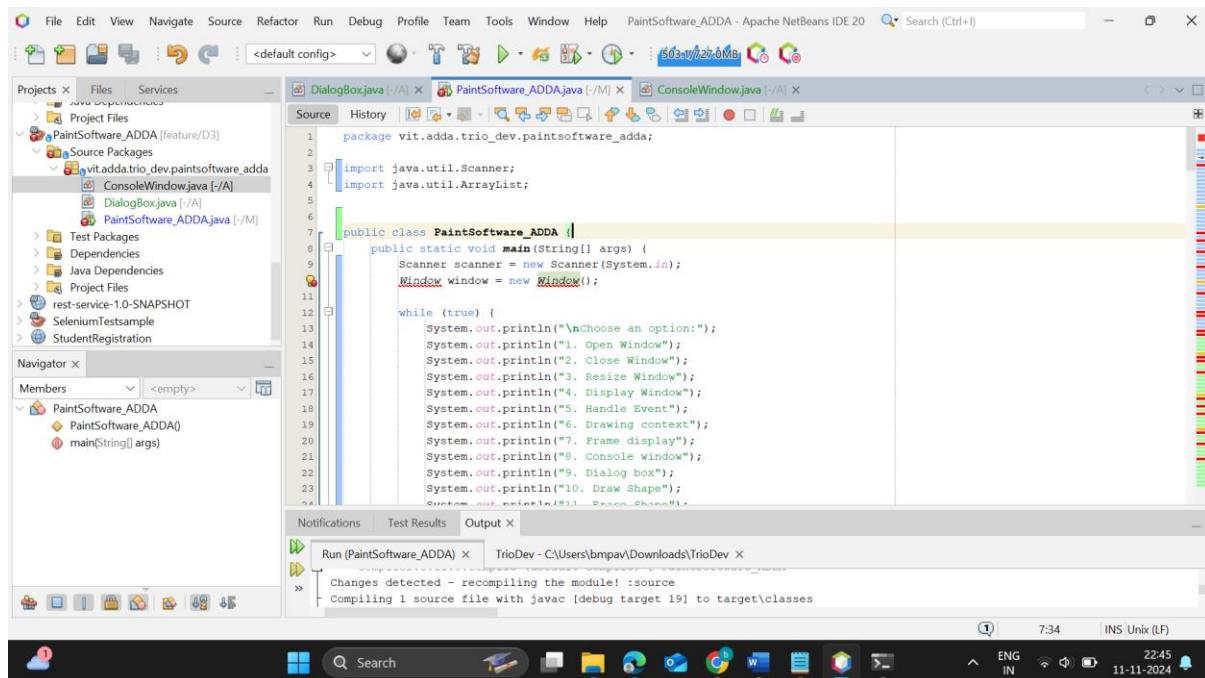
```
package vit.adda.trio_dev.paintsoftware_adda;
public class DialogBox {
    public void showDialog() {
        System.out.println("Dialog box shown.");
    }
}
```

### ConsoleWindow.java



```
package vit.adda.trio_dev.paintsoftware_adda;
public class ConsoleWindow {
    public void showConsole() {
        System.out.println("Console window shown.");
    }
}
```

## PaintSoftware\_ADDA.java



### 13. Now commit the changes:

```
C:\Windows\System32\cmd.exe x + v
C:\Users\bmpav\Downloads\TrioDev>git checkout -b feature/D3
Switched to a new branch 'feature/D3'

C:\Users\bmpav\Downloads\TrioDev>git config --global user.name "Developer D3"
C:\Users\bmpav\Downloads\TrioDev>git config --global user.email "d3@gmail.com"

C:\Users\bmpav\Downloads\TrioDev>git status
On branch feature/D3
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
    (use "git restore <file>..." to discard changes in working directory)
      modified:   PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/PaintSoftware_ADDA.java

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/ConsoleWindow.java
    PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/DialogBox.java

no changes added to commit (use "git add" and/or "git commit -a")

C:\Users\bmpav\Downloads\TrioDev>git add .
warning: in the working copy of 'PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/PaintSoftware_ADDA.java', LF will be replaced by CRLF the next time Git touches it

C:\Users\bmpav\Downloads\TrioDev>git commit -m "D3: Work done"
[feature/D3 44d9c90] D3: Work done
  3 files changed, 203 insertions(+), 2 deletions(-)
  create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/ConsoleWindow.java
  create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/DialogBox.java

C:\Users\bmpav\Downloads\TrioDev>
C:\Users\bmpav\Downloads\TrioDev|
```

## 14. Now go back to dev branch and now merge all the feature branches.

```
C:\Windows\System32\cmd.e > + ^ x
C:\Users\bmpav\Downloads\TrioDev>git checkout dev
Switched to branch 'dev'

C:\Users\bmpav\Downloads\TrioDev>git merge feature/D1 -m "Merge branch 'feature/D1' into dev"
Updating 51a3b8e..f15bc54
Fast-forward (no commit created; -m option ignored)
.gitignore | 1 +
PaintSoftware_ADDA/pom.xml | 20 ++++++
.../adda/trio_dev/paintsoftware_adda/Circle.java | 55 ++++++-----+
.../adda/trio_dev/paintsoftware_adda/Event.java | 7 +++
.../adda/trio_dev/paintsoftware_adda/Frame.java | 12 +++++
.../adda/trio_dev/paintsoftware_adda/Point.java | 33 ++++++-----+
.../adda/trio_dev/paintsoftware_adda/Polygon.java | 35 ++++++-----+
.../trio_dev/paintsoftware_adda/Rectangle.java | 36 ++++++-----+
.../adda/trio_dev/paintsoftware_adda/Shape.java | 9 +++
.../paintsoftware_adda/CircleAreaTest.java | 28 ++++++-----+
.../CircleCircumferenceTest.java | 39 ++++++-----+
.../trio_dev/paintsoftware_adda/FrameTesting.java | 42 ++++++-----+
.../paintsoftware_adda/WindowOpenTesting.java | 47 ++++++-----+
14 files changed, 406 insertions(+)
create mode 100644 .gitignore
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Circle.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Event.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Frame.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Point.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Polygon.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Rectangle.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Shape.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Window.java
create mode 100644 PaintSoftware_ADDA/src/test/java/vit/adda/trio_dev/paintsoftware_adda/CircleAreaTest.java
create mode 100644 PaintSoftware_ADDA/src/test/java/vit/adda/trio_dev/paintsoftware_adda/CircleCircumferenceTest.java
create mode 100644 PaintSoftware_ADDA/src/test/java/vit/adda/trio_dev/paintsoftware_adda/FrameTesting.java
22:49
11-11-2024
```

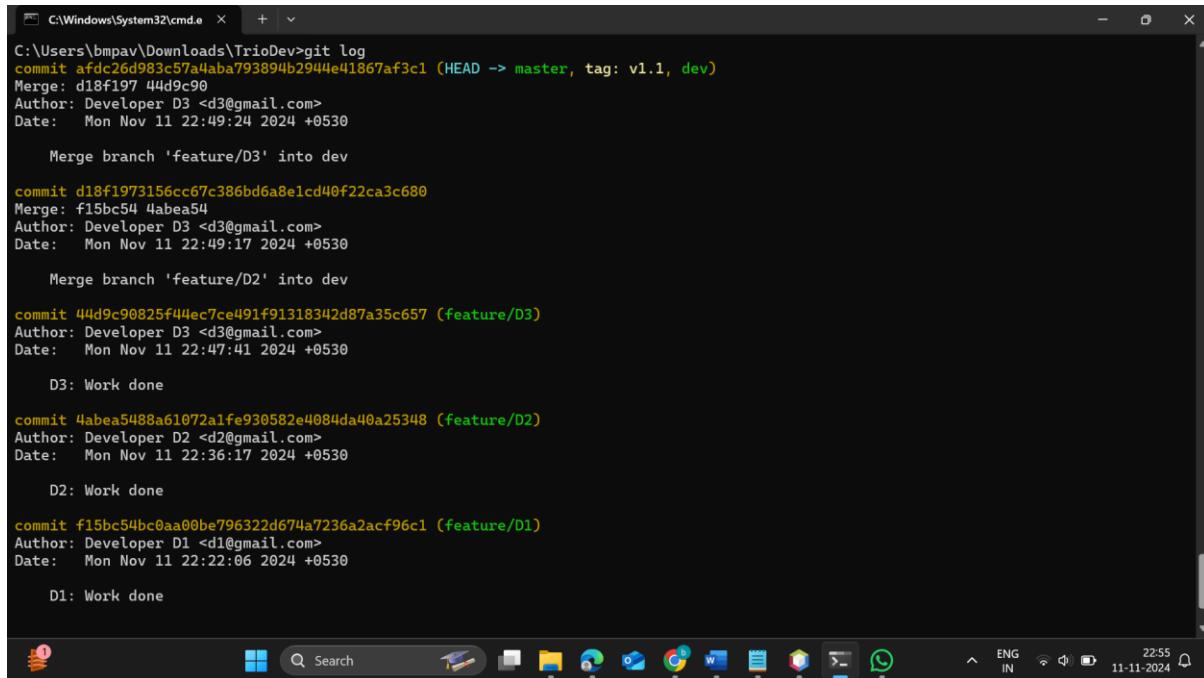
```
C:\Windows\System32\cmd.e > + ^ x
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Frame.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Point.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Polygon.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Rectangle.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Shape.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Window.java
create mode 100644 PaintSoftware_ADDA/src/test/java/vit/adda/trio_dev/paintsoftware_adda/CircleAreaTest.java
create mode 100644 PaintSoftware_ADDA/src/test/java/vit/adda/trio_dev/paintsoftware_adda/CircleCircumferenceTest.java
create mode 100644 PaintSoftware_ADDA/src/test/java/vit/adda/trio_dev/paintsoftware_adda/FrameTesting.java
create mode 100644 PaintSoftware_ADDA/src/test/java/vit/adda/trio_dev/paintsoftware_adda/WindowOpenTesting.java
C:\Users\bmpav\Downloads\TrioDev>git merge feature/D2 -m "Merge branch 'feature/D2' into dev"
Merge made by the 'ort' strategy.
PaintSoftware_ADDA/nbproject/project.properties |  0
.../paintsoftware_adda/DataController.java |  7 +++
.../paintsoftware_adda/DrawingContext.java | 21 ++++++-----+
.../paintsoftware_adda/DrawingContextTesting.java | 40 ++++++-----+
4 files changed, 68 insertions(+)
create mode 100644 PaintSoftware_ADDA/nbproject/project.properties
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/DataController.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/DrawingContext.java
create mode 100644 PaintSoftware_ADDA/src/test/java/vit/adda/trio_dev/paintsoftware_adda/DrawingContextTesting.java
C:\Users\bmpav\Downloads\TrioDev>git merge feature/D3 -m "Merge branch 'feature/D3' into dev"
Merge made by the 'ort' strategy.
.../trio_dev/paintsoftware_adda/ConsoleWindow.java |  7 +
.../trio_dev/paintsoftware_adda/DialogBox.java |  6 +
.../paintsoftware_adda/PaintSoftware_ADDA.java | 192 ++++++-----+
3 files changed, 203 insertions(+), 2 deletions(-)
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/ConsoleWindow.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/DialogBox.java
22:50
11-11-2024
```

15. Now go to main branch and merge the dev branch and add a new tag to it.

```
C:\Users\bmpav\Downloads\TrioDev>git merge dev -m "Merge branch 'dev' into master for release v1.1"
Updating 51a3b8e..afdc26d
Fast-forward (no commit created; -m option ignored)
 .gitignore | 1 +
 PaintSoftware_ADDA/nbproject/project.properties | 0
 PaintSoftware_ADDA/pom.xml | 20 +++
 .../adda/trio_dev/paintsoftware_adda/Circle.java | 55 ++++++
 .../trio_dev/paintsoftware_adda/ConsoleWindow.java | 7 +
 .../paintsoftware_adda/DataController.java | 7 +
 .../trio_dev/paintsoftware_adda/DialogBox.java | 6 +
 .../paintsoftware_adda/DrawingContext.java | 21 +++
 .../adda/trio_dev/paintsoftware_adda/Event.java | 7 +
 .../adda/trio_dev/paintsoftware_adda/Frame.java | 12 ++
 .../paintsoftware_adda/PaintSoftware_ADDA.java | 192 ++++++-----+
 .../adda/trio_dev/paintsoftware_adda/Point.java | 33 +++
 .../adda/trio_dev/paintsoftware_adda/Polygon.java | 35 +++
 .../trio_dev/paintsoftware_adda/Rectangle.java | 36 +++
 .../adda/trio_dev/paintsoftware_adda/Shape.java | 9 +
 .../adda/trio_dev/paintsoftware_adda/Window.java | 28 +++
 .../paintsoftware_adda/CircleAreaTest.java | 39 +++++
 .../CircleCircumferenceTest.java | 42 +++++
 .../paintsoftware_adda/DrawingContextTesting.java | 40 +++++
 .../trio_dev/paintsoftware_adda/FrameTesting.java | 42 +++++
 .../paintsoftware_adda/WindowOpenTesting.java | 47 +++++
21 files changed, 677 insertions(+), 2 deletions(-)
create mode 100644 .gitignore
create mode 100644 PaintSoftware_ADDA/nbproject/project.properties
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Circle.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/ConsoleWindow.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/DataController.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/DialogBox.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/DrawingContext.java
```

```
.../adda/trio_dev/paintsoftware_adda/Point.java | 33 +++
.../adda/trio_dev/paintsoftware_adda/Polygon.java | 35 +++
.../trio_dev/paintsoftware_adda/Rectangle.java | 36 +++
.../adda/trio_dev/paintsoftware_adda/Shape.java | 9 +
.../adda/trio_dev/paintsoftware_adda/Window.java | 28 +++
.../paintsoftware_adda/CircleAreaTest.java | 39 +++++
.../CircleCircumferenceTest.java | 42 +++++
.../paintsoftware_adda/DrawingContextTesting.java | 40 +++++
.../trio_dev/paintsoftware_adda/FrameTesting.java | 42 +++++
.../paintsoftware_adda/WindowOpenTesting.java | 47 +++++
21 files changed, 677 insertions(+), 2 deletions(-)
create mode 100644 .gitignore
create mode 100644 PaintSoftware_ADDA/nbproject/project.properties
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Circle.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/ConsoleWindow.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/DataController.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/DialogBox.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/DrawingContext.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Event.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Frame.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Point.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Polygon.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Rectangle.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Shape.java
create mode 100644 PaintSoftware_ADDA/src/main/java/vit/adda/trio_dev/paintsoftware_adda/Window.java
create mode 100644 PaintSoftware_ADDA/src/test/java/vit/adda/trio_dev/paintsoftware_adda/CircleAreaTest.java
create mode 100644 PaintSoftware_ADDA/src/test/java/vit/adda/trio_dev/paintsoftware_adda/CircleCircumferenceTest.java
create mode 100644 PaintSoftware_ADDA/src/test/java/vit/adda/trio_dev/paintsoftware_adda/DrawingContextTesting.java
create mode 100644 PaintSoftware_ADDA/src/test/java/vit/adda/trio_dev/paintsoftware_adda/FrameTesting.java
create mode 100644 PaintSoftware_ADDA/src/test/java/vit/adda/trio_dev/paintsoftware_adda/WindowOpenTesting.java
C:\Users\bmpav\Downloads\TrioDev>git tag v1.1
```

## 16. Now use the git log command to visualise the codebase.



```
C:\Windows\System32\cmd.exe + 
C:\Users\bmpav\Downloads\TrioDev>git log
commit afdc26d983c57a4aba793894b2944e1867af3c1 (HEAD -> master, tag: v1.1, dev)
Merge: d18f197 44d9c90
Author: Developer D3 <d3@gmail.com>
Date: Mon Nov 11 22:49:24 2024 +0530

    Merge branch 'feature/D3' into dev

commit d18f1973156cc67c386bd6a8e1cd40f22ca3c680
Merge: f15bc54 4abea54
Author: Developer D3 <d3@gmail.com>
Date: Mon Nov 11 22:49:17 2024 +0530

    Merge branch 'feature/D2' into dev

commit 44d9c90825f44ec7ce491f91318342d87a35c657 (feature/D3)
Author: Developer D3 <d3@gmail.com>
Date: Mon Nov 11 22:47:41 2024 +0530

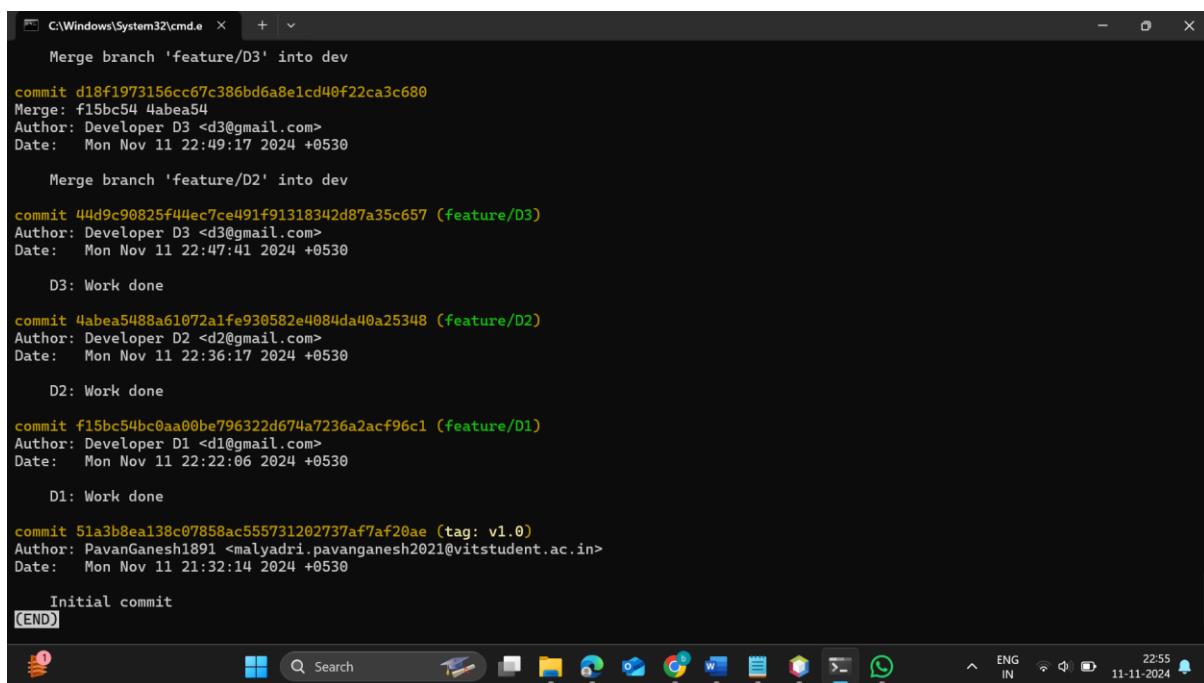
D3: Work done

commit 4abea5488a61072a1fe930582e4084da40a25348 (feature/D2)
Author: Developer D2 <d2@gmail.com>
Date: Mon Nov 11 22:36:17 2024 +0530

D2: Work done

commit f15bc54bc0aa00be796322d674a7236a2acf96c1 (feature/D1)
Author: Developer D1 <d1@gmail.com>
Date: Mon Nov 11 22:22:06 2024 +0530

D1: Work done
```



```
C:\Windows\System32\cmd.exe + 
Merge branch 'feature/D3' into dev

commit d18f1973156cc67c386bd6a8e1cd40f22ca3c680
Merge: f15bc54 4abea54
Author: Developer D3 <d3@gmail.com>
Date: Mon Nov 11 22:49:17 2024 +0530

    Merge branch 'feature/D2' into dev

commit 44d9c90825f44ec7ce491f91318342d87a35c657 (feature/D3)
Author: Developer D3 <d3@gmail.com>
Date: Mon Nov 11 22:47:41 2024 +0530

D3: Work done

commit 4abea5488a61072a1fe930582e4084da40a25348 (feature/D2)
Author: Developer D2 <d2@gmail.com>
Date: Mon Nov 11 22:36:17 2024 +0530

D2: Work done

commit f15bc54bc0aa00be796322d674a7236a2acf96c1 (feature/D1)
Author: Developer D1 <d1@gmail.com>
Date: Mon Nov 11 22:22:06 2024 +0530

D1: Work done

commit 51a3b8ea138c07858ac555731202737af7af20ae (tag: v1.0)
Author: PavanGanesh1891 <malyadri.pavangnesh2021@vitstudent.ac.in>
Date: Mon Nov 11 21:32:14 2024 +0530

Initial commit
(END)
```

The screenshot shows a Windows desktop environment. At the top, there is a taskbar with various pinned icons. Below the taskbar, a Microsoft Word document is open, showing a branch diagram. The diagram illustrates a commit history starting from the 'Master' branch, which merges into the 'Dev' branch. From 'Dev', three feature branches ('Feature/D1', 'Feature/D2', and 'Feature/D3') are developed. 'Feature/D1' and 'Feature/D2' merge back into 'Dev', while 'Feature/D3' continues independently. A final merge occurs at the end of 'Feature/D3' into a terminal node.

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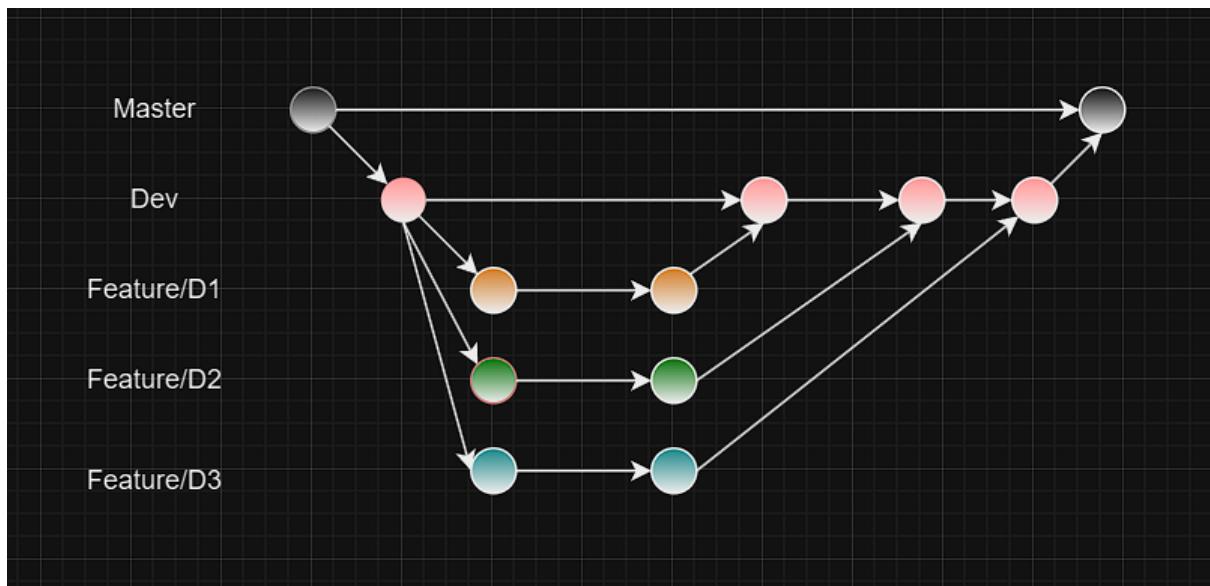
22:57 11-11-2024

```
C:\Windows\System32\cmd.exe + Microsoft Windows [Version 10.0.22631.4317]
(c) Microsoft Corporation. All rights reserved.

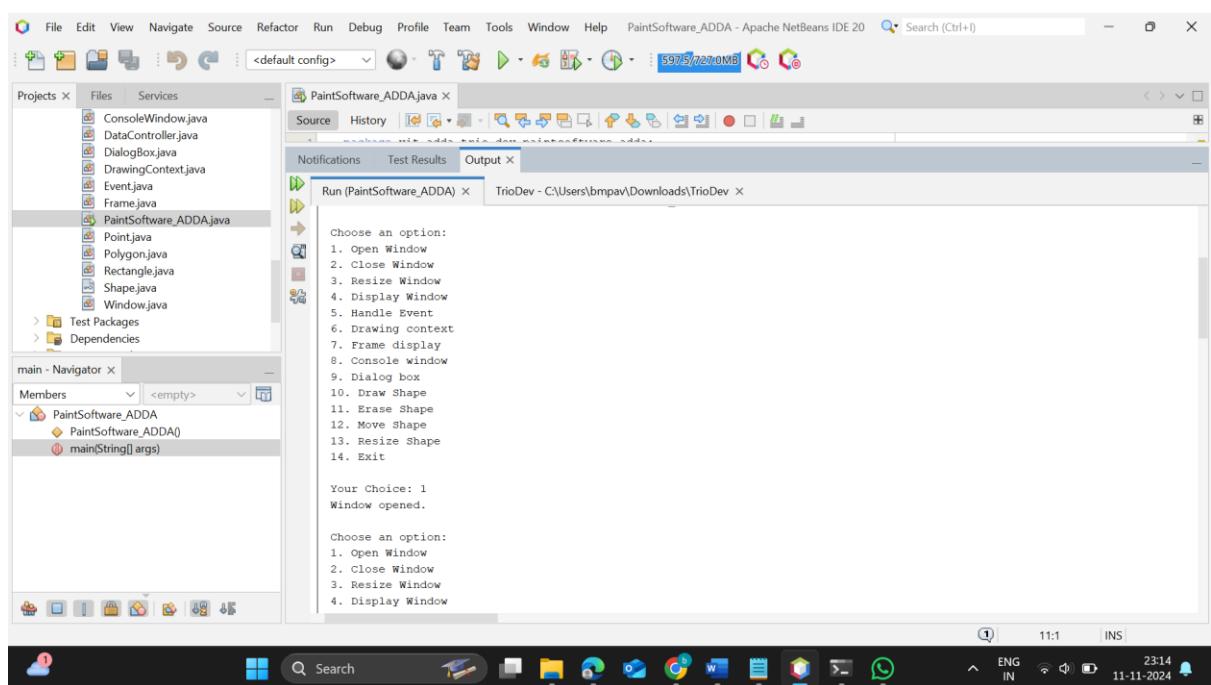
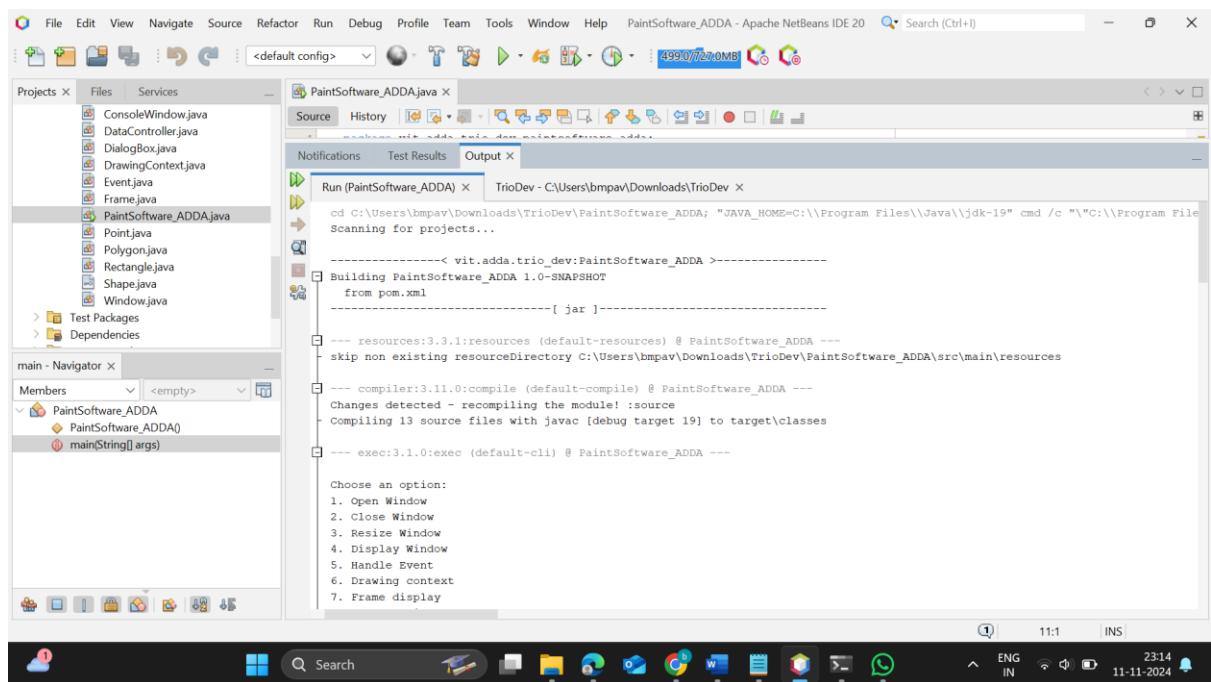
C:\Users\bmpav\Downloads\TrioDev>git log --oneline --graph --all --decorate
* afdc26d (HEAD -> master, tag: v1.1, dev) Merge branch 'feature/D3' into dev
| \
| * 44d9c90 (feature/D3) D3: Work done
| * d18f197 Merge branch 'feature/D2' into dev
| |
| * | 4abea54 (feature/D2) D2: Work done
| |
| * f15bc54 (feature/D1) D1: Work done
|
* 51a3b8e (tag: v1.0) Initial commit

C:\Users\bmpav\Downloads\TrioDev>
```

## Branch diagram:



## Code compilation:



The image displays three vertically stacked screenshots of the Apache NetBeans IDE 20.0 interface, illustrating the execution of a Java application named `PaintSoftware_ADDA`.

**Top Window:**

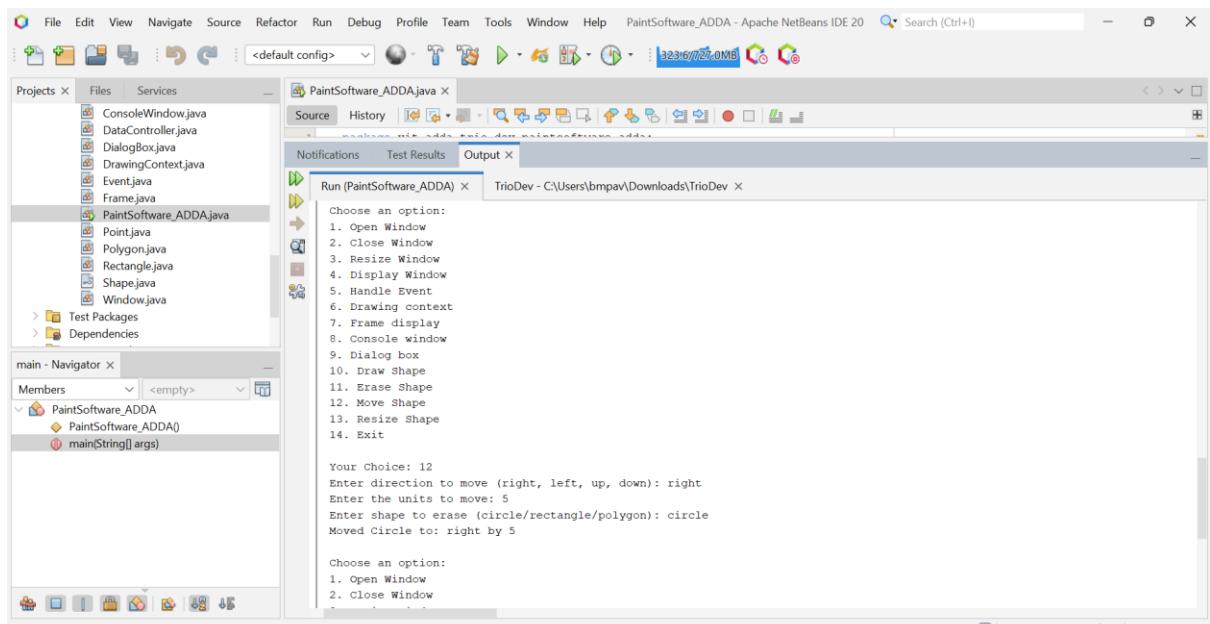
- Output Content:**

```
Choose an option:  
1. Open Window  
2. Close Window  
3. Resize Window  
4. Display Window  
5. Handle Event  
6. Drawing context  
7. Frame display  
8. Console window  
9. Dialog box  
10. Draw Shape  
11. Erase Shape  
12. Move Shape  
13. Resize Shape  
14. Exit  
  
Your Choice: 6  
Point set on the screen.  
Screen cleared.  
Vertical size of window is 1080  
Horizontal size of window is 1920.
```
- Bottom Window:**

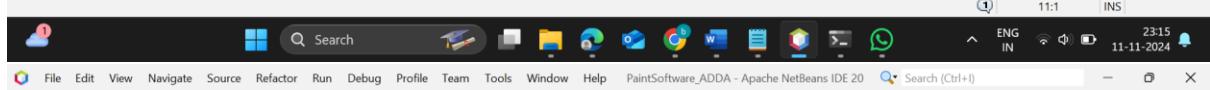
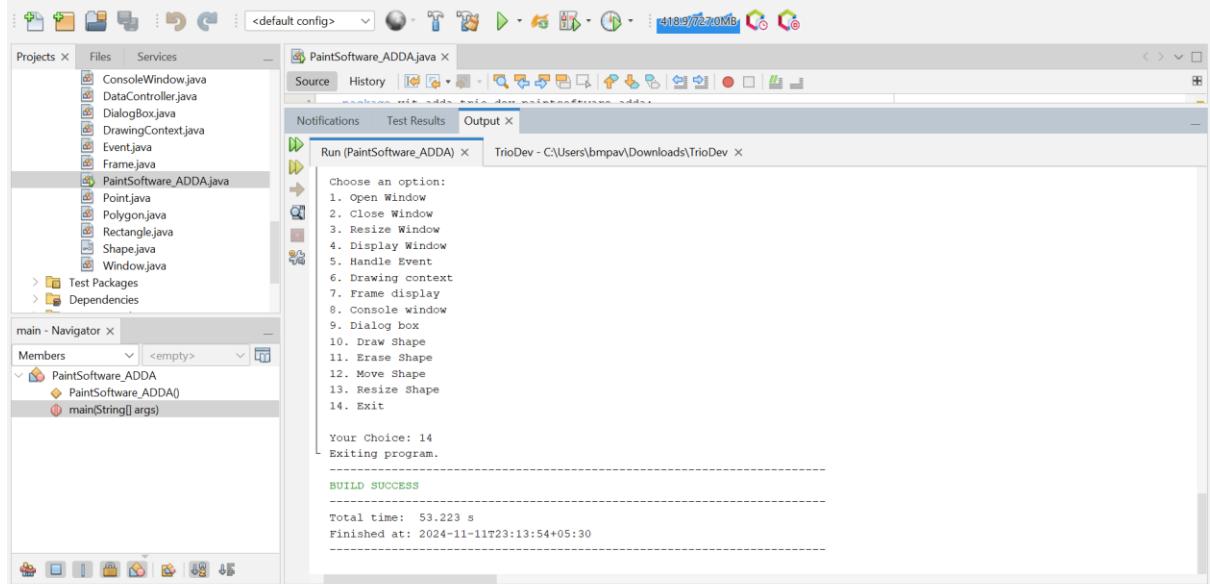
```
Choose an option:  
1. Open Window  
2. Close Window  
3. Resize Window  
4. Display Window  
5. Handle Event  
6. Drawing context  
7. Frame display  
8. Console window  
9. Dialog box  
10. Draw Shape  
11. Erase Shape  
12. Move Shape  
13. Resize Shape  
14. Exit  
  
Your Choice: 10  
Enter shape to draw (circle/rectangle/polygon): circle  
Enter radius for Circle: 5  
Enter x and y coordinates for Circle center: 0 9  
Drawing Circle with radius 5.0 at center (0, 9)
```
- Third Window:**

```
Choose an option:  
1. Open Window  
2. Close Window  
3. Resize Window
```

The IDE interface includes a toolbar, menu bar (File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help), a Projects view, a Files view, a Navigator view, and a central Source editor pane. The status bar at the bottom shows system information like battery level, network, and date/time.



```
Choose an option:  
1. Open Window  
2. Close Window  
3. Resize Window  
4. Display Window  
5. Handle Event  
6. Drawing context  
7. Frame display  
8. Console window  
9. Dialog box  
10. Draw Shape  
11. Erase Shape  
12. Move Shape  
13. Resize Shape  
14. Exit  
  
Your Choice: 12  
Enter direction to move (right, left, up, down): right  
Enter the units to move: 5  
Enter shape to erase (circle/rectangle/polygon): circle  
Moved Circle to: right by 5  
  
Choose an option:  
1. Open Window  
2. Close Window
```

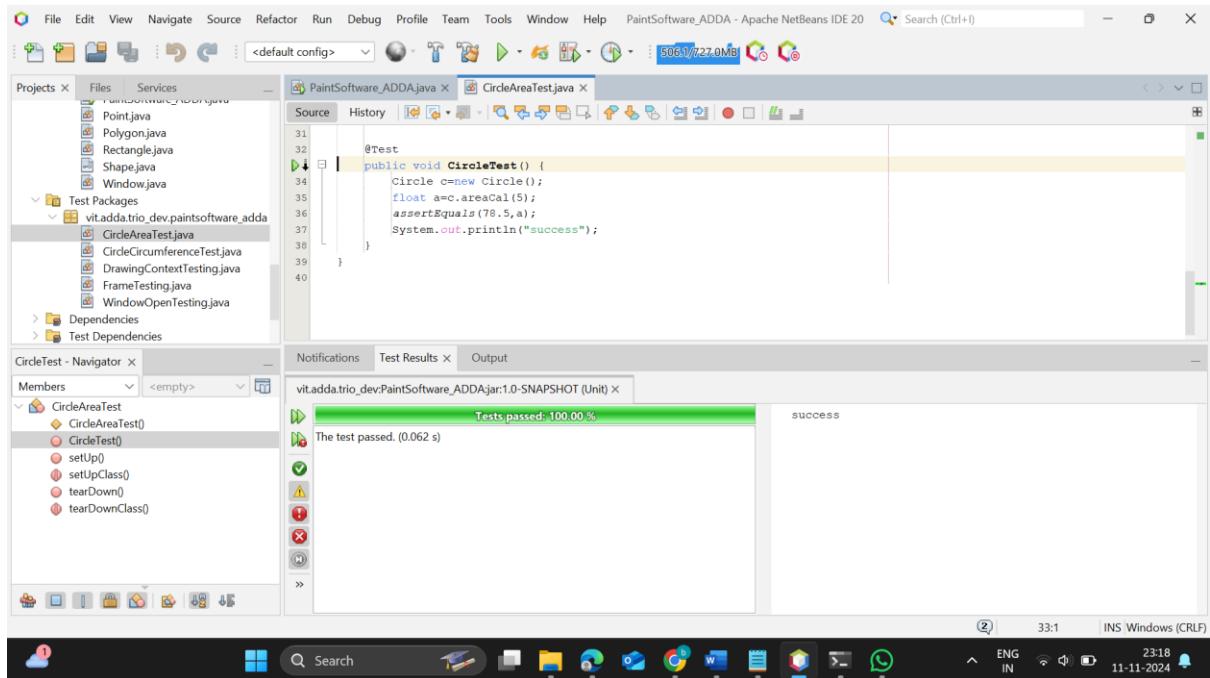
  


```
Choose an option:  
1. Open Window  
2. Close Window  
3. Resize Window  
4. Display Window  
5. Handle Event  
6. Drawing context  
7. Frame display  
8. Console window  
9. Dialog box  
10. Draw Shape  
11. Erase Shape  
12. Move Shape  
13. Resize Shape  
14. Exit  
  
Your Choice: 14  
Exiting program.  
-----  
BUILD SUCCESS  
-----  
Total time: 53.223 s  
Finished at: 2024-11-11T23:13:54+05:30  
-----
```



## Test cases:

### CircleAreaTest.java:



The screenshot shows the Apache NetBeans IDE interface. The top menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help, and PaintSoftware\_ADDA - Apache NetBeans IDE 20. The status bar at the bottom right shows 33:1, ENG IN, 23:18, and 11-11-2024.

The Projects panel on the left lists several Java files: Point.java, Polygon.java, Rectangle.java, Shape.java, Window.java, and a Test Packages folder containing vit.adda.trio\_dev.paintsoftware\_adda, which includes CircleAreaTest.java, CircleCircumferenceTest.java, DrawingContextTesting.java, FrameTesting.java, and WindowOpenTesting.java. Below these are Dependencies and Test Dependencies.

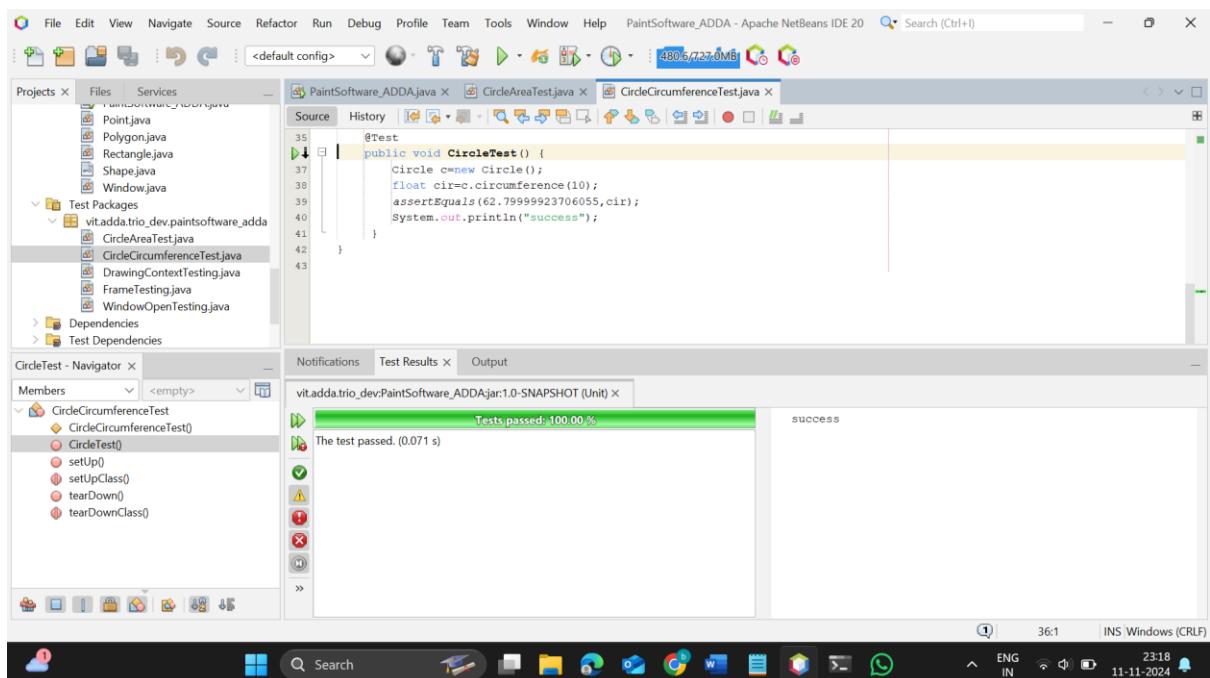
The Source editor on the right displays the code for CircleAreaTest.java:

```
31  @Test
32  public void CircleTest() {
33      Circle c=new Circle();
34      float a=c.areaCal(5);
35      assertEquals(78.5,a);
36      System.out.println("success");
37  }
38
39
40
```

The Notifications and Test Results panes show the test results for vit.adda.trio\_dev.PaintSoftware\_ADDAjar:1.0-SNAPSHOT (Unit) x:

- Tests passed: 100.00 %
- The test passed. (0.062 s)
- success

### CircleCircumferenceTest.java:



The screenshot shows the Apache NetBeans IDE interface. The top menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help, and PaintSoftware\_ADDA - Apache NetBeans IDE 20. The status bar at the bottom right shows 36:1, ENG IN, 23:18, and 11-11-2024.

The Projects panel on the left lists several Java files: Point.java, Polygon.java, Rectangle.java, Shape.java, Window.java, and a Test Packages folder containing vit.adda.trio\_dev.paintsoftware\_adda, which includes CircleAreaTest.java, CircleCircumferenceTest.java, DrawingContextTesting.java, FrameTesting.java, and WindowOpenTesting.java. Below these are Dependencies and Test Dependencies.

The Source editor on the right displays the code for CircleCircumferenceTest.java:

```
35  @Test
36  public void CircleTest() {
37      Circle c=new Circle();
38      float cir=c.circumference(10);
39      assertEquals(62.7999923706055,cir);
40      System.out.println("success");
41  }
42
43
```

The Notifications and Test Results panes show the test results for vit.adda.trio\_dev.PaintSoftware\_ADDAjar:1.0-SNAPSHOT (Unit) x:

- Tests passed: 100.00 %
- The test passed. (0.071 s)
- success

## DrawingContextTesting.java:

```
public void tearDown() {  
}  
  
@Test  
public void DrawingContextsetPoint() {  
    DrawingContext d= new DrawingContext();  
    String msg=d.setPoint();  
    assertEquals("point set on the screen.",msg);  
    System.out.println("Success");  
}
```

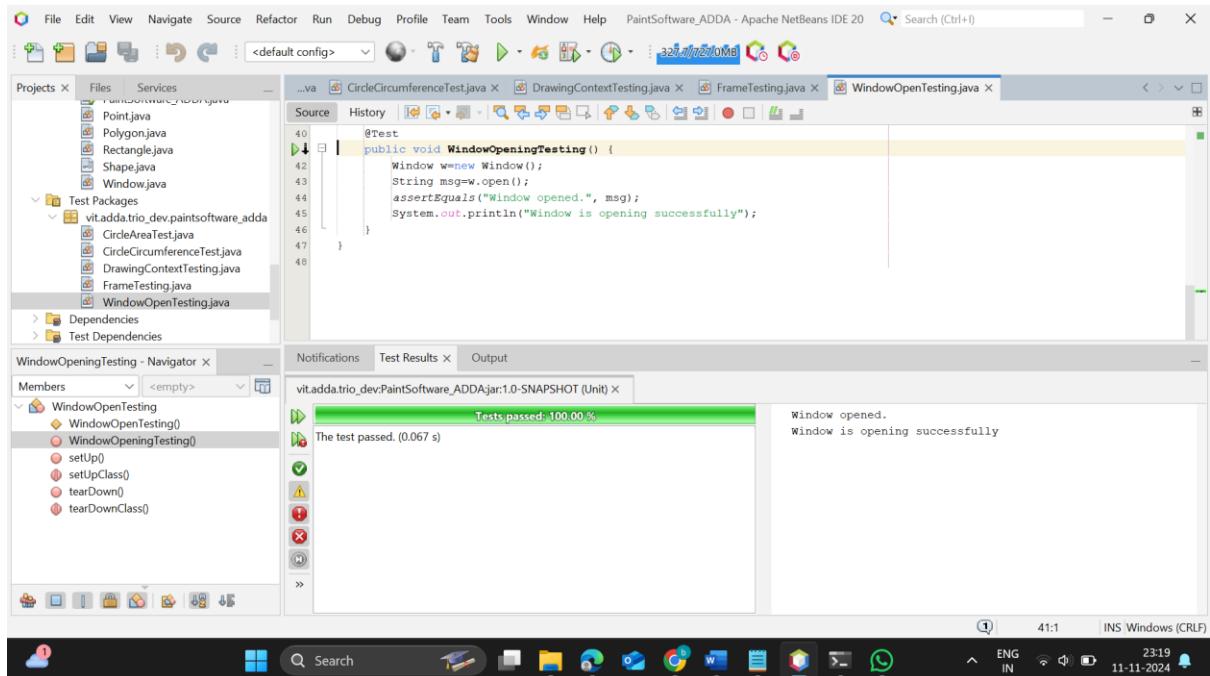
The screenshot shows the Apache NetBeans IDE interface. The top menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help, and PaintSoftware\_ADDA - Apache NetBeans IDE 20. The toolbar has various icons for file operations. The Projects tab shows a package structure with several Java files like Point.java, Polygon.java, Rectangle.java, Shape.java, and Window.java, along with test packages containing CircleAreaTest.java, CircleCircumferenceTest.java, DrawingContextTesting.java, FrameTesting.java, and WindowOpenTesting.java. The current file, DrawingContextTesting.java, is open in the editor. The Notifications and Test Results tabs are visible at the bottom, showing a green bar indicating "Tests passed: 100.00%" and the message "The test passed. (0.079 s)". The Output tab shows "Point set on the screen. Success". The system tray at the bottom right shows the date and time as 11-11-2024 23:18.

## FrameTesting.java:

```
@AfterEach  
public void tearDown() {  
}  
  
@Test  
public void FrameshowingTesting() {  
    Frame f=new Frame();  
    String msg=f.showFrame();  
    assertEquals("Frame shown.", msg);  
    System.out.println("Success");  
}
```

The screenshot shows the Apache NetBeans IDE interface. The top menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help, and PaintSoftware\_ADDA - Apache NetBeans IDE 20. The toolbar has various icons for file operations. The Projects tab shows a package structure with several Java files like Point.java, Polygon.java, Rectangle.java, Shape.java, and Window.java, along with test packages containing CircleAreaTest.java, CircleCircumferenceTest.java, DrawingContextTesting.java, FrameTesting.java, and WindowOpenTesting.java. The current file, FrameTesting.java, is open in the editor. The Notifications and Test Results tabs are visible at the bottom, showing a green bar indicating "Tests passed: 100.00%" and the message "The test passed. (0.081 s)". The Output tab shows "Frame shown. Displaying the window content. Success". The system tray at the bottom right shows the date and time as 11-11-2024 23:20.

## WindowOpenTesting.java:



## GitHub Push:

```
C:\Windows\System32\cmd.exe > + <
Microsoft Windows [Version 10.0.22631.4317]
(c) Microsoft Corporation. All rights reserved.

C:\Users\bmpav\Downloads\TrioDev>git remote add origin https://github.com/Pavan-Ganesh1891/PaintSoftware.git
C:\Users\bmpav\Downloads\TrioDev>git push -u origin master
Enumerating objects: 115, done.
Counting objects: 100% (115/115), done.
Delta compression using up to 16 threads
Compressing objects: 100% (55/55), done.
Writing objects: 100% (115/115), 12.07 KiB | 950.00 KiB/s, done.
Total 115 (delta 10), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (10/10), done.
To https://github.com/Pavan-Ganesh1891/PaintSoftware.git
 * [new branch]      master -> master
branch 'master' set up to track 'origin/master'.

C:\Users\bmpav\Downloads\TrioDev>
```

Link: <https://github.com/Pavan-Ganesh1891/PaintSoftware.git>

## Commits list:

The screenshot shows a GitHub commit history for the 'master' branch of the repository 'Pavan-Ganesh1891/PaintSoftware'. The commits are listed in chronological order from newest to oldest. The commits are as follows:

- Merge branch 'feature/D3' into dev (33 minutes ago)
- Merge branch 'feature/D2' into dev (33 minutes ago)
- D3: Work done (35 minutes ago)
- D2: Work done (46 minutes ago)
- D1: Work done (1 hour ago)
- Initial commit (1 hour ago)

The GitHub interface includes a search bar, navigation buttons, and a header with repository information. The taskbar at the bottom of the screen shows various application icons.

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**-:THE END:-**