Lab Goal :   This lab was designed to teach you more object oriented programming and how to write a very simple game, using interfaces, abstract classes, and inheritance.

Lab Description :   Complete the code for the abstract class Cell located in Cell.java. Cell will be extended to make a ColoredCell class. ColoredCell will store color and fill information.   ColoredCell is located in ColoredCell.java. ColoredCells will be used to keep track of garbage filled areas in the Grid. Use CellTester.java to test the completed Cell classes.

```
public interface Locatable
{
  public void setPos( int x, int y);
  public void setX( int x );
  public void setY( int y );

  public int getX();
  public int getY();
}
```

Files Needed ::
Locatable.java
Cell.java
ColoredCell.java
CellTester.java

```
public abstract class Cell implements Locatable
{
    private int xPos;
    private int yPos;
    private int width;
    private int height;


    //constructors


    //set methods


    //get methods


    public abstract void draw(Graphics window);


    //toString
}
```

Sample Output (CellTester.java)
```
5 5 5 5 false java.awt.Color[r=0,g=0,b=255]
5 5 5 5 false java.awt.Color[r=0,g=0,b=255]
100 100 5 5 true java.awt.Color[r=0,g=0,b=255]
200 200 20 20 true java.awt.Color[r=0,g=255,b=0]
```

```
public class ColoredCell extends Cell
{
    private boolean filled;
    private Color color;

    //constructors

    //set and get methods

    public void draw(Graphics window)
    {
       window.setFont(new Font("TAHOMA",Font.BOLD,28));
       window.setColor(getColor());
       window.drawRect(getX(),getY(),getWidth(),getHeight());



    }

    //toString
}
```