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package Items;

import java.awt.Color;
import javax.swing.JLabel;

/**
 * " Cell " is a class to represent CPU job graphically on the screen
 * and some markers (black mark represented every 10 jobs).
 */
public class Cell extends JLabel{

    /**
     * Create a cell with a specific location, size and number
     * @param x x-coordinate location of the Cell
     * @param y y-coordinate location of the Cell
     * @param width width of the Cell
     * @param height height of the Cell
     * @param jobNumber number on the Cell
     */
    private Cell(int x , int y , int width , int height , int jobNumber)
    {
        setSize(width , height);
        chooseColor(jobNumber);
        setLocation(x, y);
        setOpaque(true);
    }

    /**
     * Create and return a job on Gantt Chart at a specific location
     * with a specific job number
     * @param x x-coordinate location of the Cell
     * @param y y-coordinate location of the Cell
     * @param jobNumber number on the Cell
     * @return
     */
    public static Cell createGanttCell(int x , int y , int jobNumber)
    {
        return new Cell(x, y, 5, 50, jobNumber);
    }

    /**
     * Create a white small square to represent an empty job
     * at a specific location for the Gantt Chart
     * @param x x-coordinate location of the Cell
     * @param y y-coordinate location of the Cell
     */
    public static Cell createEmptyJobCell(int x , int y)
    {

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    return new Cell(x,y,10,10,11);
}

/**
 * Create and return a job on Ready Queue at a specific location
 * with a specific job number
 * @param x x-coordinate location of the Cell
 * @param y y-coordinate location of the Cell
 * @param jobNumber number on the Cell
 * @return Cell
 */
public static Cell createReadyQueueCell(int x , int y , int jobNumber)
{
    return new Cell(x,y, 30 , 60 ,jobNumber);
}

/**
 * Create a black small mark at a specific location.
 * Used mainly to make a mark after every 10 jobs.
 * @param x x-coordinate location of the Cell
 * @param y y-coordinate location of the Cell +70
 * @return Cell
 */
public static Cell createMark(int x , int y)
{
    return new Cell(x,y,1,10,12);
}

/**
 * used to select the color of the job based on
 * its number and also view job number.
 * note: case 9 means empty job which is represented
 * in small white square in Gantt Chart.
 * @param type is the job number related to its color.
 */
private void chooseColor(int type)
{
    setForeground(Color.WHITE); // view job number in white on the label
    setHorizontalAlignment(LEFT); // view job number in the center of the label
    switch(type)
    {
        case 1: setBackground(new Color(0xdb353d)); break;
        case 2: setBackground(Color.DARK_GRAY); break;
        case 3: setBackground(new Color(0xdb35c2)); break;
        case 4: setBackground(new Color(0x3935db)); break;
        case 5: setBackground(new Color(0x35a6db)); break;
        case 6: setBackground(new Color(0x35dbbe)); break;
        case 7: setBackground(new Color(0x35db39)); break;
    }
}

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case 8: setBackground(new Color(0x8fdb35)); break;
case 9: setBackground(new Color(0xdbd935)); break;
case 10: setBackground(new Color(0xdb8735));break;
case 11: setBackground(Color.WHITE); break; // empty job
case 12: setBackground(Color.BLACK); break;// 10 jobs mark
default:
    }
}
}
```