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Code Smells

1. Duplicated code

*public* ResourceNewAction(HumanResourceManager hrManager, ProjectDatabase projectDatabase, RoleManager roleManager, TaskManager taskManager, UIFacade uiFacade) {  
 *super*("resource.new", hrManager);  
 myUIFacade = uiFacade;  
 myRoleManager = roleManager;  
 myTaskManager = taskManager;  
 myProjectDatabase = projectDatabase;  
}  
  
*private* ResourceNewAction(HumanResourceManager hrManager, ProjectDatabase projectDatabase, RoleManager roleManager, TaskManager taskManager, UIFacade uiFacade, IconSize size) {  
 *super*("resource.new", hrManager, *null*, size);  
 myUIFacade = uiFacade;  
 myRoleManager = roleManager;  
 myTaskManager = taskManager;  
 myProjectDatabase = projectDatabase;

Both code fragments look identical, making the code more difficult to change and update.

Solution: The constructor that has more arguments calls the other and sends the parameters they have in common, avoiding repeated code.

Location: ganttproject/src/main/java/net/sourceforge/ganttproject/action/resource/ResourceNewAction.java

1. Large class

*public class* OptionsPageBuilder

This class contains many lines of code. This occurs because this class has more responsibilities than it should.

Solution: Some of the responsibilities in this class can be moved to another class, making it simpler.

Location:

ganttproject/src/main/java/net/sourceforge/ganttproject/gui/options/OptionsPageBuilder.java

1. Long Method

*public* Component buildPageComponent() {  
 *final* GanttLanguage i18n = GanttLanguage.getInstance();  
 *final* Box result = Box.createVerticalBox();  
  
 myWeekendsPanel = *new* WeekendsSettingsPanel(getProject(), getUiFacade());  
 myWeekendsPanel.setAlignmentX(Component.LEFT\_ALIGNMENT);  
 myWeekendsPanel.initialize();  
 result.add(myWeekendsPanel);  
  
 result.add(Box.createVerticalStrut(15));  
  
 myProjectStart = getProject().getTaskManager().getProjectStart();  
 myProjectStartOption = *new* DefaultDateOption("project.startDate", myProjectStart) {  
 *private* TimeDuration getMoveDuration() {  
 *return* getProject().getTaskManager().createLength(getProject().getTimeUnitStack().getDefaultTimeUnit(),  
 getInitialValue(), getValue());  
 }  
  
 *@Override  
 public void* setValue(Date value) {  
 *super*.setValue(value);  
 TimeDuration moveDuration = getMoveDuration();  
 *if* (moveDuration.getLength() != 0) {  
 updateMoveOptions(moveDuration);  
 }  
 }  
  
 *@Override  
 public void* commit() {  
 *super*.commit();  
 *if* (!isChanged()) {  
 *return*;  
 }  
 *try* {  
 moveProject(getMoveDuration());  
 } *catch* (AlgorithmException e) {  
 getUiFacade().showErrorDialog(e);  
 }  
 }  
 };  
  
 Box myMoveOptionsPanel = Box.createVerticalBox();  
 myMoveOptionsPanel.setAlignmentX(Component.LEFT\_ALIGNMENT);  
  
 Box dateComponent = Box.createHorizontalBox();  
 OptionsPageBuilder builder = *new* OptionsPageBuilder();  
 dateComponent.add(*new* JLabel(i18n.getText(builder.getI18N().getCanonicalOptionLabelKey(myProjectStartOption))));  
 dateComponent.add(Box.createHorizontalStrut(3));  
 dateComponent.add(builder.createDateComponent(myProjectStartOption));  
 dateComponent.setAlignmentX(Component.LEFT\_ALIGNMENT);  
 myMoveOptionsPanel.add(dateComponent);  
 myMoveOptionsPanel.add(Box.createVerticalStrut(5));  
  
 myMoveStrategyPanelWrapper = *new* JPanel(*new* BorderLayout()) {  
 *@Override  
 public void* paint(Graphics g) {  
 *if* (isEnabled()) {  
 *super*.paint(g);  
 *return*;  
 }  
 *final* BufferedImage buf = *new* BufferedImage(getWidth(), getHeight(), BufferedImage.TYPE\_INT\_RGB);  
 *super*.paint(buf.getGraphics());  
 *final float*[] my\_kernel = { 0.0625f, 0.125f, 0.0625f, 0.125f, 0.25f, 0.125f, 0.0625f, 0.125f, 0.0625f };  
 *final* ConvolveOp op = *new* ConvolveOp(*new* Kernel(3, 3, my\_kernel), ConvolveOp.EDGE\_NO\_OP, *null*);  
 Image img = op.filter(buf, *null*);  
 g.drawImage(img, 0, 0, *null*);  
 }  
 };  
 myMoveStrategyPanelWrapper.setAlignmentX(Component.LEFT\_ALIGNMENT);  
  
 myMoveAllTasks = *new* JRadioButton(i18n.getText("project.calendar.moveAll.label"));  
 myMoveAllTasks.setAlignmentX(Component.LEFT\_ALIGNMENT);  
  
 myMoveStartingTasks = *new* JRadioButton(MessageFormat.format(i18n.getText("project.calendar.moveSome.label"),  
 i18n.formatDate(CalendarFactory.createGanttCalendar(myProjectStart))));  
 myMoveStartingTasks.setAlignmentX(Component.LEFT\_ALIGNMENT);  
  
 ButtonGroup moveGroup = *new* ButtonGroup();  
 moveGroup.add(myMoveAllTasks);  
 moveGroup.add(myMoveStartingTasks);  
 moveGroup.setSelected(myMoveAllTasks.getModel(), *true*);  
  
 Box moveStrategyPanel = Box.createVerticalBox();  
 myMoveDurationLabel = *new* JLabel();  
 myMoveDurationLabel.setAlignmentX(Component.LEFT\_ALIGNMENT);  
 moveStrategyPanel.add(myMoveDurationLabel);  
 moveStrategyPanel.add(myMoveAllTasks);  
 moveStrategyPanel.add(myMoveStartingTasks);  
  
 myMoveStrategyPanelWrapper.add(moveStrategyPanel, BorderLayout.CENTER);  
 myMoveOptionsPanel.add(Box.createVerticalStrut(3));  
 myMoveOptionsPanel.add(myMoveStrategyPanelWrapper);  
  
 UIUtil.createTitle(myMoveOptionsPanel, i18n.getText("project.calendar.move.title"));  
 result.add(myMoveOptionsPanel);  
  
 updateMoveOptions(getProject().getTaskManager().createLength(0));  
 *return* OptionPageProviderBase.wrapContentComponent(result, getCanonicalPageTitle(), *null*);

*return true*;  
}

This method contains too many lines of code. This probably means that is more complex than it needs to be.

Solution: Make auxiliary methods to simplify the code.

Location: ganttproject/src/main/java/net/sourceforge/ganttproject/gui/options/ProjectCalendarOptionPageProvider.java