***Design Patterns***

1. **Illustrating code snippet:**

Uma imagem com texto

Descrição gerada automaticamente

**Class location**: ganttproject/biz.ganttproject.core/src/main/java/bix/ganttproject/core/chart/grid/OffsetBuilderImpl.java

**Design Pattern (Builder):** In the OffsetBuilderImpl.java class the initialization of various constants is handled, step by step, y a creator that is not the class, this makes it easier to modify their creation and makes the code more understandable.

1. **Illustrating code snippet:**

**Uma imagem com texto

Descrição gerada automaticamente**

**Class location**: ganttproject/ganttproject/src/main/java/net/sourceforge/ganttproject/calendar/GPcalendarProvider.java

**Design Pattern (Singleton):** The class provides access through a single instance (line 71), the constructor to the class is private (line 109) and the method that instantiates the class is public (line 95).

1. **Illustrating code snippet:**

**Uma imagem com texto

Descrição gerada automaticamente**

**Class location**: ganttproject/ganttproject/src/main/java/net/sourceforge/ganttproject/parser/ParserFactory.java

**Design Pattern (Factory):** The interface ParserFactory.java declares 2 methods that return an object, the interface is implemented by the BufferProject.java class and the ParserFactoryImpl class in GanttProject.java. This allows the subclasses to alter the creation of the new objects to better fit their necessities.