

JDataGrid formula works with the Beans Binding

This article introduce the [Beans Binding](#) can work with the [JDataGrid](#) formula.

The [JDataGrid](#) formula works in the CellFormulaContext, every function the the formula can get other cell value from CellFormulaContext.

The [Beans Binding](#) framework can bind the different property together, if the cell value in [JDataGrid](#) bind a JavaBean, the cell should have the binding expression, this can be implements by a customize function, it should get the JavaBean from the formula context.

The following is the example demonstrate a function works with [Beans Binding](#):

```
static class ELPropertyFunction extends AbstractFunction {
    private static final String NAME = "ELPROPERTY";
    public ELPropertyFunction() {
        super(NAME);
    }

    @Override
    public Object evaluate(FormulaContext ctx, List args) {
        try {
            PropertyFormulaContext context = (PropertyFormulaContext) ctx;
            Object arg = args.iterator().next();
            String el = CellUtils.stringValue(arg);
            ELProperty property = ELProperty.create(el);
            if (property.isReadable(context)) {
                Object value = property.getValue(context);
                return value;
            } else {
                throw new CellException(CellException.Type.ERROR_VALUE);
            }
        } catch (RuntimeException e) {
            e.printStackTrace();
            throw e;
        }
    }
}
```

This function use the ELProperty to get the binding value.

The following is the PropertyFormulaContext, it hold the JavaBean that the ELProperty needed:

```
public class PropertyFormulaContext extends CellFormulaContext {
    private Bean bean;
    public Bean getBean() {
        return bean;
    }
}
```

The customize FormulaFactory can return the PropertyFormulaContext:

```
class PropertyFormulaFactory extends CellFormulaFactory {
    public FormulaContext createFormulaContext() {
        return new PropertyFormulaContext();
    }
}
```

The following code make the the ELPropertyFunction works:

```
FormulaFactory.setDefault(new PropertyFormulaFactory());
FormulaFactory.getDefault().addFunction(new ELPropertyFunction());
```

The method “createFormulaContext()” in FormulaFactory is a new feature in JDataGrid 2.5.0