

[LE]**1** [CE] [RE] [LO] [CO] [RO]**1** [LE] [CE] [RE]Generated by Doxygen  
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## Künstliche neuronale Netze

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## Chapter 1

# Main Page

test



## Chapter 2

# Framework Deeplearning4j

Framework

### 2.1 erschrift 1

test



## Chapter 3

# Arbeitsweise

Stichpunkte Aufgaben:

1. Eingabedaten
2. Klassifizierung der Eingabedaten

[Eingabedaten](#)

[Klassifizierung der Eingabedaten](#)

### 3.1 Eingabedaten

Die Eingabedaten Zugferd-Dateien.

### 3.2 Klassifizierung der Eingabedaten

Abbildung zeigt wie die Eingabedaten vom neuronalen Netz verarbeitet werden sollen.





## Chapter 4

### Todo List

Member `ReducedInvoice.InvoiceReducer.AddPositions` (Invoice invoice, `RInvoice` returnValue)  
if elem.getDelivery().getBilled().getUnitCode() == null



## Chapter 5

# Namespace Index

### 5.1 Namespace List

Here is a list of all namespaces with brief descriptions:

<a href="#">Application</a>	17
<a href="#">Import</a>	17
<a href="#">ReducedInvoice</a>	17



## Chapter 6

# Hierarchical Index

### 6.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

ReducedInvoice.AInvoice . . . . .	19
ReducedInvoice.RInvoice . . . . .	32
ReducedInvoice.InvoiceReducer . . . . .	23
ReducedInvoice.Metadata . . . . .	27
ReducedInvoice.Position . . . . .	28
ReducedInvoice.Price . . . . .	30
Application.Run . . . . .	35
Import.zugferdHandler . . . . .	36



## Chapter 7

# Class Index

### 7.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

<a href="#">ReducedInvoice.AInvoice</a>	19
<a href="#">ReducedInvoice.InvoiceReducer</a>	23
<a href="#">ReducedInvoice.Metadata</a>	27
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<a href="#">ReducedInvoice.RInvoice</a>	32
<a href="#">Application.Run</a>	35
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## Chapter 8

# File Index

### 8.1 File List

Here is a list of all files with brief descriptions:

C:/Users/Denis/workspace/taxsynapse/src/main/java/Application/Run.java . . . . .	41
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C:/Users/Denis/workspace/taxsynapse/src/main/java/ReducedInvoice/AInvoice.java . . . . .	41
C:/Users/Denis/workspace/taxsynapse/src/main/java/ReducedInvoice/InvoiceReducer.java . . . . .	42
C:/Users/Denis/workspace/taxsynapse/src/main/java/ReducedInvoice/Metadata.java . . . . .	42
C:/Users/Denis/workspace/taxsynapse/src/main/java/ReducedInvoice/Position.java . . . . .	42
C:/Users/Denis/workspace/taxsynapse/src/main/java/ReducedInvoice/Price.java . . . . .	42
C:/Users/Denis/workspace/taxsynapse/src/main/java/ReducedInvoice/RInvoice.java . . . . .	43



## Chapter 9

# Namespace Documentation

### 9.1 Package Application

#### Classes

- class [Run](#)

### 9.2 Package Import

#### Classes

- class [zugferdHandler](#)

### 9.3 Package ReducedInvoice

#### Classes

- class [AInvoice](#)
- class [InvoiceReducer](#)
- class [Metadata](#)
- class [Position](#)
- class [Price](#)
- class [RInvoice](#)

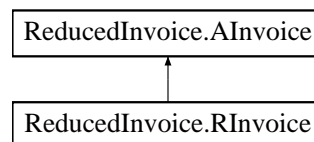


## Chapter 10

# Class Documentation

### 10.1 ReducedInvoice.AInvoice Class Reference

Inheritance diagram for ReducedInvoice.AInvoice:



#### Public Member Functions

- String [getBuyerName](#) ()
- void [setBuyerName](#) (String [buyerName](#))
- String [getSellerName](#) ()
- void [setSellerName](#) (String [sellerName](#))
- abstract void [addPosition](#) ([Position](#) p)
- abstract void [addPosition](#) (String desc, [Price](#) p, String mm, int amount, int tax)
- abstract [Position](#) [getPosition](#) (int index)
- abstract List< [Position](#) > [getPositions](#) ()
- abstract void [setPosition](#) ([Position](#) position, int index)
- abstract void [setPositionDescription](#) (String description, int index)
- abstract void [setPositionPrice](#) ([Price](#) price, int index)
- abstract void [setPositionAmount](#) (int amount, int index)
- abstract void [setPositionTaxRate](#) (int taxrate, int index)
- abstract int [getPositionsLength](#) ()
- Date [getInvoiceDate](#) ()
- void [setInvoiceDate](#) (Date invoiceDate)
- String [getInvoiceNumber](#) ()
- void [setInvoiceNumber](#) (String invoiceNumber)
- String [getCurrency](#) ()
- void [setCurrency](#) (String currency)
- [Price](#) [getTotalPrice](#) ()
- void [setTotalPrice](#) ([Price](#) totalPrice)

## Protected Attributes

- String [buyerName](#)
- String [sellerName](#)
- Price [TotalPrice](#)
- List< [Position](#) > [Positions](#)
- Metadata [MetaData](#)
- String [Currency](#)

### 10.1.1 Detailed Description

Definition at line 6 of file `AlInvoice.java`.

### 10.1.2 Member Function Documentation

**10.1.2.1** `abstract void ReducedInvoice.AlInvoice.addPosition ( Position p )` `[abstract]`

**10.1.2.2** `abstract void ReducedInvoice.AlInvoice.addPosition ( String desc, Price p, String mm, int amount, int tax )` `[abstract]`

**10.1.2.3** `String ReducedInvoice.AlInvoice.getBuyerName ( )` `[inline]`

Definition at line 31 of file `AlInvoice.java`.

```
31                                     {  
32     return buyerName;  
33 }
```

**10.1.2.4** `String ReducedInvoice.AlInvoice.getCurrency ( )` `[inline]`

Definition at line 84 of file `AlInvoice.java`.

```
84                                     {  
85     return Currency;  
86 }
```

**10.1.2.5** `Date ReducedInvoice.AlInvoice.getInvoiceDate ( )` `[inline]`

Definition at line 67 of file `AlInvoice.java`.

```
67                                     {  
68     return invoiceDate;  
69 }
```

**10.1.2.6 String ReducedInvoice.AInvoice.getInvoiceNumber ( ) [inline]**

Definition at line 75 of file AInvoice.java.

```
75                                     {  
76         return invoiceNumber;  
77     }
```

**10.1.2.7 abstract Position ReducedInvoice.AInvoice.getPosition ( int *index* ) [abstract]****10.1.2.8 abstract List<Position> ReducedInvoice.AInvoice.getPositions ( ) [abstract]****10.1.2.9 abstract int ReducedInvoice.AInvoice.getPositionsLength ( ) [abstract]****10.1.2.10 String ReducedInvoice.AInvoice.getSellerName ( ) [inline]**

Definition at line 39 of file AInvoice.java.

```
39                                     {  
40         return sellerName;  
41     }
```

**10.1.2.11 Price ReducedInvoice.AInvoice.getTotalPrice ( ) [inline]**

Definition at line 94 of file AInvoice.java.

```
94                                     {  
95         return TotalPrice;  
96     }
```

**10.1.2.12 void ReducedInvoice.AInvoice.setBuyerName ( String *buyerName* ) [inline]**

Definition at line 35 of file AInvoice.java.

```
35                                     {  
36         this.buyerName = buyerName;  
37     }
```

**10.1.2.13 void ReducedInvoice.AInvoice.setCurrency ( String *currency* ) [inline]**

Definition at line 89 of file AInvoice.java.

```
89                                     {  
90         Currency = currency;  
91     }
```

**10.1.2.14 void ReducedInvoice.AInvoice.setInvoiceDate ( Date *invoiceDate* ) [inline]**

Definition at line 71 of file AInvoice.java.

```
71                                     {
72     this.invoiceDate = invoiceDate;
73 }
```

**10.1.2.15 void ReducedInvoice.AInvoice.setInvoiceNumber ( String *invoiceNumber* ) [inline]**

Definition at line 79 of file AInvoice.java.

```
79                                     {
80     this.invoiceNumber = invoiceNumber;
81 }
```

**10.1.2.16 abstract void ReducedInvoice.AInvoice.setPosition ( Position *position*, int *index* ) [abstract]****10.1.2.17 abstract void ReducedInvoice.AInvoice.setPositionAmount ( int *amount*, int *index* ) [abstract]****10.1.2.18 abstract void ReducedInvoice.AInvoice.setPositionDescription ( String *description*, int *index* ) [abstract]****10.1.2.19 abstract void ReducedInvoice.AInvoice.setPositionPrice ( Price *price*, int *index* ) [abstract]****10.1.2.20 abstract void ReducedInvoice.AInvoice.setPositionTaxRate ( int *taxrate*, int *index* ) [abstract]****10.1.2.21 void ReducedInvoice.AInvoice.setSellerName ( String *sellerName* ) [inline]**

Definition at line 43 of file AInvoice.java.

```
43                                     {
44     this.sellerName = sellerName;
45 }
```

**10.1.2.22 void ReducedInvoice.AInvoice.setTotalPrice ( Price *totalPrice* ) [inline]**

Definition at line 99 of file AInvoice.java.

```
99                                     {
100     TotalPrice = totalPrice;
101 }
```



### 10.1.3 Member Data Documentation

#### 10.1.3.1 String ReducedInvoice.AInvoice.buyerName [protected]

Definition at line 15 of file AInvoice.java.

#### 10.1.3.2 String ReducedInvoice.AInvoice.Currency [protected]

Definition at line 29 of file AInvoice.java.

#### 10.1.3.3 Metadata ReducedInvoice.AInvoice.MetaData [protected]

Definition at line 27 of file AInvoice.java.

#### 10.1.3.4 List<Position> ReducedInvoice.AInvoice.Positions [protected]

Definition at line 24 of file AInvoice.java.

#### 10.1.3.5 String ReducedInvoice.AInvoice.sellerName [protected]

Definition at line 18 of file AInvoice.java.

#### 10.1.3.6 Price ReducedInvoice.AInvoice.TotalPrice [protected]

Definition at line 21 of file AInvoice.java.

The documentation for this class was generated from the following file:

- C:/Users/Denis/workspace/taxsynapse/src/main/java/ReducedInvoice/[AInvoice.java](#)

## 10.2 ReducedInvoice.InvoiceReducer Class Reference

### Public Member Functions

- void [ReducedInvoiceList](#) (List< Invoice > InvoiceList, List< [AInvoice](#) > ReducedInvoiceList)
- [Price checkMonetarySummation](#) (MonetarySummation gesamtpreis)
- void [AddPositions](#) (Invoice invoice, [RInvoice](#) returnValue)
- void [AddMetaInformation](#) (Invoice invoice, [RInvoice](#) returnValue)
- [RInvoice ConvertInvoiceToRinvoice](#) (Invoice invoice)

### Static Public Member Functions

- static [InvoiceReducer getInstance](#) ()
- static int [getExceptionCounter](#) ()

### 10.2.1 Detailed Description

Definition at line 9 of file InvoiceReducer.java.

### 10.2.2 Member Function Documentation

#### 10.2.2.1 void ReducedInvoice.InvoiceReducer.AddMetaInformation ( Invoice invoice, RInvoice returnValue ) [inline]

**Parameters**

<i>invoice</i>	
<i>returnValue</i>	

**Returns**

Definition at line 155 of file InvoiceReducer.java.

```

156     {
157         try
158         {
159             if(invoice.getHeader().getIssued() != null)
160             {
161                 returnValue.setInvoiceDate(new Date(
162                     invoice.getHeader().getIssued().getYear(),
163                     invoice.getHeader().getIssued().getMonth(),
164                     invoice.getHeader().getIssued().getDay()));
165             }
166             returnValue.setInvoiceNumber(invoice.getHeader().getInvoiceNumber()); //wichtig
167             returnValue.setBuyerName(invoice.getTrade().getAgreement().getBuyer().getName());
168             returnValue.setSellerName(invoice.getTrade().getAgreement().getSeller().getName());
169             returnValue.setCurrency(invoice.getTrade().getSettlement().getCurrency().getName());
170
171             returnValue.setTotalPrice(checkMonetarySummation(invoice.getTrade().
getSettlement().getMonetarySummation()));
172         }
173         catch(Exception e)
174         {
175             this.exceptionCounter++;
176         }
177     }

```

### 10.2.2.2 void ReducedInvoice.InvoiceReducer.AddPositions ( Invoice *invoice*, RInvoice *returnValue* ) [inline]

**Todo** if elem.getDelivery().getBilled().getUnitCode() == null

**Parameters**

<i>invoice</i>	
<i>returnValue</i>	

**Returns**

Definition at line 80 of file InvoiceReducer.java.

```

81     {
82         try
83         {
84             int lastPosition = -1;
85             String lastPositionName = "";
86
87             for(Item elem : invoice.getTrade().getItems())
88             {
89                 if(elem != null)
90                 {

```

```

91         float lineTaxPerc = 0;
92         float lineSumNet = 0;
93         float lineSumGross = 0;
94         if(elem.getSettlement() != null)
95         {
96             lineTaxPerc = elem.getSettlement().getTradeTax().get(0).getPercentage().floatValue();
97             lineSumNet = elem.getSettlement().getMonetarySummation().getLineTotal().getValue().
floatValue();
98             lineSumGross = lineSumNet + ( (lineSumNet * lineTaxPerc) / 100 );
99         }
100         if(elem.getProduct() != null && elem.getDelivery() != null)
101         {
102             if(elem.getProduct().getName() != null)
103             {
104                 if(lastPosition == -1)
105                 {
106                     lastPositionName = elem.getProduct().getName();
107                     returnValue.addPosition( new Position(
108                         elem.getProduct().getName(),
109                         new Price(lineSumGross, lineSumNet, lineTaxPerc),
110                         elem.getDelivery().getBilled().getUnitCode(),
111                         elem.getDelivery().getBilled().getValue().intValue(),
112                         (int)lineTaxPerc));
113                     lastPosition++;
114                 }
115                 else
116                 {
117                     if(lastPositionName.equals(elem.getProduct().getName()))
118                     {
119                         returnValue.getPosition(lastPosition).setAmount(returnValue.getPosition(
lastPosition).getAmount() + elem.getDelivery().getBilled().getValue().intValue());
120                     }
121                     else
122                     {
123                         /*
124                          * @todo if elem.getDelivery().getBilled().getUnitCode() == null
125                          */
126                         lastPositionName = elem.getProduct().getName();
127                         returnValue.addPosition( new Position(
128                             elem.getProduct().getName(),
129                             new Price(lineSumGross, lineSumNet, lineTaxPerc),
130                             elem.getDelivery().getBilled().getUnitCode(),
131                             elem.getDelivery().getBilled().getValue().intValue(),
132                             (int)lineTaxPerc));
133                         lastPosition++;
134                     }
135                 }
136             }
137         }
138     }
139 }
140 }
141 }
142 catch(Exception e)
143 {
144     this.exceptionCounter++;
145 }
146 }

```

### 10.2.2.3 Price ReducedInvoice.InvoiceReducer.checkMonetarySummation ( MonetarySummation gesamtpreis ) [inline]

Definition at line 48 of file InvoiceReducer.java.

```

49 {
50     float GrandTotal = 0;
51     float TaxBasisTotal = 0;
52     float TaxTotal = 0;
53     if(gesamtpreis.getGrandTotal().getValue() != null)
54     {
55         GrandTotal = gesamtpreis.getGrandTotal().getValue().floatValue();
56     }
57     if(gesamtpreis.getTaxBasisTotal().getValue() != null)
58     {
59         TaxBasisTotal = gesamtpreis.getTaxBasisTotal().getValue().floatValue();
60     }
61     if(gesamtpreis.getTaxTotal().getValue() != null)
62     {
63         TaxTotal = gesamtpreis.getTaxTotal().getValue().floatValue();

```

```

64         }
65
66         if(GrandTotal == 0)
67         {
68             GrandTotal = TaxBasisTotal + TaxTotal;
69         }
70
71         return new Price(GrandTotal, TaxBasisTotal, TaxTotal);
72     }

```

#### 10.2.2.4 RInvoice ReducedInvoice.InvoiceReducer.ConvertInvoiceToRInvoice ( Invoice invoice ) [inline]

Definition at line 179 of file InvoiceReducer.java.

```

180     {
181         RInvoice returnValue = new RInvoice();
182         AddMetaInformation(invoice, returnValue);
183         AddPositions(invoice, returnValue);
184         return returnValue;
185     }

```

#### 10.2.2.5 static int ReducedInvoice.InvoiceReducer.getExceptionCounter ( ) [inline], [static]

Definition at line 188 of file InvoiceReducer.java.

```

188                                     {
189         return exceptionCounter;
190     }

```

#### 10.2.2.6 static InvoiceReducer ReducedInvoice.InvoiceReducer.getInstance ( ) [inline], [static]

Definition at line 17 of file InvoiceReducer.java.

```

17                                     {
18         if(uniqueInstance == null) {
19             synchronized(InvoiceReducer.class){
20                 if(uniqueInstance == null){
21                     uniqueInstance = new InvoiceReducer();
22                 }
23             }
24         }
25         return uniqueInstance;
26     }

```

### 10.2.2.7 void ReducedInvoice.InvoiceReducer.ReducedInvoiceList ( List< Invoice > InvoiceList, List< AInvoice > ReducedInvoiceList ) [inline]

Definition at line 28 of file InvoiceReducer.java.

```

29     {
30         for(int i = 0; i < InvoiceList.size(); i++)
31         {
32             try
33             {
34                 if(InvoiceList.get(i) != null)
35                 {
36                     RInvoice addToList = (ConvertInvoiceToRInvoice(InvoiceList.get (
37 i)));
38                     if(addToList != null)
39                         ReducedInvoiceList.add(addToList);
40                 }
41             } catch(Exception e)
42             {
43                 System.out.println(i + " falsy");
44             }
45         }
46     }

```

The documentation for this class was generated from the following file:

- C:/Users/Denis/workspace/taxsynapse/src/main/java/ReducedInvoice/[InvoiceReducer.java](#)

## 10.3 ReducedInvoice.Metadata Class Reference

### Public Member Functions

- String [getBranchKey](#) ()
- void [setBranchKey](#) (String branchKey)

### 10.3.1 Detailed Description

Definition at line 3 of file Metadata.java.

### 10.3.2 Member Function Documentation

#### 10.3.2.1 String ReducedInvoice.Metadata.getBranchKey ( ) [inline]

Definition at line 11 of file Metadata.java.

```

11         {
12             return BranchKey;
13         }

```

### 10.3.2.2 void ReducedInvoice.Metadata.setBranchKey ( String *branchKey* ) [inline]

Definition at line 15 of file Metadata.java.

```

15         {
16             BranchKey = branchKey;
17         }

```

The documentation for this class was generated from the following file:

- C:/Users/Denis/workspace/taxsynapse/src/main/java/ReducedInvoice/[Metadata.java](#)

## 10.4 ReducedInvoice.Position Class Reference

### Public Member Functions

- [Position](#) (String Description, [Price](#) PositionPrice, String MeasureMent, int Amount, int Taxrate)
- String [getDescription](#) ()
- void [setDescription](#) (String description)
- [Price](#) [getPositionPrice](#) ()
- void [setPositionPrice](#) ([Price](#) positionPrice)
- int [getAmount](#) ()
- void [setAmount](#) (int amount)
- int [getTaxrate](#) ()
- void [setTaxrate](#) (int taxrate)

### 10.4.1 Detailed Description

Definition at line 3 of file Position.java.

### 10.4.2 Constructor & Destructor Documentation

#### 10.4.2.1 ReducedInvoice.Position.Position ( String *Description*, [Price](#) *PositionPrice*, String *MeasureMent*, int *Amount*, int *Taxrate* ) [inline]

Definition at line 5 of file Position.java.

```

6         {
7             this.Description = Description;
8             this.PositionPrice = PositionPrice;
9             this.Measurement = MeasureMent;
10            this.Amount = Amount;
11            this.Taxrate = Taxrate;
12        }

```

### 10.4.3 Member Function Documentation

#### 10.4.3.1 `int ReducedInvoice.Position.getAmount ( )` [inline]

Definition at line 40 of file `Position.java`.

```
40      {  
41          return Amount;  
42      }
```

#### 10.4.3.2 `String ReducedInvoice.Position.getDescription ( )` [inline]

Definition at line 24 of file `Position.java`.

```
24      {  
25          return Description;  
26      }
```

#### 10.4.3.3 `Price ReducedInvoice.Position.getPositionPrice ( )` [inline]

Definition at line 32 of file `Position.java`.

```
32      {  
33          return PositionPrice;  
34      }
```

#### 10.4.3.4 `int ReducedInvoice.Position.getTaxrate ( )` [inline]

Definition at line 48 of file `Position.java`.

```
48      {  
49          return Taxrate;  
50      }
```

#### 10.4.3.5 `void ReducedInvoice.Position.setAmount ( int amount )` [inline]

Definition at line 44 of file `Position.java`.

```
44      {  
45          Amount = amount;  
46      }
```

#### 10.4.3.6 void ReducedInvoice.Position.setDescription ( String *description* ) [inline]

Definition at line 28 of file Position.java.

```
28                                     {
29     Description = description;
30 }
```

#### 10.4.3.7 void ReducedInvoice.Position.setPositionPrice ( Price *positionPrice* ) [inline]

Definition at line 36 of file Position.java.

```
36                                     {
37     PositionPrice = positionPrice;
38 }
```

#### 10.4.3.8 void ReducedInvoice.Position.setTaxrate ( int *taxrate* ) [inline]

Definition at line 52 of file Position.java.

```
52                                     {
53     Taxrate = taxrate;
54 }
```

The documentation for this class was generated from the following file:

- C:/Users/Denis/workspace/taxsynapse/src/main/java/ReducedInvoice/[Position.java](#)

## 10.5 ReducedInvoice.Price Class Reference

### Public Member Functions

- [Price](#) (float Gross, float Net, float Tax)
- float [getBrutto](#) ()
- void [setBrutto](#) (float brutto)
- float [getNetto](#) ()
- void [setNetto](#) (float netto)
- float [getSteuer](#) ()
- void [setSteuer](#) (float steuer)

#### 10.5.1 Detailed Description

Definition at line 3 of file Price.java.



### 10.5.2 Constructor & Destructor Documentation

### 10.5.2.1 ReducedInvoice.Price.Price ( float *Gross*, float *Net*, float *Tax* ) [inline]

Definition at line 5 of file Price.java.

```
5      {
6          this.Gross = Gross;
7          this.Net = Net;
8          this.Tax = Tax;
9      }
```

### 10.5.3 Member Function Documentation

### 10.5.3.1 float ReducedInvoice.Price.getBrutto ( ) [inline]

Definition at line 17 of file Price.java.

```
17         {
18             return Gross;
19     }
```

### 10.5.3.2 float ReducedInvoice.Price.getNetto ( ) [inline]

Definition at line 25 of file Price.java.

```
25         {
26             return Net;
27     }
```

### 10.5.3.3 float ReducedInvoice.Price.getSteuer ( ) [inline]

Definition at line 33 of file Price.java.

```
33     {
34         return Tax;
35     }
```

#### 10.5.3.4 void ReducedInvoice.Price.setBrutto ( float *brutto* ) [inline]

Definition at line 21 of file Price.java.

[illegible]

### 10.5.3.5 void ReducedInvoice.Price.setNetto ( float *netto* ) [inline]

Definition at line 29 of file Price.java.

```

29                                     {
30         Net = netto;
31     }
```

### 10.5.3.6 void ReducedInvoice.Price.setSteuer ( float *steuer* ) [inline]

Definition at line 37 of file Price.java.

```

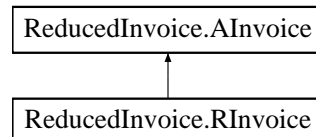
37                                     {
38         Tax = steuer;
39     }
```

The documentation for this class was generated from the following file:

- C:/Users/Denis/workspace/taxsynapse/src/main/java/ReducedInvoice/[Price.java](#)

## 10.6 ReducedInvoice.RInvoice Class Reference

Inheritance diagram for ReducedInvoice.RInvoice:



### Public Member Functions

- [RInvoice](#) ()
- void [addPosition](#) ([Position](#) p)
- void [addPosition](#) (String desc, [Price](#) p, String mm, int amount, int tax)
- [Position](#) [getPosition](#) (int index)
- List< [Position](#) > [getPositions](#) ()
- void [setPositionDescription](#) (String description, int index)
- void [setPositionPrice](#) ([Price](#) price, int index)
- void [setPositionAmount](#) (int amount, int index)
- void [setPositionTaxRate](#) (int taxrate, int index)
- int [getPositionsLength](#) ()
- void [setPosition](#) ([Position](#) position, int index)

### Additional Inherited Members

#### 10.6.1 Detailed Description

Definition at line 6 of file RInvoice.java.

## 10.6.2 Constructor & Destructor Documentation

### 10.6.2.1 `ReducedInvoice.RInvoice.RInvoice ( )` `[inline]`

Definition at line 9 of file `RInvoice.java`.

```
9          {
10      Positions = new ArrayList<Position>();
11    }
```

## 10.6.3 Member Function Documentation

### 10.6.3.1 `void ReducedInvoice.RInvoice.addPosition ( Position p )` `[inline]`

Definition at line 14 of file `RInvoice.java`.

```
14          {
15
16      Positions.add(p);
17    }
```

### 10.6.3.2 `void ReducedInvoice.RInvoice.addPosition ( String desc, Price p, String mm, int amount, int tax )` `[inline]`

Definition at line 20 of file `RInvoice.java`.

```
20          {
21
22      Positions.add(new Position(desc, p, mm, amount, tax));
23    }
```

### 10.6.3.3 `Position ReducedInvoice.RInvoice.getPosition ( int index )` `[inline]`

Definition at line 26 of file `RInvoice.java`.

```
26          {
27
28      if(Positions.size() < index)
29          return null;
30      else
31          return Positions.get(index);
32    }
```

### 10.6.3.4 `List<Position> ReducedInvoice.RInvoice.getPositions ( )` `[inline]`

Definition at line 35 of file `RInvoice.java`.

```
35          {
36
37      return Positions;
38    }
```

**10.6.3.5 int ReducedInvoice.RInvoice.getPositionsLength ( ) [inline]**

Definition at line 65 of file RInvoice.java.

```
65                                     {
66
67         return Positions.size();
68     }
```

**10.6.3.6 void ReducedInvoice.RInvoice.setPosition ( Position position, int index ) [inline]**

Definition at line 71 of file RInvoice.java.

```
71                                     {
72
73         Positions.get(index).setDescription(position.getDescription());
74         Positions.get(index).setPositionPrice(position.getPositionPrice());
75         Positions.get(index).setAmount(position.getAmount());
76         Positions.get(index).setTaxrate(position.getTaxrate());
77     }
```

**10.6.3.7 void ReducedInvoice.RInvoice.setPositionAmount ( int amount, int index ) [inline]**

Definition at line 53 of file RInvoice.java.

```
53                                     {
54
55         Positions.get(index).setAmount(amount);
56     }
```

**10.6.3.8 void ReducedInvoice.RInvoice.setPositionDescription ( String description, int index ) [inline]**

Definition at line 41 of file RInvoice.java.

```
41                                     {
42
43         Positions.get(index).setDescription(description);
44     }
```

**10.6.3.9 void ReducedInvoice.RInvoice.setPositionPrice ( Price price, int index ) [inline]**

Definition at line 47 of file RInvoice.java.

```
47                                     {
48
49         Positions.get(index).setPositionPrice(price);
50     }
```

**10.6.3.10 void ReducedInvoice.RInvoice.setPositionTaxRate ( int *taxrate*, int *index* ) [inline]**

Definition at line 59 of file RInvoice.java.

```

59                                     {
60
61         Positions.get(index).setTaxrate(taxrate);
62     }

```

The documentation for this class was generated from the following file:

- C:/Users/Denis/workspace/taxsynapse/src/main/java/ReducedInvoice/[RInvoice.java](#)

**10.7 Application.Run Class Reference****Static Public Member Functions**

- static void [main](#) (String[] args) throws IOException

**10.7.1 Detailed Description**

Definition at line 11 of file Run.java.

**10.7.2 Member Function Documentation****10.7.2.1 static void Application.Run.main ( String[] *args* ) throws IOException [inline], [static]**

Override Validation Counter

Serialization

Definition at line 21 of file Run.java.

```

21                                     {
22
23         String pathToFolder = args[0];
24         Boolean logSingleSteps = Boolean.valueOf(args[1]);
25         Boolean supressInvalid = Boolean.valueOf(args[2]);
26
27         zugferdHandler zHandler = zugferdHandler.
28         getInstance();
29         List<Invoice> InvoiceList = new ArrayList<Invoice>();
30         List<AInvoice> ReducedInvoiceList = new ArrayList<AInvoice>();
31
32         System.out.println("Please ignore log4j Warnings");
33         //Read Invoices from Folder and add to List
34         try{
35             zHandler.readInvoice(pathToFolder, InvoiceList, logSingleSteps, supressInvalid);
36             System.out.println("All Invoices successfully readed");
37             InvoiceReducer ir = InvoiceReducer.
38             getInstance();
39             ir.ReducedInvoiceList(InvoiceList, ReducedInvoiceList);
40             System.out.println("Successfully reduced Invoices");
41             System.out.println("Exceptioncounter: " + ir.getExceptionCounter());
42         }catch(Exception e){
43             System.out.print("Exception while reducing Invoices");
44             System.out.println("Details: ");
45             System.out.println(e.getMessage());
46         }
47
48         System.out.println("Breakpoint");
49
50     }

```

The documentation for this class was generated from the following file:

- C:/Users/Denis/workspace/taxsynapse/src/main/java/Application/[Run.java](#)

## 10.8 Import.zugferdHandler Class Reference

### Public Member Functions

- Invoice [readInvoice](#) (String Path) throws IOException
- void [readInvoice](#) (String Path, List< Invoice > InvoiceList, final boolean setLogging, final boolean supressInvalid) throws Exception
- void [removeInvalid](#) (List< Invoice > InvoiceList)
- boolean [hasInvalid](#) (List< Invoice > InvoiceList)
- Set< ConstraintViolation< Invoice > > [getViolations](#) (Invoice invoice)
- void [printViolations](#) (List< Invoice > InvoiceList)
- void [printSingleInvoiceViolations](#) (Invoice invoice)

### Static Public Member Functions

- static [zugferdHandler getInstance](#) ()

### 10.8.1 Detailed Description

Definition at line 19 of file zugferdHandler.java.

### 10.8.2 Member Function Documentation

#### 10.8.2.1 static zugferdHandler Import.zugferdHandler.getInstance ( ) [inline], [static]

Definition at line 25 of file zugferdHandler.java.

```

25                                     {
26         if(uniqueInstance == null) {
27             synchronized(zugferdHandler.class){
28                 if(uniqueInstance == null){
29                     uniqueInstance = new zugferdHandler();
30                 }
31             }
32         }
33         return uniqueInstance;
34     }

```

#### 10.8.2.2 Set<ConstraintViolation<Invoice> > Import.zugferdHandler.getViolations ( Invoice invoice ) [inline]

Definition at line 125 of file zugferdHandler.java.

```

125                                     {
126
127         InvoiceValidator invoiceValidator = new InvoiceValidator();
128
129         Set<ConstraintViolation<Invoice>> violations = invoiceValidator.validate(invoice);
130
131         return violations;
132     }

```

**10.8.2.3 boolean Import.zugferdHandler.hasInvalid ( List< Invoice > InvoiceList ) [inline]**

Definition at line 116 of file zugferdHandler.java.

```
116                                     {
117
118     for (Invoice temp : InvoiceList) {
119         if (this.getViolations(temp) != null)
120             return true;
121     }
122     return false;
123 }
```

**10.8.2.4 void Import.zugferdHandler.printSingleInvoiceViolations ( Invoice invoice ) [inline]**

Definition at line 148 of file zugferdHandler.java.

```
148                                     {
149
150     InvoiceValidator invoiceValidator = new InvoiceValidator();
151
152     Set<ConstraintViolation<Invoice>> violations = invoiceValidator.validate(invoice);
153
154     for (ConstraintViolation<Invoice> violation : violations) {
155         System.out.println((violation.getMessage() + " at: " + violation.getPropertyPath()));
156     }
157 }
```

**10.8.2.5 void Import.zugferdHandler.printViolations ( List< Invoice > InvoiceList ) [inline]**

Definition at line 134 of file zugferdHandler.java.

```
134                                     {
135
136     InvoiceValidator invoiceValidator = new InvoiceValidator();
137
138     Set<ConstraintViolation<Invoice>> violations;
139
140     for (Invoice temp : InvoiceList) {
141         violations = invoiceValidator.validate(temp);
142         for (ConstraintViolation<Invoice> violation : violations) {
143             System.out.println((violation.getMessage() + " at: " + violation.getPropertyPath()));
144         }
145     }
146 }
```

**10.8.2.6 Invoice Import.zugferdHandler.readInvoice ( String Path ) throws IOException [inline]**

Definition at line 36 of file zugferdHandler.java.

```
36                                     {
37
38     PdfHandler handler = new PdfHandler();
39
40     FileInputStream input = new FileInputStream(new File(Path));
41
42     Invoice invoice = handler.extractInvoice(input);
43
44     if (invoice != null)
45         return invoice;
46     else
47         return null;
48 }
```

### 10.8.2.7 void Import.zugferdHandler.readInvoice ( String Path, List< Invoice > InvoiceList, final boolean setLogging, final boolean supressInvalid ) throws Exception [inline]

Definition at line 50 of file zugferdHandler.java.

```

50
51         {
52         //Rekursive => elem can be a folder or a file
53         Files.walk(Paths.get(Path)).forEach(elem -> {
54             String fileName = elem.getFileName().toString();
55             String path = elem.toString();
56             try{
57                 if (Files.isDirectory(elem)){
58                     if(setLogging){ System.out.println("recursive entry. elem is just a directory."); }
59                 }else{ if (Files.isRegularFile(elem)){
60                     if(Files.probeContentType(elem).intern() == "application/pdf"){
61                         Invoice invoice = this.readInvoice(path);
62                         if(invoice != null) {
63                             boolean add = false;
64                             if(supressInvalid){
65                                 Set<ConstraintViolation<Invoice>> violations = this.
66                                 getViolations(invoice);
67                                 if((violations.size() > 0)){
68                                     if(setLogging){ System.out.println("Violatins found in: " + fileName);
69                                     }
70                                     if(setLogging){
71                                         violations.forEach(vio -> {
72                                             System.out.println(vio.getExecutableReturnValue() + "|" + vio.
73                                             getLeafBean() + "|" + vio.getInvalidValue() + "|" + vio.getMessage());
74                                         });
75                                         add = false;
76                                     }else{
77                                         add = true;
78                                     }
79                                 }else{
80                                     add = true;
81                                 }
82                                 if(add){
83                                     if(setLogging){ System.out.println(fileName + " is valid." ); }
84                                     InvoiceList.add(invoice);
85                                     if(setLogging){ System.out.println( fileName + " added to the list."); }
86                                 }
87                             }else{
88                                 if(setLogging){ System.out.println("a non pdf file was found. Ignoring..."); }
89                             }else{
90                                 if(setLogging){ System.out.println("elem is neither a directory nor a file. Ignoring...
91                                 "); }
92                             }
93                         }catch(TransformationException tfe){
94                             if(setLogging){
95                                 System.out.println(fileName + " caused an Exception while transforming PDF/ZUGFERD to
96                                 Java/Invoice");
97                                 System.out.println("Message: " + tfe.getMessage());
98                             }
99                         }catch(IOException ioe){
100                             if(setLogging){
101                                 System.out.println(fileName + " caused an IOException.");
102                                 System.out.println("Message: " + ioe.getMessage());
103                             }
104                         }catch(Exception e){
105                             if(setLogging){
106                                 System.out.println(fileName + " caused an Exception.");
107                                 System.out.println("Message: " + e.getMessage());
108                             }
109                         }
110                     }
111                 }
112             }
113         });
114     }

```

### 10.8.2.8 void Import.zugferdHandler.removeInvalid ( List< Invoice > InvoiceList ) [inline]

Definition at line 111 of file zugferdHandler.java.



```
111                                     {  
112  
113         InvoiceList.removeIf(i -> getViolations(i).size() <= 0);  
114     }
```

The documentation for this class was generated from the following file:

- C:/Users/Denis/workspace/taxsynapse/src/main/java/Import/[zugferdHandler.java](#)



# Chapter 11

## File Documentation

### 11.1 C:/Users/Denis/workspace/taxsynapse/src/main/java/Application/↵ Run.java File Reference

#### Classes

- class [Application.Run](#)

#### Packages

- package [Application](#)

### 11.2 C:/Users/Denis/workspace/taxsynapse/src/main/java/Import/zugferd↵ Handler.java File Reference

#### Classes

- class [Import.zugferdHandler](#)

#### Packages

- package [Import](#)

### 11.3 C:/Users/Denis/workspace/taxsynapse/src/main/java/Reduced↵ Invoice/AlInvoice.java File Reference

#### Classes

- class [ReducedInvoice.AlInvoice](#)

## Packages

- package [ReducedInvoice](#)

## 11.4 C:/Users/Denis/workspace/taxsynapse/src/main/java/ReducedInvoice/InvoiceReducer.java File Reference ↩

### Classes

- class [ReducedInvoice.InvoiceReducer](#)

## Packages

- package [ReducedInvoice](#)

## 11.5 C:/Users/Denis/workspace/taxsynapse/src/main/java/ReducedInvoice/Metadata.java File Reference ↩

### Classes

- class [ReducedInvoice.Metadata](#)

## Packages

- package [ReducedInvoice](#)

## 11.6 C:/Users/Denis/workspace/taxsynapse/src/main/java/ReducedInvoice/Position.java File Reference ↩

### Classes

- class [ReducedInvoice.Position](#)

## Packages

- package [ReducedInvoice](#)

## 11.7 C:/Users/Denis/workspace/taxsynapse/src/main/java/ReducedInvoice/Price.java File Reference ↩

### Classes

- class [ReducedInvoice.Price](#)

## Packages

- package [ReducedInvoice](#)

## 11.8 C:/Users/Denis/workspace/taxsynapse/src/main/java/ReducedInvoice/RInvoice.java File Reference

## Classes

- class [ReducedInvoice.RInvoice](#)

## Packages

- package [ReducedInvoice](#)

## 11.9 mainpage.txt File Reference



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