



# W3C RIF Rule Interchange Format

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# RIF

- RIF Core
- RIF BLD: Basic Logic Dialect
- RIF PRD: Production Rule Dialect
- RIF FLD: Framework for Logic Dialect
- RIF DTB: Datatypes and Built-Ins
- RIF SWC: RDF and OWL Compatibility



# RIF BLD

```
Document (  
Base (<http://example.com/people#>)  
Prefix (bks <http://example.com/books#>)  
Group (  
Forall ?Buyer ?Item ?Seller (  
    bks:buy(?Buyer ?Item ?Seller) :-  
    bks:sell(?Seller ?Item ?Buyer) )  
bks:sell(<John> bks:LeRif "Mary"^^rif:iri)  
))
```

# RIF BLD

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**Base (<http://example.com/people#>)**

**Prefix (bks <http://example.com/books#>)**

Group (

Forall ?Buyer ?Item ?Seller (

    bks:buy(?Buyer ?Item ?Seller) :-

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))



# RIF BLD

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Base (<http://example.com/people#>)

Prefix (bks <http://example.com/books#>)

Group (

**forall ?Buyer ?Item ?Seller (**

**bks:buy(?Buyer ?Item ?Seller) :-**

**bks:sell(?Seller ?Item ?Buyer) )**

bks:sell(<John> bks:LeRif "Mary"^^rif:iri)

))



# RIF BLD

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    bks:sell(?Seller ?Item ?Buyer) )

**bks:sell(<John> bks:LeRif "Mary"^^rif:iri)**

))



# RIF BLD

```
Exists ?X (cpt:book(?X bks:LeRif))
```

```
cpt:book(cpt:author->?X cpt:title->bks:LeRif)
```

```
?L = List(?X ?Y ?X)
```

```
List(?Head | ?Tail)
```

```
= List("a"^^rif:local ?Y "c"^^rif:local)
```

*Source: W3C*



# Frame

```
bks:wd1 [
```

```
  cpt:author->auth:rifwg
```

```
  cpt:title->bks:LeRif]
```

```
?I [cpt:author->?X    ?T->bks:LeRif]
```

```
?I # cpt:book          (instance of)
```

```
?C ## cpt:document    (subClass of)
```

*Source: W3C*





# RIF BLD

```
?diff = External(func:subtract-  
    dateTime(?deliverydate ?scheduledate))
```

*Source: W3C*

# RIF BLD

```

<And>
<formula>
<Exists> <declare><Var>Buyer</Var></declare>
  <formula>
<Atom> <op><Const type="&rif;iri">&cpt;purchase</Const></op>
<args ordered="yes">
<Var>Buyer</Var> <Var>Seller</Var>
<Expr> <op><Const type="&rif;iri">&cpt;book</Const></op>
<args ordered="yes"> <Var>Author</Var> <Const type="&rif;iri">&bks;LeRif</Const> </args>
</Expr>
<Expr> <op><Const type="&rif;iri">&curr;USD</Const></op>
<args ordered="yes"><Const type="&xs;integer">49</Const></args>
</Expr>
</args>
</Atom>
</formula>
</Exists>
</formula>
<formula> <Equal> <left><Var>Seller</Var></left> <right><Var>Author</Var></right> </Equal>
</formula>
</And>

```