



Process Design

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Appian Rules & Constants

- Organized into folders
- Constants *can* change
- Appian expression language
 - <https://forum.appian.com/suite/wiki/71/Expressions>
 - Literals - Variables (domain!name) - Functions - Operators
 - Arrays (one based indexing) - CDTs
- Built in functions
 - https://forum.appian.com/suite/wiki/71/Appian_Functions
 - if, logical functions, text function, **looping** (map/reduce), conversion functions etc
- Custom functions
- *Most functions are not available in reports*

Some useful functions

- if
- and / or / not / true / false
- index ([]) / append / insert
- find / len / left / right / split
- contains / difference / union / intersection
- all / any / apply / reduce / filter / reject
- user / group / document / loggedInUser / isusermemberofgroup

https://forum.appian.com/suite/wiki/71/Function_Recipes

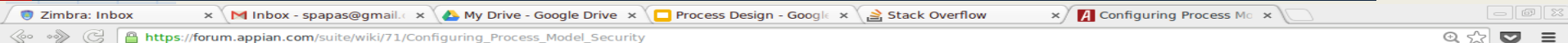
Example rules

```
if (  
  and (  
    not((contains(x,"test")),  
    contains(x,"foo")  
  ),  
  "FOO", "BAR"  
) => for x = {"foo", "bar"} will return "FOO"  
reduce(  
  fn!sum, 0 ,  
  filter(fn!ismorethan3,  
    apply(fn!len, ll)  
  )  
) => for ll = {"a1", "str2", "str35"} will return 9
```

Process Design

- Versioning
- Data management
- Assignment or automated
 - To whom / Automated as who

Process Model Security



Actions	Process Administrator	Editor	Manager	Viewer	Initiator
Start the Process Model	X	X	X	X	X
Star the Process Model	X	X	X	X	X
View the Process Model	X	X	X	X	
View Process Model Reports	X	X	X	X	
Add Attachment/Note to a Process Model	X	X	X		
Edit the Process Model	X	X			
Override Task Assignment (whether or not reassignment is allowed)	X	X			
Save the Process Model	X	X			
View the Process Model Documentation	X	X			
Change User/Group Security Rights Assigned for a Process Model.	X				
Delete Process Model	X				
Override a Lock Placed on the Process Model	X				
Publish the Process Model	X				
Remove Attachment/Note from a Process Model	X				

Deny

If a user or group is assigned to **Deny** security rights, they cannot perform any action associated with the process model.

- You cannot remove the right to view assigned tasks.

Process Security

Zimbra: Inbox x Inbox - spapas@gmail.com x My Drive - Google Drive x Process Design - Google x Stack Overflow x Configuring Process Security x

https://forum.appian.com/suite/wiki/71/Configuring_Process_Security

STAR Methodology

[Best Practices](#)
[Glossary](#)
[APIs](#)

Toolbox

[What links here](#)
[Related changes](#)
[Special pages](#)
[Printable version](#)
[Permanent link](#)

Actions	Process Administrator	Editor	Manager	Viewer	Initiator
Upload attachments to a task that is assigned to the user	X	X	X	X	X
Reassign tasks assigned to me, when reassignment is enabled	X	X	X	X	X
Add attachments/notes to a process	X	X	X	X	
View process status	X	X	X	X	
View process report	X	X	X	X	
View node report	X	X	X	X	
View task reports	X	X	X	X	
Update process variables	X	X	X		
Remove attachments/notes from a process	X		X		
Reassign tasks for other users when reassignment is enabled	X	X	X		
Reassign tasks when reassignment is disabled	X	X			
View and complete tasks assigned to other users in the system (as well as tasks assigned to you)	X	X			
Change process security roles for other users and groups	X				
Perform in-flight modifications to the process	X				
Stop or pause a process	X				
Delete a process	X				

Appian BPM Notation

- <http://www.bpmn.org/>
- Flow
- Lane

- Node
 - Activity
 - User Task
 - Script Task
 - Subprocess
 - Smart Node
 - Event
 - Start / End
 - Send / Receive message
 - Rule
 - Timer
 - Gateways

Appian User Tasks

- Escalations
 - After some time or at a specific interval
 - Raise priority / send alert / reassign / send message to process
- Exceptions
- Assignee / Owner
 - Be careful with the unattended activity
- Data mapping
- Activity chaining / wizards
- Quick tasks
 - Outside of flow
 - For instance, cancel process

Sub processes

- Synchronous
- Asynchronous
 - No communication - No chaining - No wait for parent
- Inputs / Outputs
- Pass by value / **reference**
- *Always latest version of sub process is used*
- *Subprocesses can be archived / deleted after finished*

Events

- Start / End / Terminate
- Send / Receive message
 - Send: Process to Process
 - Receive: Process / External (JMS) / Email
- Rule / Timer
- Rule, timer & receive message can also be used to define exception flows to activities

Document Management

- Manage documents
- Generate documents

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<HTML>
<BODY>
  ###Name### joined ###Department### on ###Date of Joining###. The
employee's position is ###Position### and their
supervisor is ###Supervisor###.
</BODY>
</HTML>
```

- Not recommended - use Jasper instead

Other things to discuss

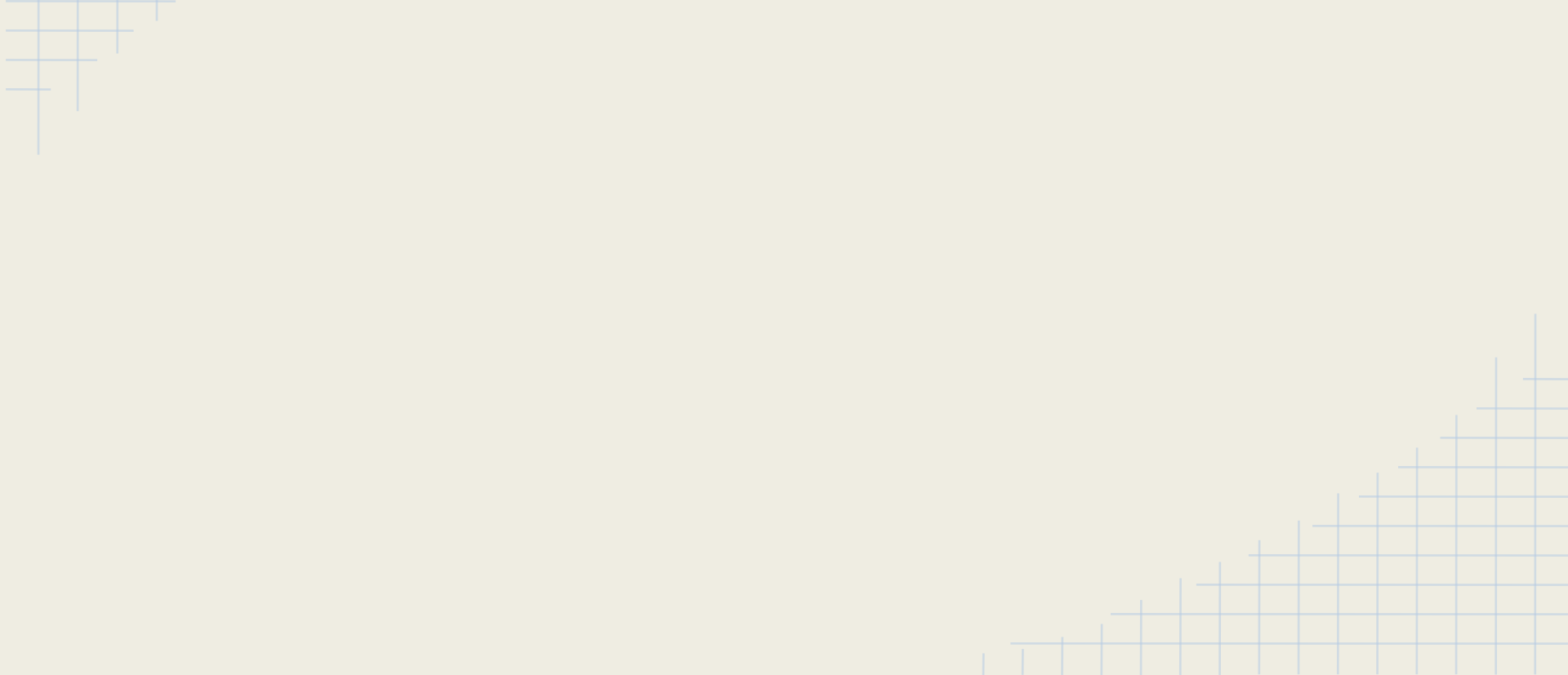
- Gateways
- MNI
- Assignments
- Receive messages
- ...

Reports

- Process Model
 - All, Created by user, Last Modified By user
- Process
 - All, Initiated by user, By process model
- Task
 - All, assigned to User, assigned to Group, by Owner, by process model, by process
- Scripting and custom function not available

Best practices for reports

- Use existing reports as templates
- Always check report calculation times
 - Reports run sequentially
- Always think for reporting when designing your process
 - Most functions cannot be used so process variables have to be created that contain the values
- To use data from subprocesses pass them by reference
- *Use numbers for statuses and not text*
- Compare text using `exact()` instead of `=`
- Do not place reports on main pages of applications



Best Practices

- Be careful with process data size
- Be careful with process form data
- Be careful with versioning
- Usually the most difficult to implement solution would be the “best”
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Example: Fill a dropdown

- We want to fill a dropdown in an Appian form with values
 - Solution 1: We create an Expression Rule that returns the values
 - Not easy when we have lots of values
 - What would we do if we wanted to display different values per process or customer ?
 - Solution 2: We put the values in the database and get them in an Appian array with a simple select
 - No problem with lots of values or querying
 - However, each instance of the processes will have a copy of **not needed values - please don't do it**
 - Solution 3: We use AJAX to fill the dropdown
 - More difficult to implement however it doesn't have the previous shortcomings
 - **Solution 4 (the future): Do not use Drop down - use Data grid !!!**