* Achieving business automation with Validation,Workflows,approvals and Process Builder

Validation Rules

* Helps implement business rules on Entries/updates done by user .
* Works whenever data is saved via layouts/vf pages or any insert to an object
* Major expressions AND,OR,IF ,ISBLANK,ISNEW and more.
* If validation rule expression evaluates to true ,then it means rule is violated.
* Regex,vlookup type functions are also available
* https://help.salesforce.com/articleView?id=000213868&type=1
* Labs:Create Vrules using and,or ,check for multiple conditions and edit mode.
* Dont allow name change in edit mode,add age check ,doj rule,unique name

Lab validation rules

* IF(ISCHANGED(Name) , true,false)
* AND(if(devlight1973__Age__c < 18,true,false), ISNEW())
* if(VLOOKUP(
  $ObjectType.devlight1973__StudentMaster__c.Fields.Name,
  $ObjectType.devlight1973__StudentMaster__c.Fields.Name, Name)== Name,true,false)
* IF(devlight1973__DOJ__c < DATE(2017,5,8), true, false)

Workflows

Business

Information Alerts

Allocate Tasks

Status Updates

Message External System

Workflow

Email Alerts

Tasks

Field Updates

Information Alerts

Workflow definition

- A workflow rule sets workflow actions into motion when its designated conditions are met.

- You can configure workflow actions to execute immediately when a record meets the conditions in your workflow rule, or set time triggers that execute the workflow actions on a specific day.

Evaluation criteria

- You can choose whenever a record is created
- Whenever a record is created or edited
- Whenever a record is created or edited to subsequently meet criteria (in other words, if it already satisfied the criteria before it was edited, the rule won't run).
- Which option you choose depends on your specific scenario.

Logic for Rule to Get Triggered

You can select from the dropdown menu:

Run the rule if the following criteria are met. (you can compare fields to static values that you specify based on simple operators like equals, not equal to, starts with, or contains)

Run the rule if the following formula evaluates to true. (you can create more complex criteria, by writing a boolean expression (that is, one that evaluations to true or false))

Choose Actions

Tasks: Assign a new task to a user, role, or record owner.

Email Alerts: Send an email to one or more recipients you specify.

Field Updates: Update the value of a field on record.

Outbound Messages: Send a secure, configurable API message (in XML format) to a designated listener.

Time Based Workflow

We can add time based workflow rule so that based on the time duration and rule the rule is fired.

This we can add only with Created and Created and edited when subsequently meet the criteria

To check the workflow working status we can view through Time-Based Workflow option in monitoring.

Labs

* Create workflow on student master
* To send welcome email when a new student record is created
* Create auto task to create id card
* Update field to active
* Create hidden field update to ensure multiple field unique key

Process builder

- What are all the Automation Tools that salesforce has?
- Why they needed another tool?
- What is Process Builder?
- How is it better than workflow rules.

Its Capabilities

Select and Define Action

Action Type *

| Select One ▼ |

Select One
Apex
Create a Record
Email Alerts
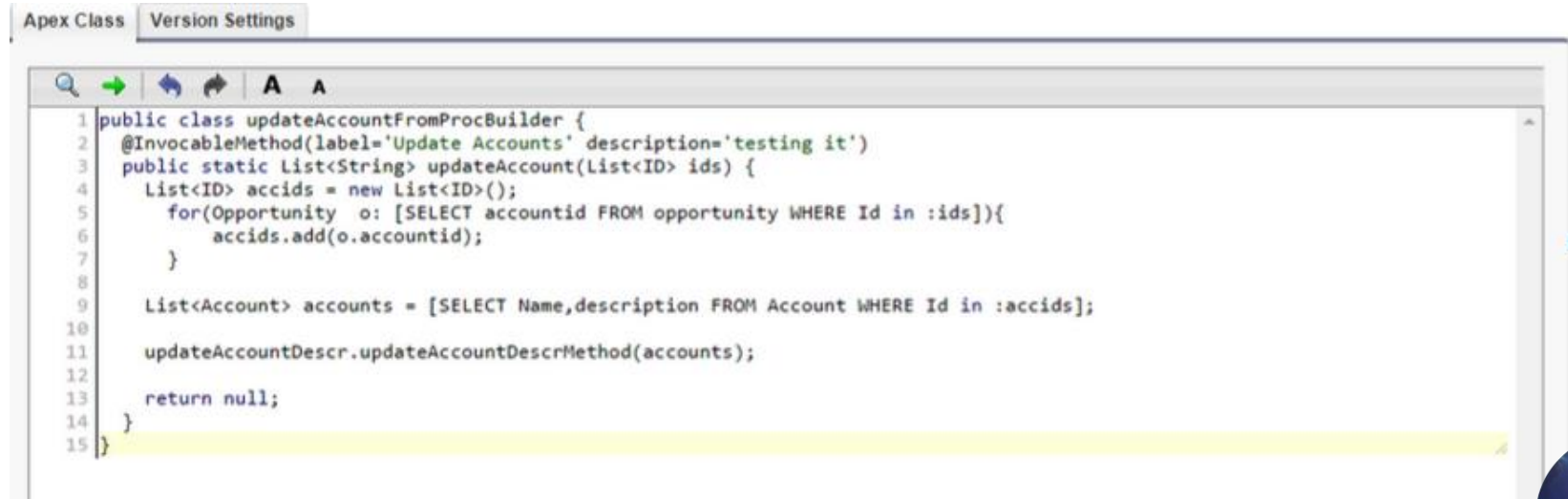Flows
Post to Chatter
Quick Actions
Submit for Approval
Update Records

Invoke Apex

- Use @InvocableMethod.
- Contains only one method.
- You can pass current record id to the method.
- You can pass the data between methods like in line# 11 below.


```
1  public class updateAccountFromProcBuilder {
2    @InvocableMethod(label='Update Accounts' description='testing it')
3    public static List<String> updateAccount(List<ID> ids) {
4      List<ID> accids = new List<ID>();
5      for(Opportunity  o: [SELECT accountid FROM opportunity WHERE Id in :ids]){
6          accids.add(o.accountid);
7      }
8
9      List<Account> accounts = [SELECT Name,description FROM Account WHERE Id in :accids];
10
11     updateAccountDescr.updateAccountDescrMethod(accounts);
12
13     return null;
14   }
15 }
```

Create record

Post To Chatter

Limits and Other Considerations

Processes share some limits with rules and Visual Workflow.

In addition to the following limits, a process's `API Name` must be unique across all processes and flows in your organization.

Description	Per-Organization Limit
Total active rules and active processes. Rules include workflow rules, escalation rules, assignment rules, and auto-assignment rules.	50 per object
Total flows and processes	1000
Active flows and processes	500
Total number of criteria nodes that are evaluated and actions that are executed at runtime	2000
Total number of flow interviews that are resumed or groups of scheduled actions that are executed per hour	1000
Total number of flow interviews or groups of scheduled actions that are waiting to be processed	30,000
Total number of relative time alarms defined in flow versions or schedules based on a field value in processes	20,000

Apex Governors Limits For Processes

Salesforce strictly enforces limits to ensure that runaway processes don't monopolize shared resources in the multitenant environment. Processes are governed by the per-transaction limits that are enforced by Apex. If the process causes the transaction to exceed governor limits, the system rolls back the entire transaction. For details about the operations that are included in the transaction, see "Triggers and Order of Execution" in the Force.com Apex Developer's Guide.

Description	Per-Transaction Limit
Total number of SOQL queries issued	100
Total number of records retrieved by SOQL queries	50,000
Total number of DML statements issued	150
Total number of records processed as a result of DML statements	10,000