

Here is a summary of the formula related things that get asked in the developer certification exams.

### **Custom Formula fields**

- Formula fields are read only
- Accessible via the Force.com SOAP API
- The values are calculated every time they are needed; they are not stored
- Formula fields also let you set dynamic default values for new records
- Formulas are also used in validation rules to ensure business requirements are met and data quality is maintained
- Use to enforce other business rules, including Workflow Rules, Approval Processes, Approval Steps, Assignment Rules, Escalation Rules, Auto-Response Rules.
- Formula fields may reference other formula fields
- Formula fields reference fields from child to parent objects
- Are not searchable
- Can't reference text area long fields
- Can reference standard fields or custom fields
- Cannot add multiple records together

### **Cross-Object Formula Fields**

- Provides the ability to reference the value of a field in a parent object from the child objects through detail pages, list views, and reports
- They can reference fields on parent or grandparent objects up to 10 relationships away
- Cross object formula is calculated as the records are viewed
- Cross-object formula also work from child to parent but only in master-detail relationship

### **Roll-up Summary Fields**

- Refer fields from the child object from the parent object
- Works only in a master-detail relationship
- Can calculate the values of formula fields if they do not contain cross-object field references or functions that automatically derive values on the fly, such as NOW or TODAY.
- Changes to the value of a roll-up summary field can trigger assignment rules to run
- Roll-up summary fields can trigger workflow rules and field validations
- A limit of 10 Roll-up Summary fields on an object
- Count, Sum, Min, Max
- When is calculated? when any of the detail records in the master-detail relationship referenced in the roll-up summary field are saved

### **Understand usage and syntax of important functions**

AND – TRUE if all value are true else FALSE

CASE – checks an expression against a series of values

CASESAFEID – convert 15 char ID to case-insensitive 18 char ID

CONTAINS – CONTAINS(text, compare\_text) and replace text with the text that contains the value of compare\_text.

DATE – date value from year, month and day value entered

DATEVALUE – date value from text of date/time expression

GETSESSIONID – Returns the session ID for the current session

IF – IF(logical\_test, value\_if\_true, value\_if\_false)

INCLUDES – if any value selected in a multi-pick list equals a text literal

ISBLANK – Determines if an expression has a value and returns TRUE if it does not. If it contains a value, this function returns FALSE

ISCHANGED – Compares the value of a field to the previous value and returns TRUE if the values are different. If the values are the same, this function returns FALSE

ISNEW – Checks if the formula is running during the creation of a new record and returns TRUE if it is. If an existing record is being updated, this function returns FALSE

ISPICKVAL – if any value selected in a pick list equals a text literal

PRIORVALUE – Returns the previous value of a field.

REGEX – compare a text field to a regular expression ( a string in a certain format )

VALUE – number from a text

VLOOKUP – VLOOKUP(field\_to\_return, field\_on\_lookup\_object, lookup\_value)

### **Additional notes on functions**

Picklist needs to be wrapped by TEXT function for using in a formula function.

#### *ISNULL*

For text fields, use the ISBLANK function. ISNULL determines if an expression is null and returns TRUE if it is. If it contains a value, this function returns FALSE.

Note that Text fields are never null, so using this function with a text field always returns false. Multi-select picklist fields are never null in s-controls, buttons, and email templates, so using this function with a multi-select picklist field in those contexts will also return FALSE.

#### *ISBLANK*

Use ISBLANK instead of ISNULL in new formulas. ISBLANK has the same functionality as ISNULL, but also supports text fields. Determines if an expression has a value and returns TRUE if it does not. If it contains a value, this function returns FALSE.

#### *DATEVALUE*

Use the DATEVALUE ( date/time ) function to return the Date value of a Date/Time field. For example, to get the year from a Date/Time, use YEAR ( DATEVALUE ( date/time ) ). You can convert a Date value to a Date/Time value using the DATETIMEVALUE ( date ) function.

#### *NOW*

The NOW() function returns the Date/Time value of the current moment. It's useful when you are concerned with specific times of day as well as the date.