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Created by: Anubhav Oberoy  
System: S/4HANA OP Implementation Project

## End to End S/4 HANA Hierarchy Scenario: Employee-Manager Hierarchy Fiori App

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### Functional Information (prepared by Functional Consultant and UX Designer)

We have implemented S/4HANA OP last year in our company “anubhavtrainings.com”, We have custom HR tables containing the details of employee, manager and cost center information, along with tables including the effort estimation for employees. The business needs a Fiori Application to display Utilization effort of employee and reporting manager in a Fiori Application. Below document describes the design and detailed requirement for the same.

#### Tables used:

Following database tables are storing Master and Transaction data for Employee-Manager Record for reporting requirements

Table Name	Purpose	Key
ZATS_EMP_MGR	Employee Manager Master Record	EMPID
ZATS_EMP_HRS	Employee Effort Recording (In Hours)	EMPID

a. A BW Report displaying Cost Center, Manager and Employee Hierarchy

DP\_1 I2CZOFTIEMP

Initial State

Information on Query

Static Filter

Dynamic Filter

Variable Values

Navigation Pane

Row Characteristics

Cost Center

Manager Name

Employee

Column Characteristics

Key Figures

Free Characteristics

Field of length 16

Query Employee Manager Hierarchy

Up-to-Dateness of Data: 17.02.2019 14:58:44 INDIA

Refresh Swap Axes Documents Conditions Exceptions Dynamic Selections Bookmark

Key Figures

Cost Center/Manager Name/Employee

SUMME

1000

Cost Centers

Managers

Employees

Row 1 - 25 / 27

Column 1 - 1 / 1

2. A Smart Tree Table report showcasing the hierarchy and filter based on the Cost Center

ABAP CDS Hierarchy, CData, Fiori Annotations

Hide Filter Bar Filters Go

Cost Center:

Smart Filter Bar with Cost Center as Search Field

Manager Employee Hierarchy (28)

numc Node Text

Utilization Ratio (Formatted)

Hierarchy Display in Smart Tree Table

Cost Center

▼ Sonia Nehra	114,2857143	1000
▼ Sonia Nehra	266,6666667	SAP-DUMMY
Vinay Bhaskar	200,0000007	SAP-DUMMY
Peter Mall	114,2857143	1000
▼ Mahima Sharma	209,5238095	SAP-DUMMY
Sonakshi Sethia	266,6666667	SAP-DUMMY
> Jane Schott	190,4761905	SAP-DUMMY
Vaishali Banua	266,6666667	SAP-DUMMY
Rohit Mishra	114,2857143	SAP-DUMMY
Donna Maria	266,6666667	SAP-DUMMY
Mathias Dorry	400,0000000	SAP-DUMMY
▼ Roger Ross	200,0000000	1000
▼ Roger Ross	228,5714286	SAP-DUMMY
Riyaz Hussain	400,0000000	1000
Pooja Bajaj	266,6666667	SAP-DUMMY
Vinay Rathod	200,0000000	SAP-DUMMY

## Implementation Information (prepared by Architect)

How to read data?

Read for Analytical App

Master Data for employee and its reporting manager stored in table ZATS\_EMP\_MGR

Table: **ZOFT\_EMP\_MGR**  
 Displayed Fields: 5 of 5 Fixed Columns:

	MANDT	EMPID	EMPNAME	MANAGERID	COSTCENTER
<input type="checkbox"/>	800	00001	Sonia Nehra	00000	0000001000
<input type="checkbox"/>	800	00002	Mehima Sharma	00000	SAP-DUMMY
<input type="checkbox"/>	800	00003	Sonakshi Sethia	00002	SAP-DUMMY
<input type="checkbox"/>	800	00004	Vinay Bhaskar	00001	SAP-DUMMY
<input type="checkbox"/>	800	00005	Jane Schott	00002	SAP-DUMMY
<input type="checkbox"/>	800	00006	Peter Matt	00001	0000001000
<input type="checkbox"/>	800	00007	Vaishali Banua	00002	SAP-DUMMY
<input type="checkbox"/>	800	00008	Roger Ross	00000	0000001000
<input type="checkbox"/>	800	00009	Dennis Dell	00005	SAP-DUMMY
<input type="checkbox"/>	800	00010	Syed Ahmed	00000	SAP-DUMMY
<input type="checkbox"/>	800	00011	Shikha Sen	00005	SAP-DUMMY
<input type="checkbox"/>	800	00012	Rohit Mishra	00002	SAP-DUMMY
<input type="checkbox"/>	800	00013	Prakash Kumar	00005	SAP-DUMMY

For each employee there is a reporting manager and corresponding Cost Center associated to manager, Every Manager him/her self-part of employee table and belongs to cost center, also there are multi levels on page. For each employee the planned and actual effort is maintained in table ZATS\_EMP\_HRS (Time Recording), The actual effort spend by employee is recorded by timesheet app already.

Table: **ZOFT\_EMP\_HRS**  
 Displayed Fields: 4 of 4 Fixed Columns:

	MANDT	EMPID	PLANNED	RECORDED
<input type="checkbox"/>	800	00001	8	7
<input type="checkbox"/>	800	00002	8	3
<input type="checkbox"/>	800	00003	8	3
<input type="checkbox"/>	800	00004	8	3
<input type="checkbox"/>	800	00005	8	3
<input type="checkbox"/>	800	00006	8	7
<input type="checkbox"/>	800	00007	8	3
<input type="checkbox"/>	800	00008	8	6
<input type="checkbox"/>	800	00009	8	3
<input type="checkbox"/>	800	00010	8	6
<input type="checkbox"/>	800	00011	8	8
<input type="checkbox"/>	800	00012	8	7
<input type="checkbox"/>	800	00013	8	4
<input type="checkbox"/>	800	00014	8	5
<input type="checkbox"/>	800	00015	8	3
<input type="checkbox"/>	800	00016	8	2

**Recorded by MyTimeSheet Fiori App**

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A join can be commenced between the master and transaction data using employee id irrespective of employee or manager.

Aggregate (SUM) the planned and recorded efforts and calculate the effort utilization using formula  $\text{planned} / \text{recorded} * 100$

## Implementation Information (prepared by Developer - Anubhav)

1. Create an interface view to represent the Master Data from Employee Manager Record - ZATS\_P\_EMPLOYEE
2. Create an interface CDS view to define a parent child hierarchy between Employee and Manager with a Self-join as manager is also an employee (Non-cyclic) - ZATS\_I\_EMPMGR
3. Define a CUBE view by associating the Effort hours (Transactional data table) and cost center master data records - ZATS\_CO\_EMPHOURS (#CUBE)
4. Test the cube using RSRTS\_ODP\_DIS tcode to check if hierarchy levels are realized.
5. Finally, Create an Analytic Query using Consumption View which aggregate all the measures and expose expression to produce the Effort Utilization rate.
6. Expose the Calculation view as OData Service with Hierarchy annotations to display a Tree Table. ZATS\_C\_EMPHOURS
7. Create a Fiori Application including the Annotations file and search field for cost center.
8. Add Smart Filter bar and Table including binding to communicate to the response from OData service.

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