## Introduction

An invoice is a commercial document issued by a seller to a buyer indicating the products, quantities, and agreed upon prices for the goods or services the seller has provided to the buyer. An invoice indicates the buyer must pay the seller according to the payment terms. One of the most important and difficult aspects in paying an invoice is to verify the invoice details and obtain approvals from the relevant or appropriate approvers. Approval process also enables organizations to review their internal processes and controls to prevent any frauds or scandals that may arise due to the lack of such controls. Such controls are implemented in modern Enterprise Resource Planning (ERP) applications using workflow functionality.

In this document we discuss in detail the invoice approvals workflow functionality in Oracle Fusion Payables and also discuss in detail various features available for customers to implement their approval policy for payables invoices. Payables use Oracle SOA Suite approval management extensions for various approval flows.

### Approval Management Key Components Overview

Approval management in Oracle Fusion Applications is comprised of several key components that are integrated seamlessly for delivering end-to-end and robust approval workflow functionality. Using the approval management functionality you can define complex and multistage routing rules.

### Key components of approval management are:

Oracle SOA Suite Approval Management Extensions
Oracle Business Process Management (BPM)
Oracle Fusion Human Capital Management (HCM)

## Oracle SOA Suite Approval Management Extensions

Approval management extensions of the human workflow services from Oracle SOA Suite are the core of approval functionality in Oracle Fusion Applications and perform many key integrated tasks for approval functionality to work. Some of the key functions of approval management extensions are:

Integrates with HCM to derive approvers based on the supervisory, job role, and position-based hierarchies defined in HCM.

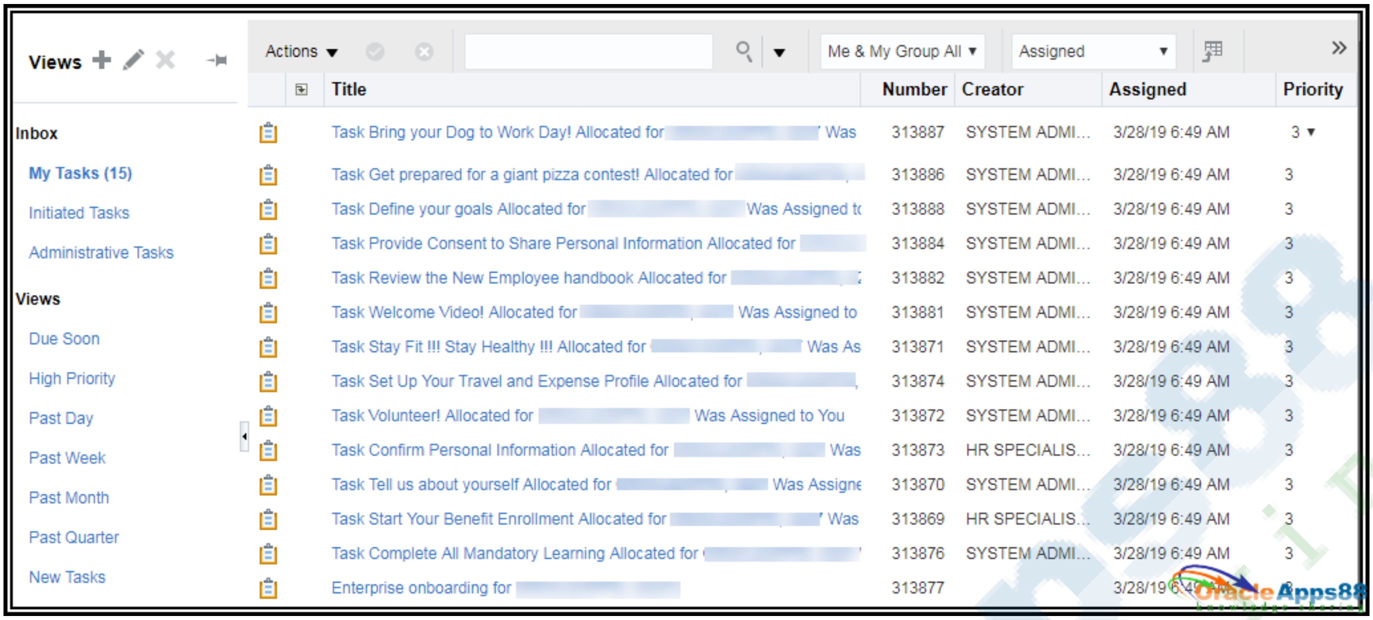
Provides the framework for defining approval rules for various business documents like Payables invoices.

Provides the ability to select complex routing patterns based on your business processes, such as whether to route documents to approvers in sequential or in parallel fashion.

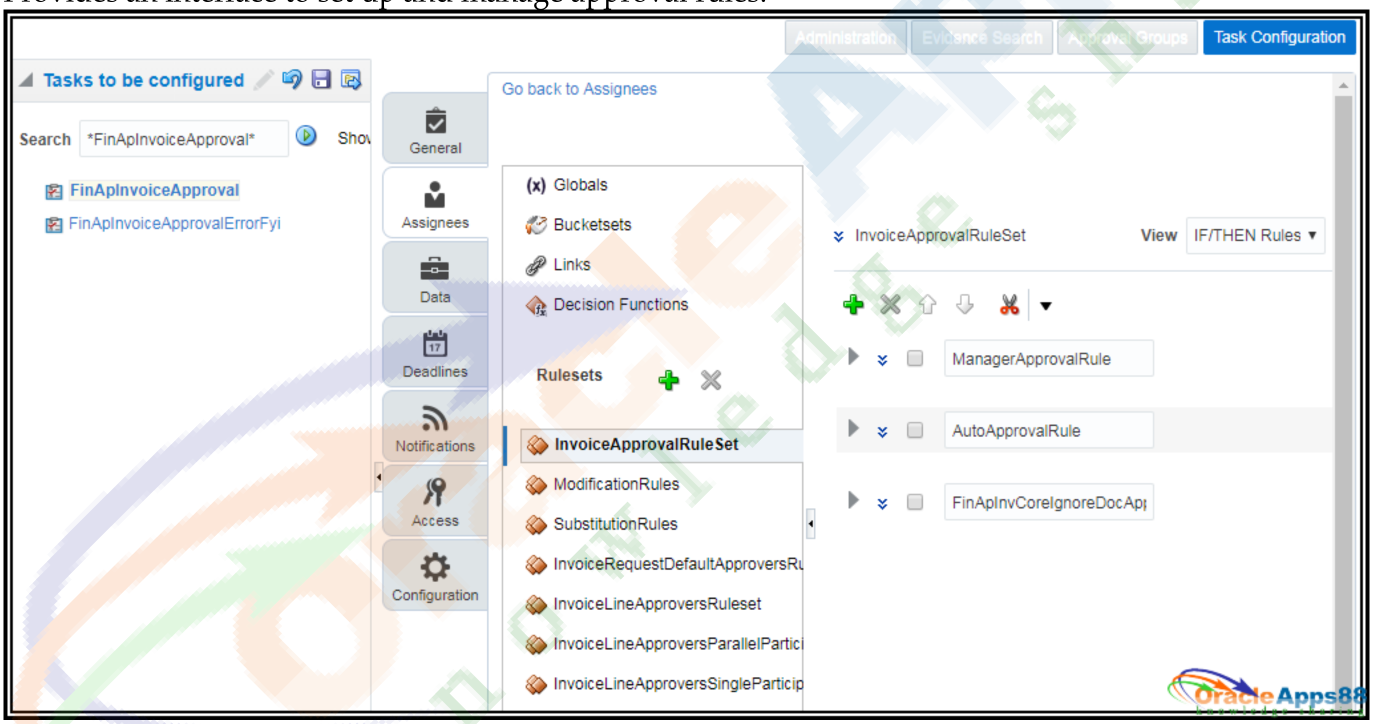
**BPM**

BPM provides an interface called the BPM Worklist application for business users to perform the following two key activities related to the approvals functionality:

Provides an interface to work with various notifications tasks assigned to them. The BPM Worklist is a web-based application that displays all worklist tasks assigned to the business users and they can perform various approval-related actions on the tasks assigned to them. Using this application, users can drill down to the task assigned to them, for example an approver can drill down to the payables invoice approval notification (task) to see invoice details like header amount, line details, line amounts, and so on, and can perform the necessary approval action.




Provides an interface to set up and manage approval rules.



**HCM**

HCM is used for defining various employee hierarchies like supervisory, job-based, or position-based. Approval management extensions integrate with HCM to derive the required approvers if approval rules are configured based on HCM hierarchies.

**Approval Key Concepts**

**List Builders**

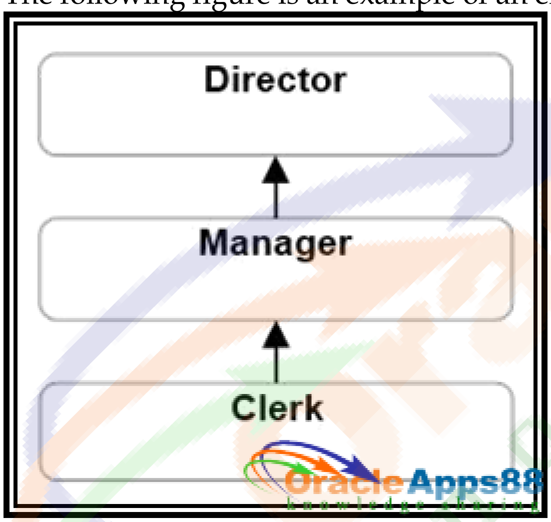
List builder is the way approvals management builds the list of approvals required for a transaction based on the rule condition. Each approval rule is associated with a list builder for generating the list of approvers. For Payables invoice approvals, the following list builders are supported:

- Supervisory
- Job Level
- Position
- Approval Group
- Resource

**Supervisory**

Approvals can be set up based on the employee supervisory hierarchy, which is defined in HCM. Employees must be set up in HCM with appropriate jobs and supervisors. For example, the clerk reports to the manager, who reports to the director.

The following figure is an example of an employee and supervisor approval structure.




For complete details on setting up the employee supervisory hierarchy, refer to the HCM application.

**Job Level**

Job level routings are based on the supervisory hierarchy defined in HCM. Employees must be set up in HCM with the appropriate job levels and supervisors. For example, Job Level1 employee, a clerk, reports to Job Level2 employee, a manager, who reports to Job Level4 employee, a director.

The approval list is generated based on the starting position specified in the rule and continues until an approver with a sufficient job level is found. The supervisory hierarchy needs to be defined along with the corresponding job levels.

The following figure provides an example of a Job Level structure:


For complete details on setting up job levels and assigning job levels to employees, refer to the HCM application.

**Position**

Organizations can also choose to route invoice approvals based on the position hierarchy defined in HCM. The position hierarchy needs to be defined and employees must be assigned the corresponding positions.

Here's an example of a position hierarchy approval structure for Beta Retail:


For complete details on setting up the position hierarchy, refer to the HCM application.

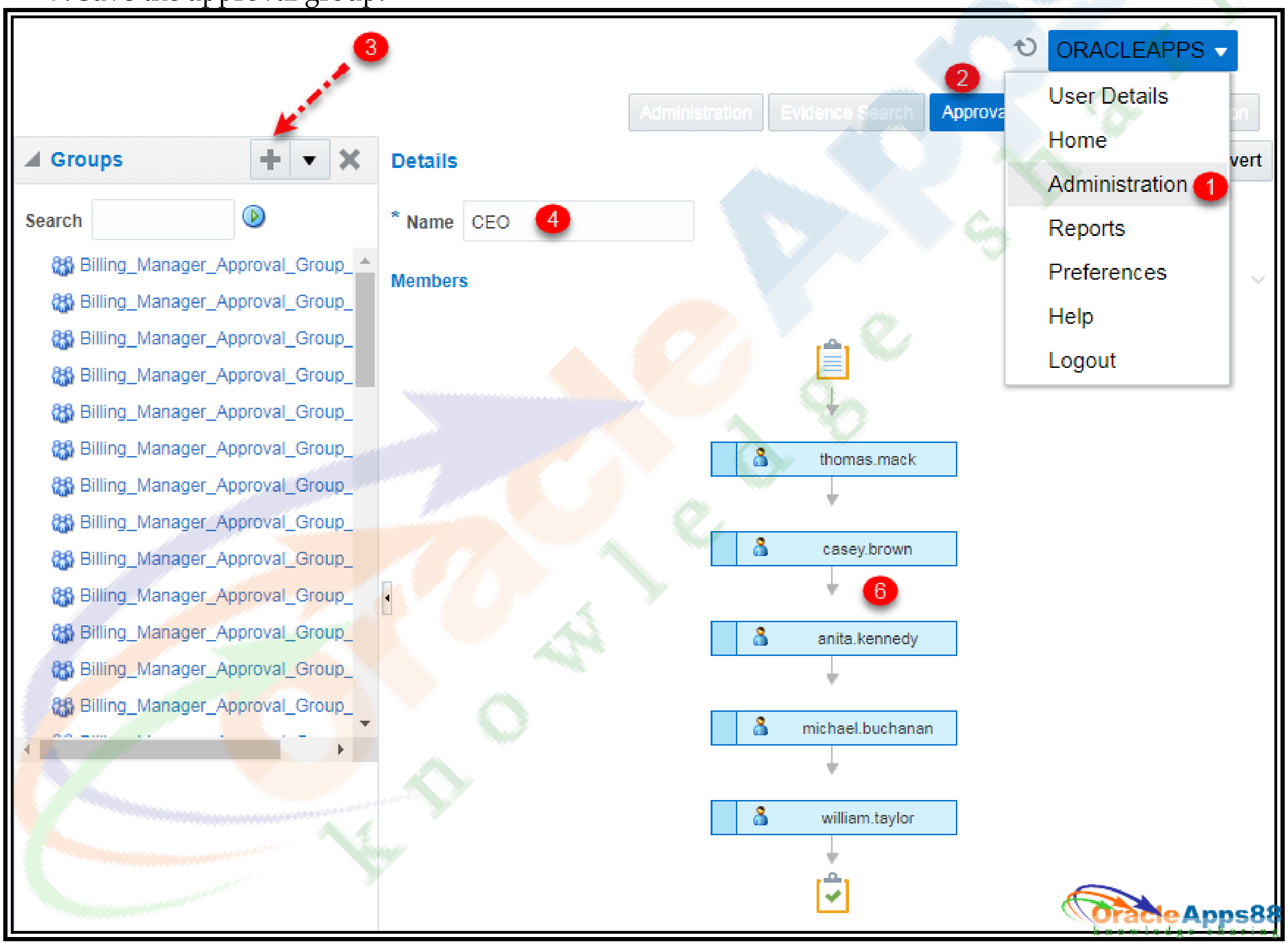
**Approval Groups**

An approval group consists of a static predefined set of users configured to act on a task. Depending on the participant type defined, approval tasks are routed to an approval group in serial or parallel mode. For example, you can create an approval group called Finance Group comprised of users from the finance department who need to participate in the approving of a task.

New approval groups can be created, or existing approval groups can be edited from the Approvals Groups tab on the BPM Worklist application Administration page.

**Steps to create an approval group:**
Sign in to the BPM Worklist application as an administrator

1. Click the **Administration** link.
2. Click the Approval Groups tab.
3. Click the icon in the left side pane.
4. Enter the name of the approval group.
5. Click the icon in the Details area to add users to the approval group.
6. Select users to add to the group.
7. Save the approval group.




**Resource**
Using the Resource list builder, you can build the approvers list by using a specific user, group duty role, or application role. Resource list builder
is one of the easiest ways to build the approvers list.

**Participant**

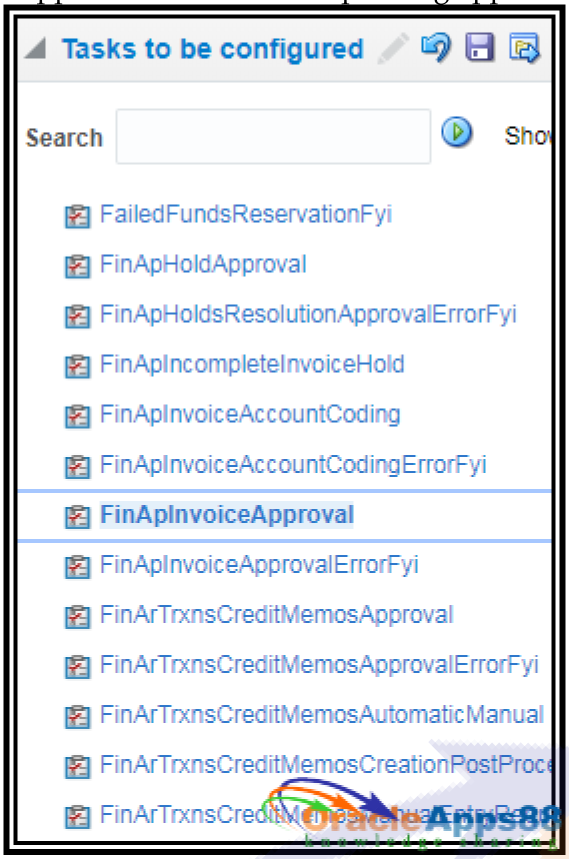
A participant is a user or set of users who are participating in the approval process, including their routing policy in the process. Each participant is associated with a single rule set. Approval rules are defined in the context of a rule set and you can create many rules under one rule set. Based on your approval requirements, you need to configure the approval rules within the context of a participant.

**Types of participants**

| Participant | Description |
|---|---|
| Serial | This participant indicates that approvers must work in sequence. This is a commonly-used participant for configuring rules using management hierarchies where approvals are performed in sequential fashion one after another. |
| | |
| Parallel | This participant indicates that a set of people must work in parallel. For example, while using this participant an invoice is assigned to all of the users at the same time and the invoice gets approved only when all of the users approve it. Even if one of the users rejects the invoice, the invoice will get rejected. |
| | |
| Single | This participant indicates that a task will be assigned to a set of people in parallel and the task outcome is decided by a response from any one of the users. In common parlance, this participant is equivalent to a first-responder-wins scenario. For example, if an invoice approval notification is sent to multiple users, and if any one of the users approves or rejects the invoice, then the invoice task is completed with the respective status. |
| | |
| FYI | This participant indicates that users just receive a notification for informational purposes and the business process does not wait for the participant's response. Users cannot perform any actions on FYI notifications. |

**Payables implementation of participant model**
For invoice approvals configuration you need to use task **FinAPInvoiceApproval**. This task includes participants for both invoices and invoice requests.

**Note**: An invoice request is an invoice without a purchase order that's submitted through Oracle Fusion Supplier Portal and that's pending approval from the requester.

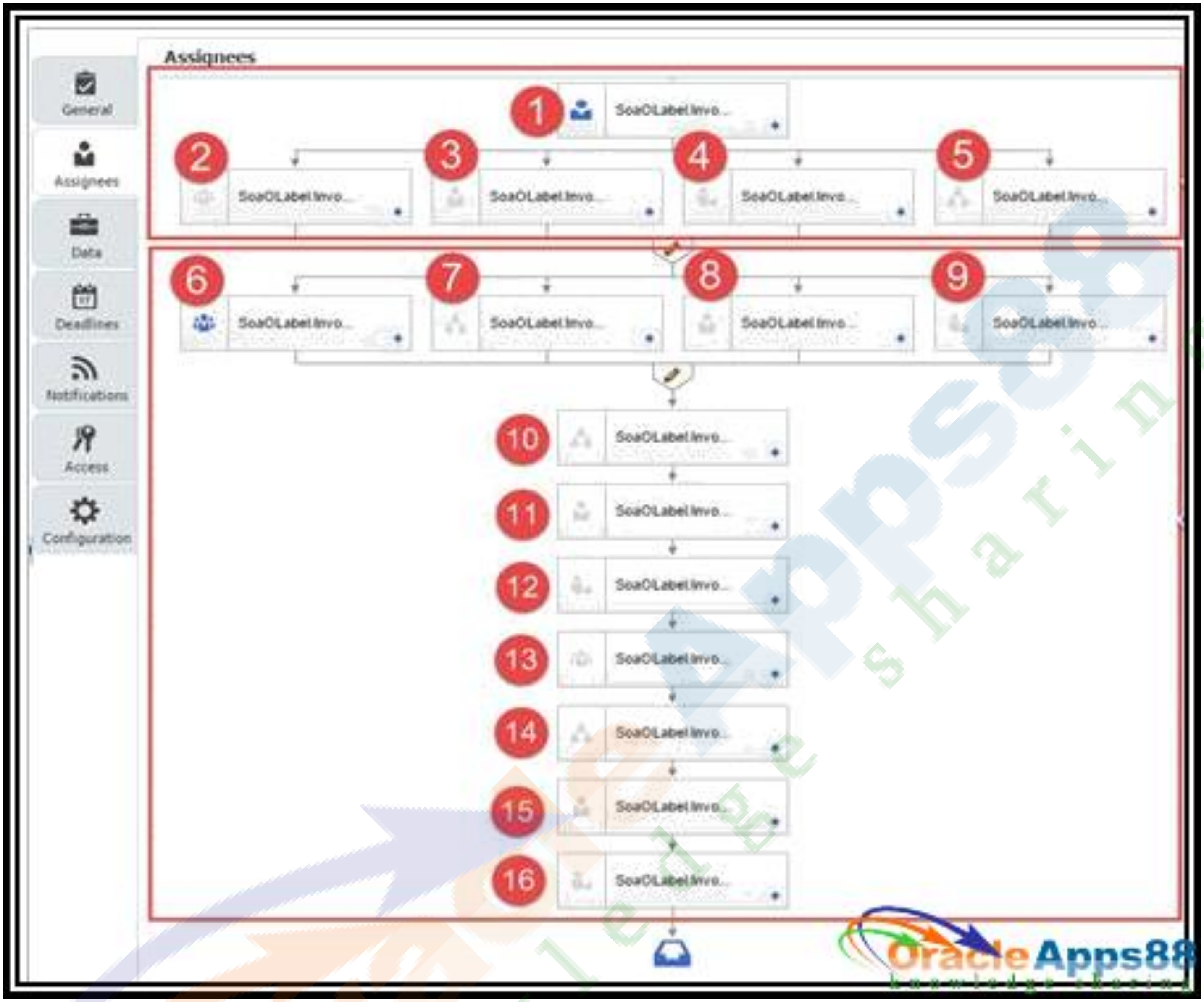



For Payables approvals we have a total of 16 predefined participants. The following figure shows the predefined participant model for Payables invoice approvals. Out of the 16, participants 1 to 5 relate to invoice requests and participants 6 to 16 relate to invoices.

This participant model is designed to support both parallel and sequential mode of approvals.

**Parallel Mode:** When the participants are in parallel mode, the task gets assigned and notifications will go to all of the participants at once in parallel.
For example as shown in the diagram, Invoice request participants 2 to 5 are executed in parallel. Invoice participants 6 to 9 are executed in parallel.

**Sequential Mode**: The task gets assigned and notifications go in sequential manner, meaning one after another, to each participant in sequential mode. All have to approve sequentially to get the task approved.
For example as shown in the diagram, Invoice participants 10 to 16 are executed in sequential mode.


Assignees
General
Assignees
Data
Deadlines
Notifications
Access
Configuration
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**Invoice request participant details**

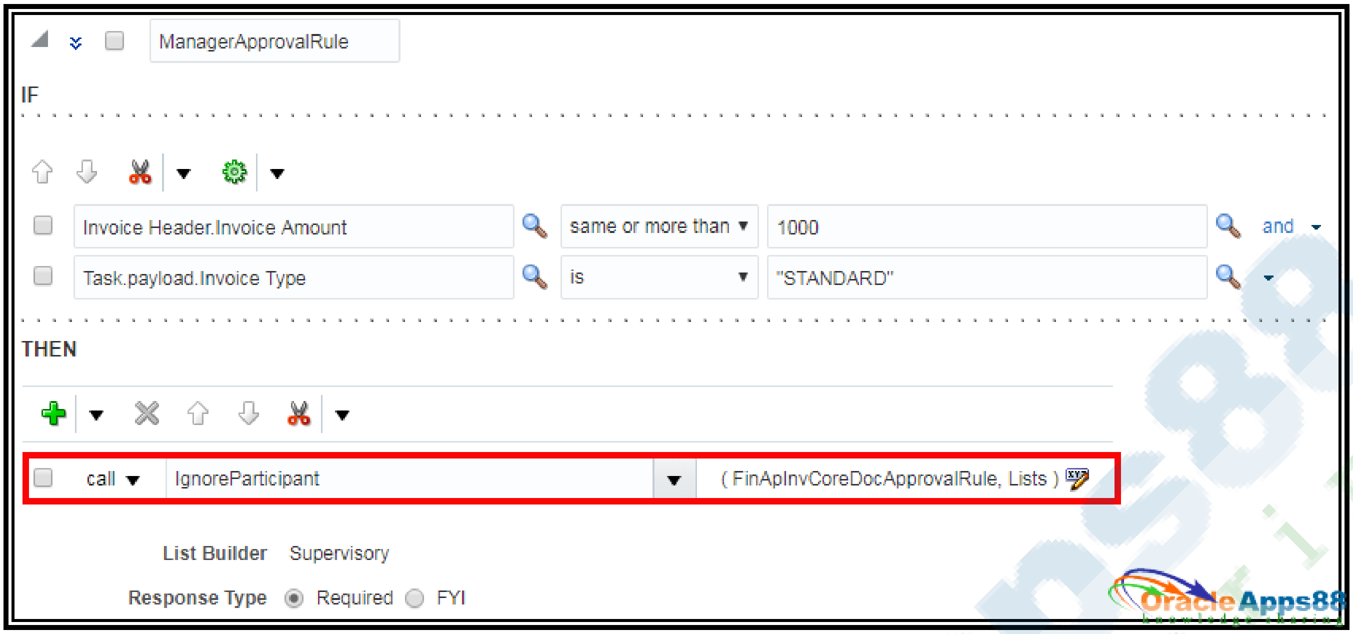
| No | Participant | Rule Set | Participant Type |
|---|---|---|---|
| 1 | InvoiceRequestDefaultApprovers | InvoiceRequestDefaultApproversRuleSet | Single |
| 2 | InvoiceRequestAdditionalApprovers | InvoiceRequestApprovalRuleSet | Serial |
| 3 | InvoiceRequestSingleApprovalTypeParticipantinParallel | CustomSingleTypeParticipantInParallelModeRuleSet | Single |
| 4 | InvoiceRequestApproversFYIParticipantinParallel | CustomFyiTypeParticipantInParallelModeRuleSet | FYI |
| 5 | InvoiceRequestApproversParallelParticipantinParallel | CustomParallelTypeParticipantInParallelModeRuleSet | Parallel |
| 6 | InvoiceApprovers | InvoiceApprovalRuleSet | Serial |
| 7 | InvoiceApproversParallelParticipantinParallel | ParallelTypeParticipantInParallelModeRuleSet | Parallel |
| 8 | InvoiceApproversSingleParticipantinParallel | SingleTypeParticipantInParallelModeRuleSet | Single |
| 9 | InvoiceApproversFYIParticipantinParallel | FyiTypeParticipantInParallelModeRuleSet | FYI |
| 10 | InvoiceApproversParallelParticipantOneinSequence | ParallelTypeParticipantOneInSequencialModeRuleSet | Parallel |
| 11 | InvoiceApproversSingleParticipantOneinSequence | SingleTypeParticipantOneInSequencialModeRuleSet | Single |
| 12 | InvoiceApproversFYIParticipantOneinSequence | FyiTypeParticipantOneInSequencialModeRuleSet | FYI |
| 13 | InvoiceApproversSerialParticipantTwoinSequence | SerialTypeParticipantTwoInSequencialModeRuleSet | Serial |
| 14 | InvoiceApproversParallelParticipantTwoinSequence | ParallelTypeParticipantTwoInSequencialModeRuleSet | Parallel |
| 15 | InvoiceApproversSingleParticipantTwoinSequence | SingleTypeParticipantTwoInSequencialModeRuleSet | Single |
| 16 | InvoiceApproversFYIParticipantTwoinSequence | FyiTypeParticipantTwoInSequencialModeRuleSet | FYI |

**Key Considerations**

Only two participants, InvoiceApprovers and InvoiceRequestDefautlApprovers are enabled by default. You need to enable other participants as per your requirements.

Rules have been predefined for the two active participants InvoiceApprovers and InvoiceRequestDefautlApprovers. You need to review the predefined rules and modify them as per your approval requirements.

You can disable participants that you do not want to use by selecting the ignore participant option or by defining a rule to ignore the participant as shown in the screenshot below.




Note: You cannot change the order of predefined participants.

You cannot add participants.
You cannot change voting regime settings for Parallel and Serial participants.

**Use Cases 1 : Requirement :** Invoices should be approved based on invoice amount. As invoice amounts increase, the number of approver levels also increases. For example, if the invoice amount is less than 1000, then it should be approved by a manager. If the invoice amount is 10000, then it should be approved by a director. If the invoice amount is greater than 100k, then it should be approved by the CEO.

**Solution** : For the purpose of this use case, you need to enable only one serial participant and use the job level hierarchy list builder. All other participants should be disabled.

Enable Serial participant InvoiceApprovers and create a rule with the job level hierarchy list builder.

**Use Case 2 : Requirement** : You want an invoice to be approved by two approvers, one payables manager and one finance manager, and you want approvals to happen simultaneously.

**Solution**: For the purpose of this use case, you need to enable only one parallel participant. All other participants should be disabled.

Enable parallel participant InvoiceApproversParallelParticipantinParallel with an approval group comprised of the finance manager and the payables manager.

**Use Case 3 : Requirement :** You require the requester's supervisory hierarchy to approve the invoices based on invoice amount limits.
After approval of the requester's group, you want the invoice to be approved by any one of the finance managers.

**Solution:** For the purpose of this use case, you need to use two participants in sequential mode. All other participants should be disabled.
Enable serial participant InvoiceApprovers with the supervisory hierarchy list builder for configuring the requester's group approvals.

The selection of the second participant for finance manager depends on two factors:
Execution sequence: As you want approval of the finance manager to happen after the requester's group approval, you need to use a participant that gets executed after the InvoiceApprovers participant.

Participant type: As you want approval of one of the finance managers, you should use a Single type participant.
Based on the above two factors, you need to enable the Single type participant that gets executed after InvoiceApprovers, which is InvoiceApproversSingleParticipantOneinSequence, with approval group as the list builder. The approval group can have the list of finance managers in your company.

**Use Case 4 : Requirement :**

You require the requester's job level hierarchy to approve invoices based on invoice amount limits.

After approval of the requester's group, the invoice should be approved by any one of the payables managers.

After approval of a payables manager, the invoice should be approved by a finance group based on invoice limits.

**Solution:**

For the purpose of this use case, you need to use three participants in sequential mode. All other participants should be disabled.

Enable Serial participant InvoiceApprovers with a supervisory hierarchy list builder for configuring requester's group approvals.

Enable InvoiceApproversSingleParticipantOneinSequence for payables manager approval with approval group as the list builder. The approval group can have the list of payables managers in your company.

Enable InvoiceApproversSerialParticipantTwoinSequence for finance group approval with the job level list builder.

**Payables Approvals Overview : Enabling Payables Approvals**
To route Payables invoices for approval, you need to enable approvals on the Manage Invoice Options page in the context of the invoicing business unit.

**Tasks in Payables**
For invoice approvals configuration you need to use the task **FinAPInvoiceApproval**. This task includes participants for both invoices and invoice requests.

**Rules Overview :**
Approval rules are configured in the context of a rule set from the BPM Worklist application. You need to have administration privileges to configure rules.

**Structure of an approval rule:**
- Each rule consists of an IF and THEN component.
- In the IF section of the rule, you need to define the condition to determine when the rule should be applied. You can define multiple conditions if needed.
- In the THEN section of the rule, you need to define how approvers are to be generated if the conditions are met. The THEN component consists of a List builder and related attributes

Response type: Indicates if the assignees are required to respond or if they receive an FYI notification
Automatic action setting: Allows you to set an automatic response, for example automatically approve or reject

**Rules Configuration :** Navigation to BPM Worklist
For configuring approval rules, you need to navigate to BPM Worklist. You can navigate to the BPM Worklist application in the following two ways:

1. Using the Oracle Fusion Functional Setup Manager task Manage Task Configuration for Financials.
2. From the Oracle Fusion Application Toolkit Home page:

Sign in to Oracle Fusion Applications
Navigate to the Worklist section -> View menu -> Click Servers. →Click Financials.

**Configuration of simple rule for invoice approvals**

In this section we will create an approval rule for the following simple use case:

- All standard invoices greater than 1000 should be approved by the requester specified on the invoice.

01. Sign in to the BPM Worklist application using the Functional Setup Manager task Manage Task Configuration for Financials. The BPM Worklist application home page opens.
02. Click the Administration link on the top right.
03. Click the Task Configuration tab.
04. Navigate to the invoice approvals task FinApInvoiceApproval.
05. Click the InvoiceApprovers participant.
06. Go to the rules configuration page by clicking the icon.
07. Click the + icon to add the rule.
08. Steps for creating the rule for routing invoices having an invoice amount greater than 1000 to the requester:
09. Enter the rule name and description as required.
10. Define the condition as InvoiceHeader.invoiceAmount more than 1000. You can select the invoice amount field using the Condition Browser by clicking the magnifier icon.
11. Add another condition by selecting the + simple test action from the dropdown menu.
12. Add the second condition to specify the invoice type as "Standard"
13. In the THEN part of the rule, select the Resource list builder by navigating to Add Action -> Add Approver -> Resource.
14. Select the invoice requester attribute in the User field as Task.payload.invoiceRequestor.
15. Enter null in the Groups and Application Role fields.
16. 10. Now validate the rule using the Validate button at the top left-hand corner.
17. Click the Save icon near the top left of the screen to save the rule.
18. Click the Commit icon near the top left of the screen next to the save icon, to complete the rule configuration.

**Configuration of rule using Supervisory hierarchy**
Let us taken an example where payables invoices should be routed for supervisory hierarchy based on the following invoice limits:

| Invoice Amount Greater Than (USD) | Invoice Amount Less Than or Equal To (USD) | Levels of Approval Required |
|---|---|---|
| 0 | 5,000 | One |
| 5,000 | 10,000 | Two |
| 10,000 | 20,000 | Three |
| 20,000 | 30,000 | Four |
| 30,000 | 50,000 | Five |
| 50,000 | 100,000 | Six |
| 150,000 | 150,000 | Seven |
| 500,000 | 500,000 | Eight |

Steps to configure approval rules for the previously mentioned approval limits using Supervisory list builder criteria:
1. Sign in to BPM Worklist or navigate to BPM approval rules through Functional Setup Manager.
2. Navigate to the invoice approvals task FinApInvoiceApproval.
3. Click the InvoiceApprovers participant.
4. Click the + icon to add the rule.
5. Steps for creating the rule for routing invoices having invoice amounts up to 5000 USD to a manager:

1. Enter a rule name and description as required.
2. Define the condition InvoiceHeader.invoiceAmount same or less than 5000.

Define the supervisory action by navigating to Add Action -> Add Approver -> Supervisory.
1. Enter Number of levels as 1.
2. Add Starting Participant as HierarchyBuilder.getManager("supervisory",InvoiceHeader.createdBy,-1,"","").
3. Add Top Participant as HierarchyBuilder.getPrincipal("FINUSER30",-1,"","").
4. Set the Auto Action Enabled field to False.
5. Set the Auto Action field to null.

Note: Default setting for the top of the supervisory hierarchy is FINUSER30. You need to replace FINUSER30 with the highest position in your company like the CEO.
1. Repeat steps 4 and 5 for every approval limit. You must also add a row to the IF component specifying the amount limits.

**Configuration of rule using Job Level hierarchy**
You have a requirement to configure approval rules for the following approval limits and job levels.

| Employee Role | Job Level | Approval limit (USD) |
|---|---|---|
| Manager | 1 | 5000 |
| Senior Manager | 2 | 10000 |
| Director | 3 | 20000 |
| Senior Director | 4 | 30000 |
| Vice President | 5 | 50000 |
| SVP | 6 | 100000 |
| EVP | 7 | 150000 |
| CEO | 8 | 500000 |

Steps
1. Define the various job levels in HCM:
- Navigate to Workforce Management -> Work Force Structures.

Click on Manage Jobs to create the various job levels.
1. Assign job levels to users in HCM:

Navigate to Navigator -> Personal Management -> Search for the employee.
Click Manage Employment.
Click Edit -> Update to update the job for a user or employee.

1. Sign in to BPM Worklist or navigate to BPM approval rules through the Functional Setup Manager task.
2. Navigate to the invoice approvals task FinApInvoiceApproval.
3. Navigate to the InvoiceApprovers participant.
4. Click the + icon to add the rule.
5. Steps for creating the rule for manager level whose approval limit is up to 5000 USD.

Enter the rule name and description as required.
Define the condition as
i. InvoiceHeader.invoiceAmount is 5000
1. Define the Job Level action by navigating to Add Action -> Add Approver -> Job Level.
1. Specify the number of levels required to perform the approval action should be specified along with other details.
A lower bound and an upper bound for job levels should be specified. These levels can be relative to the starting point, the task requester, or an absolute job level.

1. For the manager level, approval is required by at least Job Level 1 and at most Job Level 1 (approval rules are modeled using absolute levels).
Enter At least level as 1.
Enter At most level as 1.
Add Starting Participant as HierarchyBuilder.getManager("joblevel", Task.payload.invoiceRequestor,-1,"","")

Note: Considering approval of an invoice starts from the manager of the invoice requester. During invoice entry, you need to manually enter the requester
Add Top Participant as HierarchyBuilder.getPrincipal("<Top Job Level Name>",-1,"","")
Set Utilized Participants to All Approvers.
Set Auto Action Enabled to False.
Set Auto Action to null.

Note: In our internal instance we have 'JL9' as the Top in the hierarchy. You need to replace this with the top participant in your company like CEO as per your requirement.
Similar to the above rule you need to create rules for other job levels in your organization.

**Available Attributes**
For configuring approvals rules for invoice approval routing, you can use attributes from the invoice header, lines, and distributions. The following tables list the key attributes available for rules configuration, and the following screen shots show the navigation for accessing these attributes from the Condition Browser window. Invoice header level attributes are included in the InvoiceHeader folder:

**Header-Level Attributes**

| Attribute Name | Description |
|---|---|
| **AmountApplicableToDiscount** | Invoice amount applicable for a discount. |
| **AmountWithheld** | Tax amount withheld. |
| **Attribute Category** | Descriptive Flexfield: structure definition of the user descriptive flexfield. |
| **Attribute1 - 15** | Segment of User Descriptive Flexfield. |
| **BaseAmount** | Invoice amount in the ledger currency. |
| **BatchName** | Batch to which the invoice belongs. |
| **BuName** | Business unit of the invoice. |
| **ControlAmount** | Control total to validate calculated tax. |
| **CorrectionPeriod** | Correction period for the invoice being corrected. |
| **CorrectionYear** | Correction year for the invoice. |
| **CreatedBy** | Name of user who created the invoice. |
| **CreationDate** | Date and time of invoice creation. |
| **CustRegistrationCode** | Customer legal registration code. Used to derive customer registration number for invoice. Use the Manage Suppliers task, Transaction Tax region to identify valid values. |
| **CustRegistrationNumber** | Customer legal registration number. Used to derive customer registration number for invoice header. Use the Manage Suppliers task, Transaction Tax region to identify valid values. |
| **Description** | Invoice description. |
| **DocCategoryCode** | Sequential numbering (voucher number) document category code. |
| **DocCategoryName** | Sequential numbering (voucher number) document category name. |
| **DocumentSubType** | A document type required by a tax or governmental authority. |
| **ExchangeDate** | Date exchange rate is effective. Usually the accounting date of the transaction. |
| **ExchangeRate** | Exchange rate used for foreign currency invoices. User entered conversion rate. |
| **ExchangeRateType** | Exchange rate type for foreign currency invoices. |
| **FreightAmount** | Freight amount on invoice. |
| **GlDate** | Default accounting date for invoice distributions. |
| **GlobalAttributeCategory** | Global Descriptive Flexfield: structure definition of the global descriptive flexfield. |
| **GlobalAttribute1 - 20** | Segment of Global Descriptive Flexfield. |
| **GoodsReceivedDate** | Date when goods on the invoice were received. |
| **InvoiceAmount** | Invoice amount in transaction currency. |
| **InvoiceCurrencyCode** | Currency of invoice. |
| **InvoiceDate** | Invoice date used to calculate due date as per payment terms. |

| | |
|---|---|
| **InvoiceNum** | Supplier invoice number. |
| **InvoiceReceivedDate** | Date when the invoice was received. Also known as terms date. |
| **InvoiceTypeLookupCode** | Type of invoice. |
| **LastUpdateDate** | Date and time when invoice was last updated. |
| **LastUpdatedBy** | User who last updated the invoice. |
| **LegalEntityName** | Name of legal entity. |
| **PayGroupLookupCode** | Groups suppliers or invoices for a single pay run. Examples: employees, merchandise, nonmerchandise. |
| **PaymentCurrencyCode** | Currency in which invoice will be paid . |
| **PaymentMethodCode** | Payment method, such as check, cash, or credit. |
| **PaymentMethodLookupCode** | Name of payment method. Use the Manage Payables Lookup task, lookup type PAYMENT METHOD to identify valid values. |
| **PaymentStatusFlag** | Payment status of invoice. |
| **PaymentTerms** | Payment terms for the invoice. |
| **PoNumber** | PO to which invoice is matched. |
| **Source** | Feeder system from which invoice is imported. |
| **SupplierNumber** | Supplier identifier. |
| **SupplierTaxExchangeRate** | Supplier conversion rate entered in online invoices to calculate the supplier tax amount for foreign currency invoices. |
| **SupplierTaxInvoiceDate** | Tax invoice date on the supplier-issued tax invoice. |
| **SupplierTaxInvoiceNumber** | The invoice number used to report on a supplier issued tax invoice that is distinct from the regular invoice. |
| **TaxInvoiceInternalSeq** | Company-specific tax invoice number, in sequence, issued by the company for a supplier-issued tax invoice. |
| **TaxInvoiceRecordingDate** | If company-specific tax invoice date and number is captured, the date the company receives or records the supplier-issued tax invoice. |
| **TaxationCountry** | Sets the context for tax drivers such as product classification code. |
| **TermsDate** | Used with payment terms to calculate scheduled payment of an invoice. |
| **UriCheckDigit** | Unique remittance identifier check digit. |
| **ValidatedTaxAmount** | Tax amount after validation. |
| **VendorSiteCode** | Supplier site name. |
| **VoucherNum** | Unique voucher number. |
| **SupplierName** | Name of supplier. |

Invoice line level attributes are included in the **InvoiceLine** folder:

**Line-Level Attributes**

| Attribute Name | Description |
|---|---|
| **LineNumber** | Invoice line number. |
| **LineTypeLookupCode** | Type of invoice line. For example, item, freight, tax. |
| **Description** | Description of the invoice line. |
| **ItemDescription** | Item description. |
| **SerialNumber** | Number indicating the position in a series for identification. |
| **Manufacturer** | Name of a manufacturer of an asset or item. |
| **ModelNumber** | Model number of the invoice line item. |
| **WarrantyNumber** | Warranty number of the item. |
| **MatchType** | Indicates document to which line is matched. For example, order, receipt, or consumption advice, |
| **ProrateAcrossAllItems** | Indicates if line amount is prorated across all items. |
| **AccountingDate** | Date when the invoice line is to be accounted. |
| **Amount** | Amount of the invoice line. |
| **BaseAmount** | Invoice amount in the ledger currency. |
| **RoundingAmt** | Amount corresponding to rounding included in base amount, if any. |
| **QuantityInvoiced** | Quantity invoiced against purchase order shipment. |
| **UnitMeasLookupCode** | Unit of measurement for the item line. |
| **UnitPrice** | Unit price for purchase order matched invoice items. |
| **IncomeTaxRegion** | Reporting region for distribution line for US 1099 supplier. |
| **Type1099** | Payments of type 1099 made to a supplier. |
| **AssetBookTypeCode** | Default asset book for transfers to Oracle Fusion Assets. |
| **CountryOfSupply** | Country from where line item is supplied. Format: two character ISO country code. Example: US for United States. |
| **CreationDate** | Date and time of creation of invoice line. |
| **CreatedBy** | User who created the invoice line. |
| **LastUpdatedBy** | User who last updated the invoice line. |
| **LastUpdateDate** | Date and time of the last update of invoice line. |
| **AttributeCategory** | Descriptive Flexfield: structure definition of the user descriptive flexfield. |
| **Attribute1 - 15** | Segment of User Descriptive Flexfield. |
| **GlobalAttributeCategory** | Global Descriptive Flexfield: structure definition of the global descriptive flexfield. |
| **GlobalAttribute1 - 20** | Segment of Global Descriptive Flexfield. |

Invoice distribution level attributes are included in the **InvoiceDistribution** folder:

**Distribution-Level Attributes**

| Attribute Name | Description |
|---|---|
| AccountingDate | Date when the invoice distribution is to be accounted. |
| AccountSegment | Overrides account segment of the default liability account combination for the invoice line. |
| Amount | Amount on invoice distribution. |
| AssetBookTypeName | Default asset book for transfers to Oracle Fusion Assets. |
| Attribute1 - 15 | Segment of User Descriptive Flexfield. |
| AttributeCategory | Descriptive Flexfield: structure definition of the user descriptive flexfield. |
| AwtGrossAmount | Amount subject to withholding tax. |
| BalancingSegment | Overrides balancing segment of the default liability account for the invoice line. |
| BaseAmount | Amount of invoice in functional currency, only used for foreign currency invoices. |
| CostCenterSegment | Overrides cost center of the default liability account combination for the invoice line. |
| CountryOfSupply | Country where services or goods were originated. |
| CreatedBy | User who created the distribution. |
| CreationDate | Date and time when distribution was created. |
| Description | Statement that describes the distribution. |
| DistMatchType | Indicates whether an invoice matched a PO or a receipt of material. |
| DistributionClass | Flag that indicates whether this distribution is permanent or built in candidate mode for display to the user.<br>Validated against AP_LOOKUP_CODES with lookup type as DISTRIBUTION CLASS. |
| DistributionLineNumber | Invoice line number associated with the invoice distribution. |
| ExchangeDate | Date when a conversion rate is used to convert an amount into another currency for invoice distribution. |
| ExchangeRate | Ratio at which the principal unit of one currency is converted into another currency for invoice distribution. |
| ExchangeRateType | Source of currency conversion rate for invoice distribution. For example, user defined, spot, or corporate. |
| ExpenditureItemDate | Date for project expenditure item used to build Accounting Flexfield for project-related distribution. |
| GlobalAttribute1 - 20 | Segment of Global Descriptive Flexfield. |
| GlobalAttributeCategory | Global Descriptive Flexfield: structure definition of the global descriptive flexfield. |
| IncomeTaxRegion | Reporting region for distribution for US 1099 supplier. |
| IntendedUse | Tax Driver: Intended use of product. |
| InvoiceLineNumber | Invoice line number for parent line. |
| LastUpdateDate | Date and Time when distribution was last updated. |
| LastUpdatedBy | User who last updated the distribution line. |
| LineTypeLookupCode | Distribution type. |

| | |
|---|---|
| **MatchedUomLookupCode** | UOM used for the quantity invoiced during matching of this distributions. |
| **MatchStatusFlag** | Indicates whether the invoice distribution is generated for a purchase order matched line. |
| **PoMatched** | Indicates if parent invoice line was matched to PO. |
| **PostedStatus** | Indicates if accounting entries for distribution are posted. |
| **QuantityInvoiced** | Quantity billed for purchase order or receipt matched invoice distributions. |
| **ReceiptConversionRate** | Exchange rate for currency of receipt. Used for expense reports. |
| **ReceiptCurrencyAmount** | Amount in receipt currency. Used for expense reports. |
| **ReceiptCurrencyCode** | Currency code of receipt. Used for expense reports. |
| **RecoveryRateCode** | Rate at which tax is recoverable for a line when you record recoverable tax. |
| **RecoveryRateName** | Recovery rate name. |
| **RecoveryTypeCode** | Mechanism to administer the recovery process for a specific tax. |
| **StartExpenseDate** | Date when incurred expense started. Used for expense reports. |
| **TaxableAmount** | Taxable amount for the distribution. This column is used during upgrade and is intended for internal use only. |
| **TaxableBaseAmount** | Taxable amount in ledger currency for the distribution. This column is used during upgrade and is intended for internal use only. |
| **TotalDistAmount** | Sum Total of Amounts related to this distribution including variance amounts from related Invoice distributions. |
| **TotalDistBaseAmount** | Sum Total of Amounts related to this distribution including variance amounts from related Invoice distributions in Base Currency. |
| **Type1099** | Payments of type 1099 made to a supplier. A US 1099 supplier may receive payments of more than one type. |
| **UnitPrice** | Unit price for purchase order, receipt matched invoice distributions, and price or quantity corrections. |

**Considerations**
If any participant is active, then under the rule set for that participant there should be at least one active rule that gets satisfied when the invoice document is submitted for approval. You need to define rules in such a way that for each document, at least one rule gets satisfied under each participant.
In Payables you can enable approvals at the invoicing business unit (BU) level. If you enable approvals for any invoicing BU, then all invoice documents (apart from Payment Requests and Invoice Requests) belonging to that invoicing BU will be routed for approval processing. You need to configure autoapproval rules for scenarios when some of the invoices do not need approvals.

For example, if you have a requirement to send only invoices more than 1000 USD to be routed for approvals, then you should configure an autoapproval rule to approve invoices below 1000 USD as below:
Out-of-the-box, the following two predefined rules are provided. Modify or inactivate the predefined rules as per your requirements.
Manager approval rule: Invoices more than 1000 USD require 1 supervisory level approval.

Autoapproval rule: Invoices less than 1000 USD should get auto approved. Perform the following steps to inactivate the rule:
1.By default only one Serial participant (InvoiceApprovers) is active, enable any other participant only based on your requirement. Perform the following steps to activate (or inactivate) the participant
a.Select the participant to be activated (or inactivated) by clicking on the participant from the participant chart:
b.Click the Advanced tab.
c.Disable the Ignore Participant option to activate the participant.

**You can submit an invoice for the approval process in the following two ways:**
1.Manual submission using the Initiate action on the Manage and Edit Invoices pages
2.Submit the scheduled ESS process Initiate Invoice Approval Workflow.
Submit the process by clicking Initiate Approval Workflow from the Tasks pane.
Submit the process from the standard Scheduled Processes window

1.Distribution update during approval process
During the invoice approval process, users are allowed to update the distribution account. To update the distribution account you need to navigate to the Edit Distributions window by clicking the Edit Distributions button.

**Key aspects of this functionality are as follows:**
The distribution account can be updated through the online BPM Worklist notification. Distribution information cannot be updated through the e-mail notification.
You cannot add new distributions or delete existing distributions.
You cannot change the distribution amount.

**1. Approval Actions: Points to Consider**
If you're using the invoice approval workflow, you can start the approval process for an invoice and handle approval exceptions on the Edit Invoice and Manage Invoices pages. You can select from the following actions:
Initiate
Withdraw
Hold
Force
Resubmit

***Initiate*** : This action starts the approval workflow and routes the invoice to the applicable approvers. The approval status on the invoice changes from Req uired to Initiated.
***Withdraw*** : This action cancels all pending workflow processes and open notifications. The approval status on the invoice changes from Initiated to Withdra wn.
***Hold*** : The Hold action delays the invoice approval. The approval status on the invoice changes from Required to Held from Approval. The invoice still requires approval before it can be paid, and you must initiate approval at a later time.
***Force Approve*** : You may need to force approve an invoice, for example, if an invoice must be paid immediately. Before you can select this action, you must have the appropriate privileges and the Allow force approval option on the Manage Invoice Options page must be enabled. The approval status on the invoice changes to Manually approved.
**Note**: The Accounts Payable Manager job role can force approve invoices.
***Resubmit*** : You can resubmit an invoice for approval when:

**The approval status on the invoice is:**
Rejected
Withdrawn
Held from approval
Resubmit for approval

The approval status on the invoice is Workflow approved or Manually approved, and at least one of the following invoice attributes has changed:
Invoice amount
Line amount
Distribution combination
Distribution set
Tax amount
Line added
Line canceled
Vacation Rules

Using BPM Worklist you can configure vacation rules. When a user is going on a planned leave, they can set their own vacation rules so that someone can act on their behalf. Administrators have access to set vacation rules for others. This is usually done in scenarios where someone leaves the company or stops coming to work all of a sudden (unplanned leave like sick leave).
Navigation:
1. Navigate to the BPM Worklist application.
2. Click the Preferences link.
3. Click the My Rules link.
4. Click Vacation Period in the Rules pane.
5. Select the Enable vacation period option.
6. Enter a Start and End Date representing the vacation period.
7. Click the Delegate to button and select the user from the identity browser to whom you want to delegate in your absence.

**Escalation Policies**
Using BPM Worklist you can configure escalation policies for invoice approvals. When a user does not respond and perform any action to the approval notification assigned to them, you can configure escalation policies to send escalation notifications to the managers.

Navigation:
1. Navigate to the BPM Worklist application.
2. Click the Administration link and the Task Configuration tab.
3. Click the Edit icon.
4. Click the FinApInvoiceApproval task.
5. Navigate to the Deadlines section.
6. Click the Escalate link.

Duration: The time you need to allow users to respond before initiating the escalation process.
Maximum Escalation Levels: You can specify the number of levels above a user that you want to escalate to.

For example, you specify escalation levels of 2 and duration of 1 day. If a user does not act on a notification after one day, the escalation process is initiated and a notification is sent to the user's manager. If the user's immediate manager also does not respond after one day, then the escalation proceeds to the next level.
Highest Approval Title: You can also specify the highest level to which you want to send an escalation notification.

**Expiration Settings**
Using BPM Worklist you can configure expiration policies for invoice approvals. You can use this setting to expire the invoice approval notification assigned to the user when they do not respond within the stipulated time as per your approval policies.
For example, you have an approval policy to allow users to respond to the invoice approval notifications assigned to them within three days. You can configure expiration settings with 3 days as the duration and, if the user does not respond within three days, the notification expires and the invoice gets rejected.

Navigation:
1. Navigate to the BPM Worklist application.
2. Click the Administration link and the Task Configuration tab.
3. Click the Edit icon.
4. Click the FinApInvoiceApproval task.
5. Navigate to the Deadlines section.
6. Click the Expire link.

**Renew Settings**
Using BPM Worklist, you can configure renewal settings for invoice approvals. You can extend the expiration period for when the user does not respond within the stipulated time as per your approval policy. As part of renewal settings, you need to specify the duration and number of times the task has to be renewed upon expiration.
For example, if you want to renew a notification an additional two times, you can set the Maximum Renewals field to 2, and if the duration of renewal is three days, then set the duration as 3 days.

Navigation:
1. Navigate to the BPM Worklist application.
2. Click on the Administration link and the Task Configuration tab.
3. Click the Edit icon.
4. Click the FinApInvoiceApproval task.
5. Navigate to the Deadlines section.
6. Click the Renew link.

**Reminder Settings**
Using BPM Worklist, you can configure reminder notification settings for invoice approvals. You need to configure reminder notifications in conjunction with your escalation duration settings. For example, if you set the expiration duration as 3 days, then you can specify reminder settings to send reminder notifications every day for three times.
Navigation:
1. Navigate to the BPM worklist application.
2. Click on the Administration link and the Task Configuration tab.
3. Click the Edit icon.
4. Click the FinApInvoiceApproval task.

5. Navigate to the Notifications section.
6. Select the Enable Reminder option.

**Approval Notifications**
Approvers can access the invoice approval notifications (tasks) pending their disposition in the following two ways:
o BPM Worklist – My Tasks o E-mail Notifications

**BPM Worklist – My Tasks:**
Approvers can perform the following actions from BPM Worklist notifications:
Approve the task.
Reject the task.
Withdraw the task.
Reassign or delegate the task.
The Reassign action transfers the task to another user or group. The task is then routed based on the specified user's hierarchy.
The Delegate action allows another user to act on your behalf.
Request additional information from other users, such as the task creator, previous approver, or another user.
Add attachment.
Add comments.
Edit distributions.
E-Mail Notifications

Invoice approvals can be performed using e-mail notifications. An e-mail is sent to the approver based on the mail ID defined in Oracle Identify Management for that approver. Approvers can perform the following actions using e-mail:
Approve the task.
Reject the task.
Add attachment.
Add comments.

To perform other actions, approvers should access the worklist notification by signing in to Oracle Fusion Applications.

**1. What happens if I edit or delete an approval rule?**
If you edit or delete an existing approval rule, then approvals currently in progress complete as if the rule had not been edited or deleted. New approvals follow the latest version of the rule.

**1. Why can't we see the Approve and Reject actions in our e-mail notifications?**
You need to enable the Make notification actionable option to allow approvers to perform approve and reject actions from e-mail notifications.
1.Navigate to BPM Worklist -> Administration -> Task Configurations.
2.Select the FinApInvoiceApproval task.
3.Navigate to the Notifications tab.
4.Select the Make notification actionable option.

**1. How can I enable e-mail notifications for approvers?**
You need to set the Notification Mode to ALL in the workflow notification properties for receiving e-mail notifications. By default this option is set to ALL.

The notification mode can have the following values:
ALL – For both web and e-mail notifications
EMAIL – For e-mail notifications
NONE – No notifications

To set the notification mode, you:
1. Sign in to the Oracle Enterprise Manager.
2. Locate the SOA server for the HCM domain (Farm_FinancialDomain > SOA > soa-infra (soa_server1).
3. Right click and navigate to SOA Administration > Workflow Properties.
4. Note that the Notification Mode field has the value ALL.

**1. How can I assign a pending approval task to another person?**
You can select the pending approval task from the BPM Worklist and perform the Reassign action.

**1. What's the difference between the actions Reassign and Delegate?**
Reassign results in transferring the ownership of the task to another user or group. For example, use this option if you should not have received the notification and you want to send it to the correct recipient or to another recipient for resolution. A transfer may have the effect of changing the approval hierarchy for the notification. Delegate allows another user to act on behalf of the current assignee. Using the Delegate action you can assign the approval task to another user just to act upon, on behalf of the current user. This is primarily used in the scenarios of vacation or the current approver changed their job role and is no longer responsible for approval of the task.

**1. How can I configure expiration and escalation policies?**
From the BPM Worklist, you need to navigate to the Deadlines tab for configuring expiration and escalation settings.
Navigation: BPM Worklist -> Administration -> Task Settings -> Select Task FinApInvoiceApproval -> Deadlines
For additional details refer to Escalation and Expiration sections in this document.

**1. How can I send reminder notifications to assignees?**

You can configure reminder notifications from the Notifications tab on the task configuration settings.
Navigation: BPM Worklist -> Administration -> Task Settings -> Select Task FinApInvoiceApproval -> Notifications

**1. How can I set up a rule such that the notification reaches multiple users at the same time and only one of them needs to approve?**
You need to configure the approval rule using Single participants to achieve this. Refer to the Participant section for additional details on the Single participant type.

**1. Can I configure vacation rules per BPM Worklist task?**
Yes, you can configure vacation rules per task and assign different users per task to act on behalf of the user going on vacation. Refer to the Vac ation Rules section for additional details.

**1. Can an administrator or manager configure vacation rules on behalf of other users?**
Yes, an admin or manager can configure vacation rules on behalf of the other users in the application.

**1. Can I convert a foreign currency invoice amount to a ledger currency amount during approval rules processing?**
Yes, you can convert a foreign currency invoice amount to a ledger currency amount by applying the conversion rate using the CurrencyConvers ionGlobal.getRate function.
Format:
CurrencyConversionGlobal.getRate(fromCurrency,toCurrency,conversionDate,conversionType,ledgerId)
Example:
For example, you have a requirement to have an approval policy implemented in your ledger currency amounts and to have foreign currency transactions evaluated in the ledger currency during rules evaluation. You can convert the foreign currency invoice amount to the ledger currency amount using the previously-mentioned format.
Syntax for converting invoice amount to ledger currency amount:
InvoiceHeader.invoiceAmount*CurrencyConversionGlobal.getRate(InvoiceHeader.invoiceCurrencyCode,"USD",InvoiceHeader.invoiceDate,"Corp orate",1)

**1. How can I create a global list and use it in the rules as an alternative to approval groups? A global list can be created as a global variable by using the function RL.list.create().**
Steps to create a global list:
1. Navigate to the (x) Globals section from the Assignees tab.
2. Create a global attribute, for example, 'Managers' using the function RL.list.create().
3. Use the Managers attribute in the rules configuration as shown in the following screenshot

**1. How can I make changes to an invoice after the approval process is already initiated?**
To make changes to the invoice, you need to withdraw the invoice from approval using the Withdraw action. Once you withdraw the invoice, all of the existing task assignments are canceled and the invoice is available for modification. Once you complete changes to the invoice, you can reinitiate the approval by resubmitting the invoice.

**1. We have some approved invoices in another application and imported them to Payables. We do not want to re-trigger approvals for these invoices in Payables, how can we achieve this?**
Payables support automatic actions as part of rules processing. You can configure a rule to autoapprove these invoices. In the THEN part of the rule, you need to set Auto Action Enabled to True and Auto Action to "APPROVE".

**1. How can I control when to pick up an invoice for approval initiation?**

We do not want an invoice to get picked up for approval initiation even though it is entered in the application. Out-of-the-box Payables provides two options on the Manage Invoice Options page to decide on the invoice approval starting point.

If the option Require validation before approval is selected, then invoices must be validated before submission for approval. Similarly, if the option Require accounting before approval is selected, then the invoices can be submitted for approval only after creating the accounting.

Apart from these two options, you can also use the Hold from Approval action to hold an invoice from routing through the approval process.

**1. Who can perform the Force approval action on an invoice and how can I enable this action?**

The Force approval action is only available to users with the Payables Manager Job role. You need to enable the Allow force approval option on the Manage Invoice Options page to allow users to perform this action.

**AP Invoice Approval Setups**

Enable the AP Invoice approval and click on Save and close button

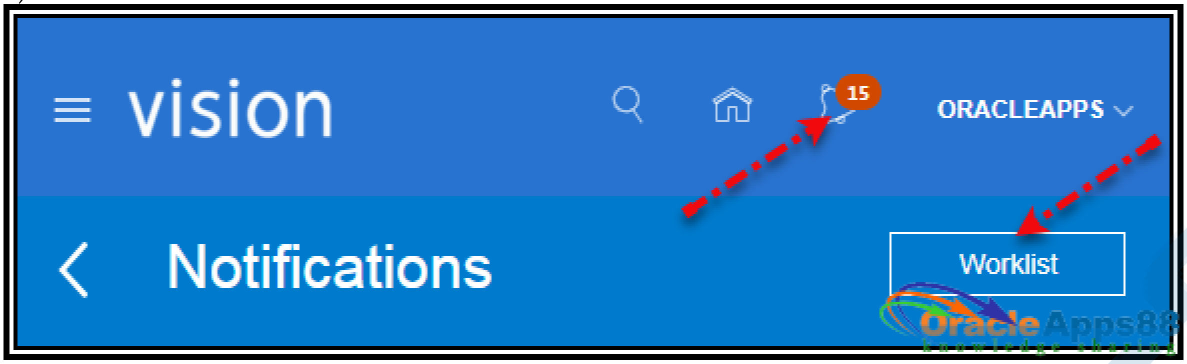
Nav : Functional Setup Manager → **Manage Invoice Options / Financials > Define Invoicing and Payments Configuration > Define Payables > Define General Payables Options > Manage Invoice Options**


vision
21
SYSTEM ADMINIST...
Manage Invoice Options
Save
Save and Close
Cancel
Business Unit US1 Business Unit
Invoice Entry
Require invoice grouping
Allow document category override
Allow adjustments to paid invoices
Allow remit-to supplier override for third-party payments
Recalculate invoice installments
Hold unmatched invoices
Enable invoice account coding workflow
Receipt Acceptance Days
Invoice Currency USD - US Dollar
Payment Currency USD - US Dollar
Pay Group Standard
* Payment Priority 99
* Payment Terms Immediate
* Terms Date Basis Invoice date
* Pay Date Basis Due date
* Accounting Date Basis Invoice date
* Budget Date Basis Accounting date
Matching
Allow final matching
Allow matching distribution override
Transfer PO distribution additional information
Quantity Tolerances Percentage of Quantity basec
Amount Tolerances Amount Ordered by 10 Perce
Prepayment
* Payment Terms Immediate
Settlement Days
Use distribution from purchase order
Show available prepayments during invoice entry
Approval
Enable invoice approval
Allow force approval
Require validation before approval
Accounting Preference
Account regardless of approval status
Require accounting before approval
Require approval before accounting
Payment Request
* Payment Terms Immediate
Pay Group Standard
* Payment Priority 99

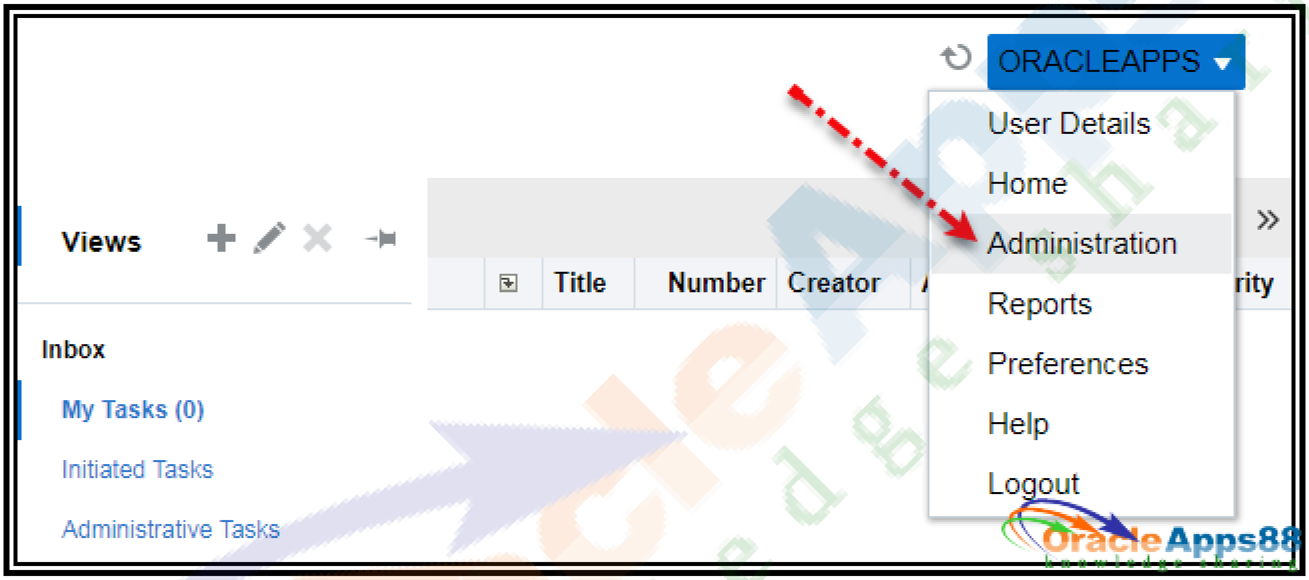
**AP Invoice Approval Setups in BPM**

There are two ways we can navigate to BPM setup

1). From Worklist notification

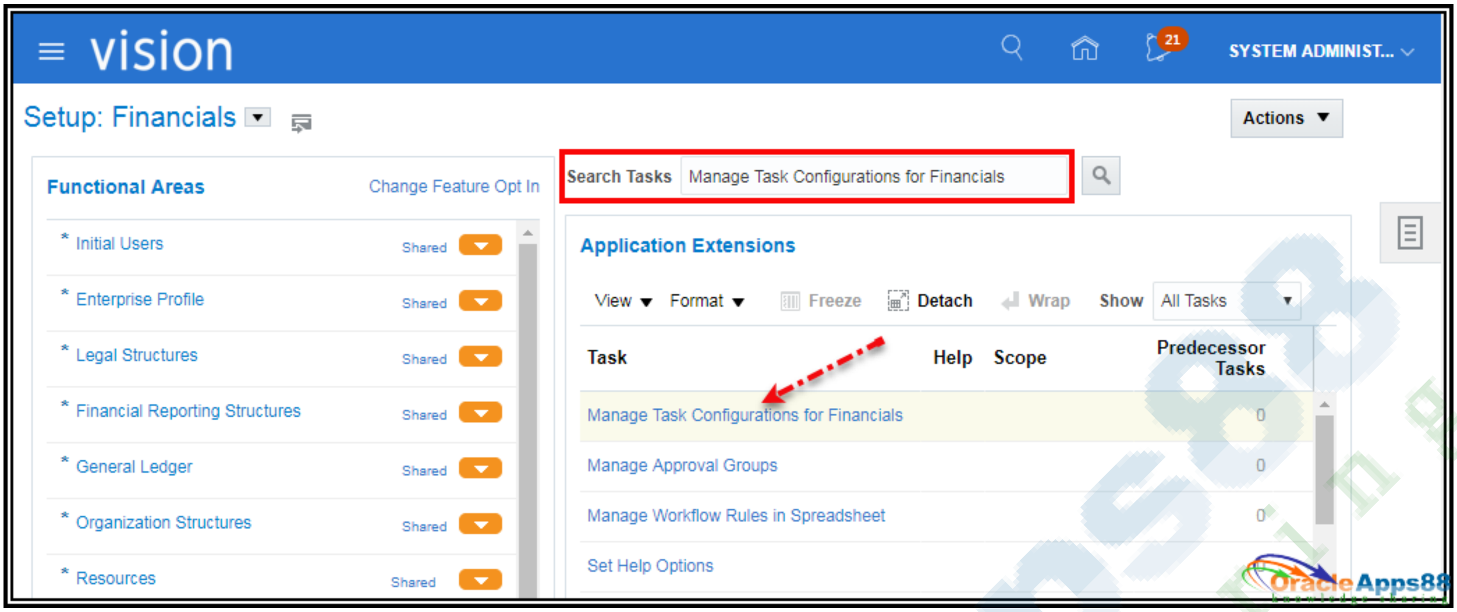



Click on the Administration




2). From FSM

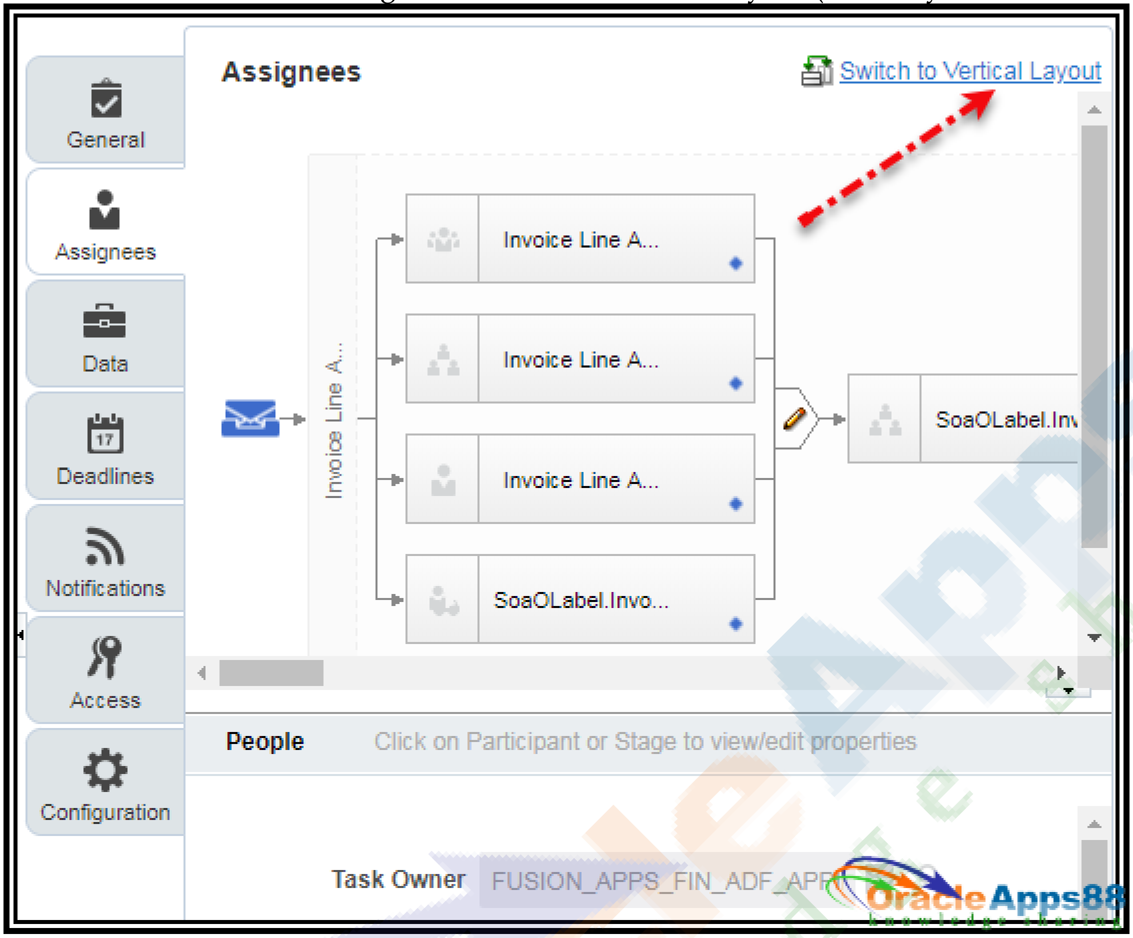
**Nav :** Functional Setup Manager → Manage Task Configurations for Financials

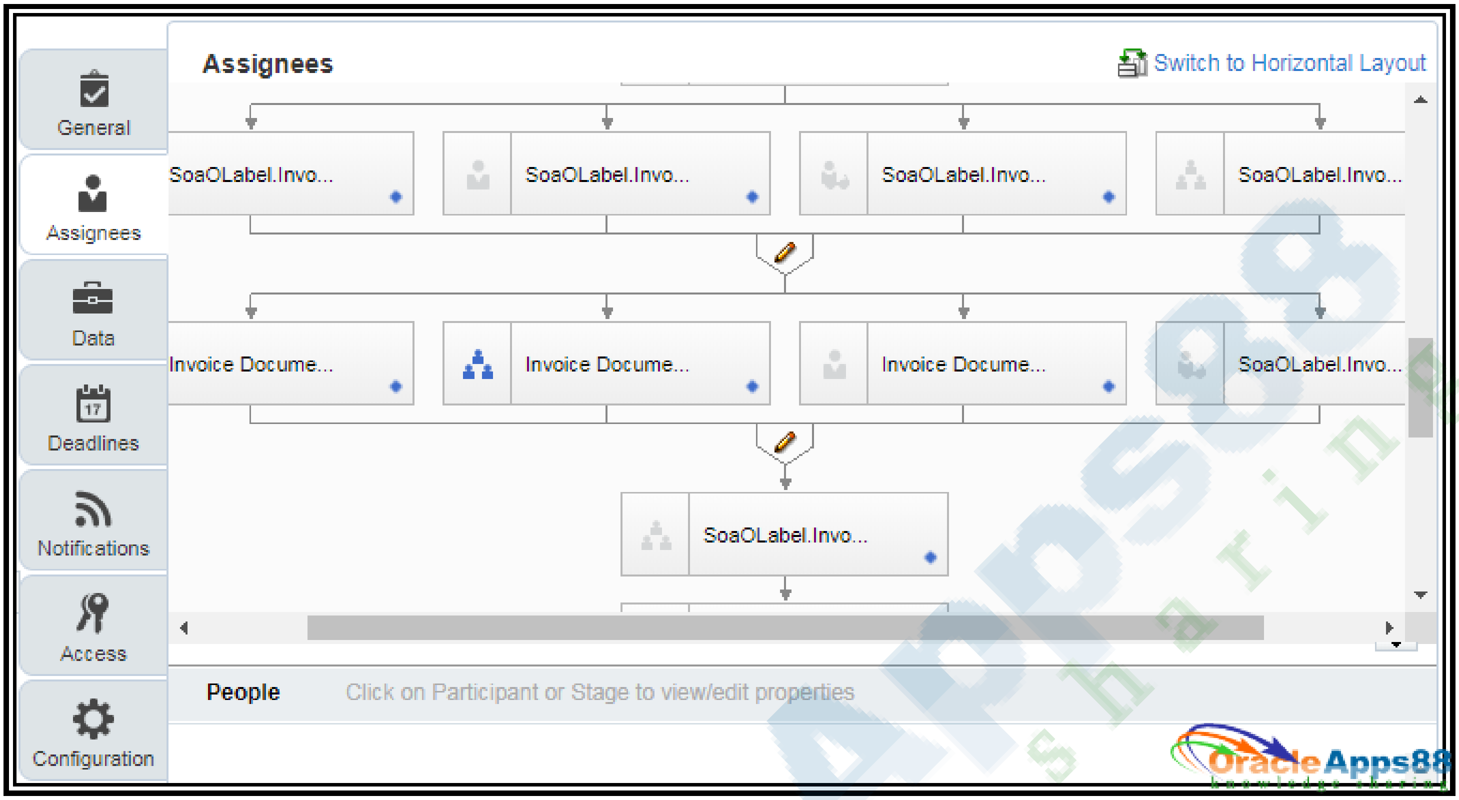


In Task Configuration tab search with ***FinApInvoiceApproval*** and click go button and click on the edit button to modify the approvals

**Active Versions** (5) : As patching occurs – it will copy the current version to the next patched version, Make sure the Active Versions is unchecked – we want to work with the current version.

Click on the Edit →Assignee →Switch to Vertical Layout (To verify the Rulesets flow)



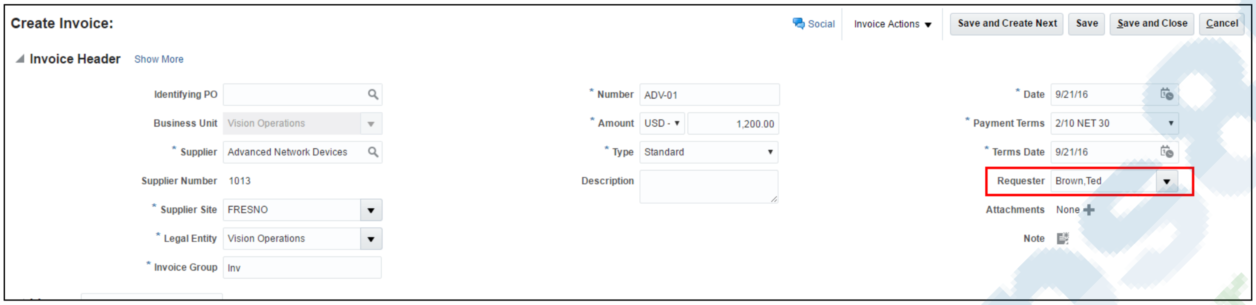

Assignees
Switch to Horizontal Layout
General
Assignees
Data
Deadlines
Notifications
Access
Configuration
SoaOLabel.Invo...
SoaOLabel.Invo...
SoaOLabel.Invo...
SoaOLabel.Invo...
Invoice Docume...
Invoice Docume...
Invoice Docume...
SoaOLabel.Invo...
SoaOLabel.Invo...
People
Click on Participant or Stage to view/edit properties

## Use Case 1: Auto Approval Rule for specific users

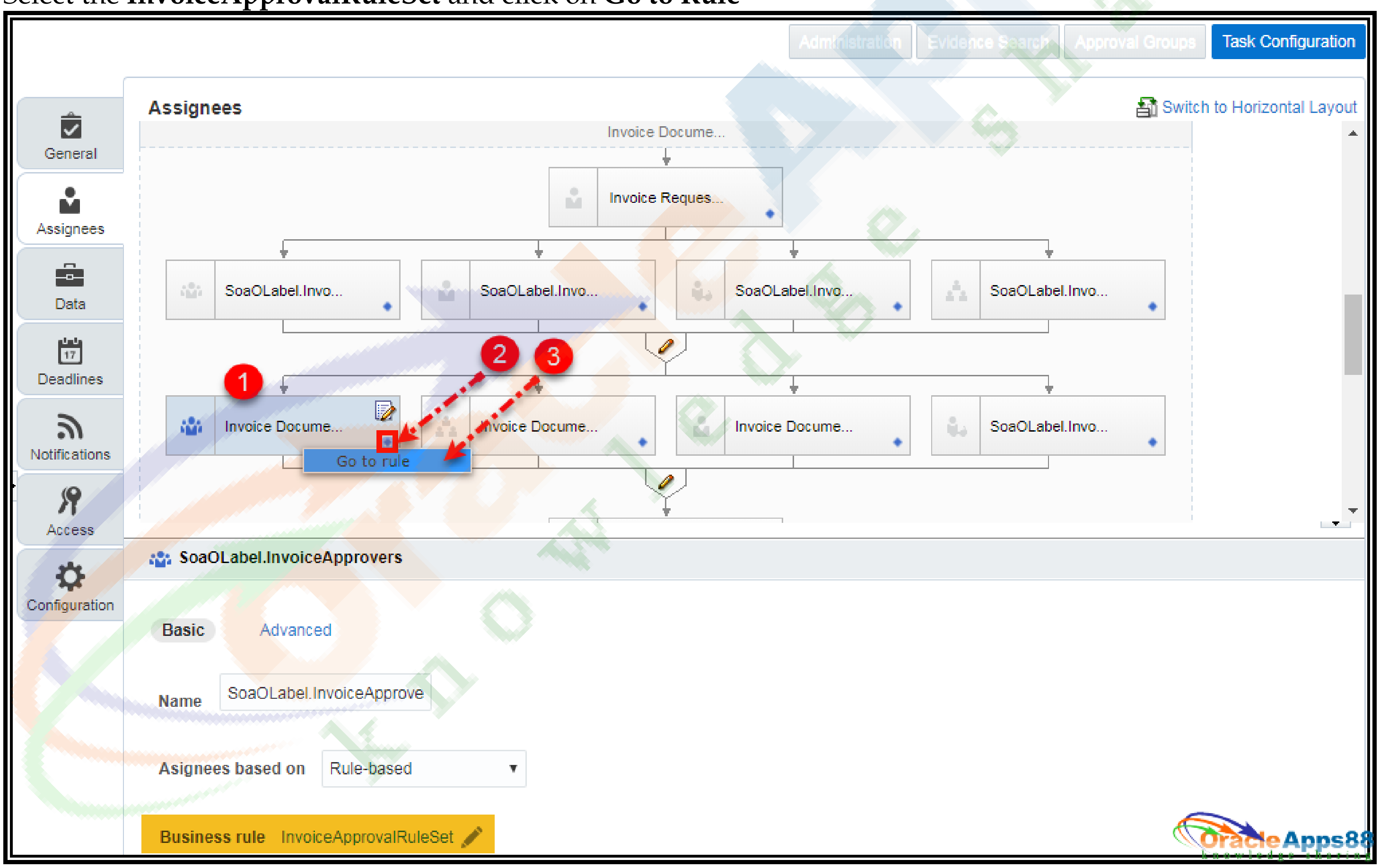
This business case requires an invoice to auto approve for specific user and amount limit.

**Solution:** To achieve this requirement, configure an approval rule using the resource list builder and in user field enter **InvoiceHeader.requesterName**.

Create an invoice and enter the buyer name in the invoice Requestor field, then initiate the approval process for the invoice.



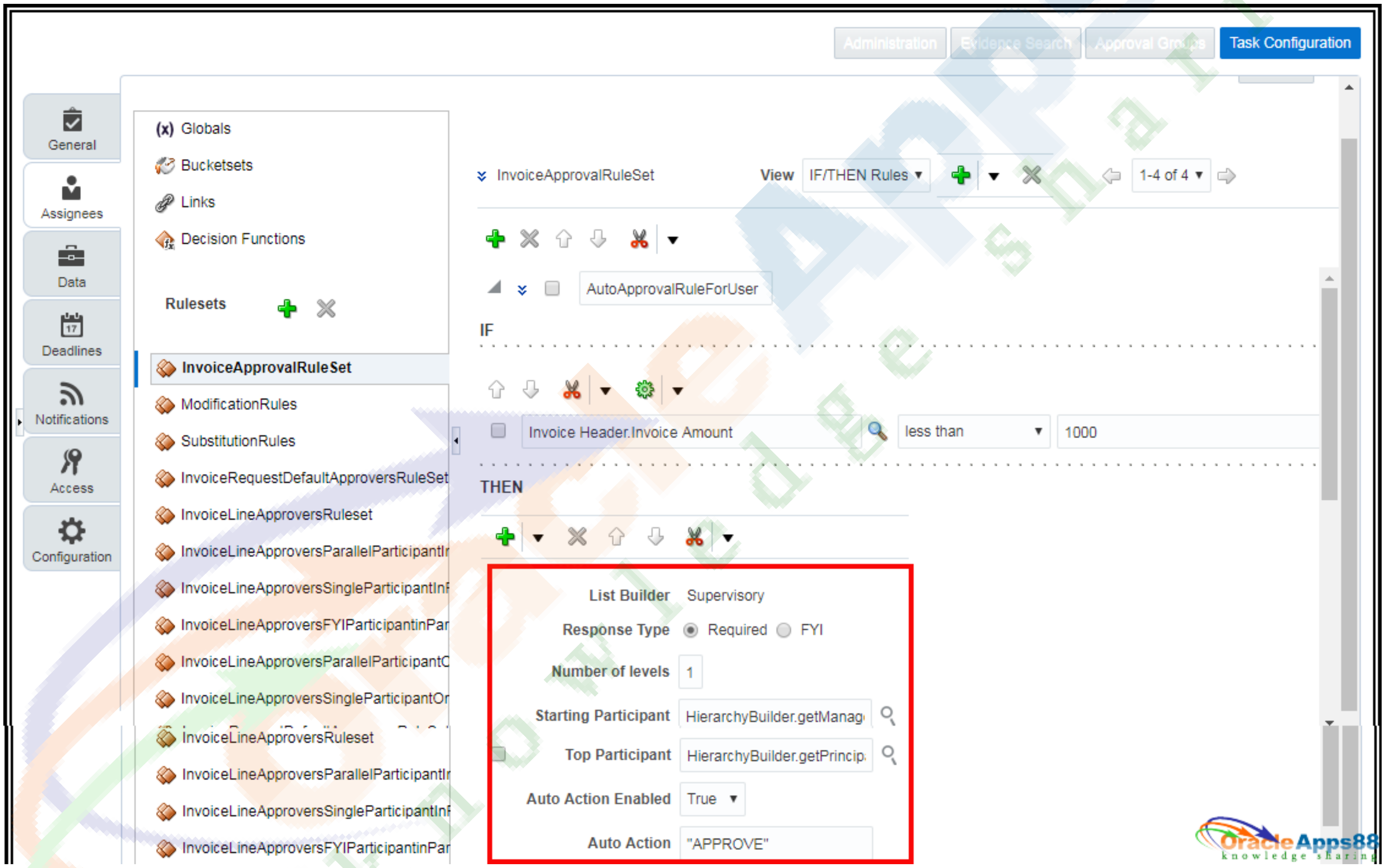

Select the **InvoiceApprovalRuleSet** and click on **Go to Rule**



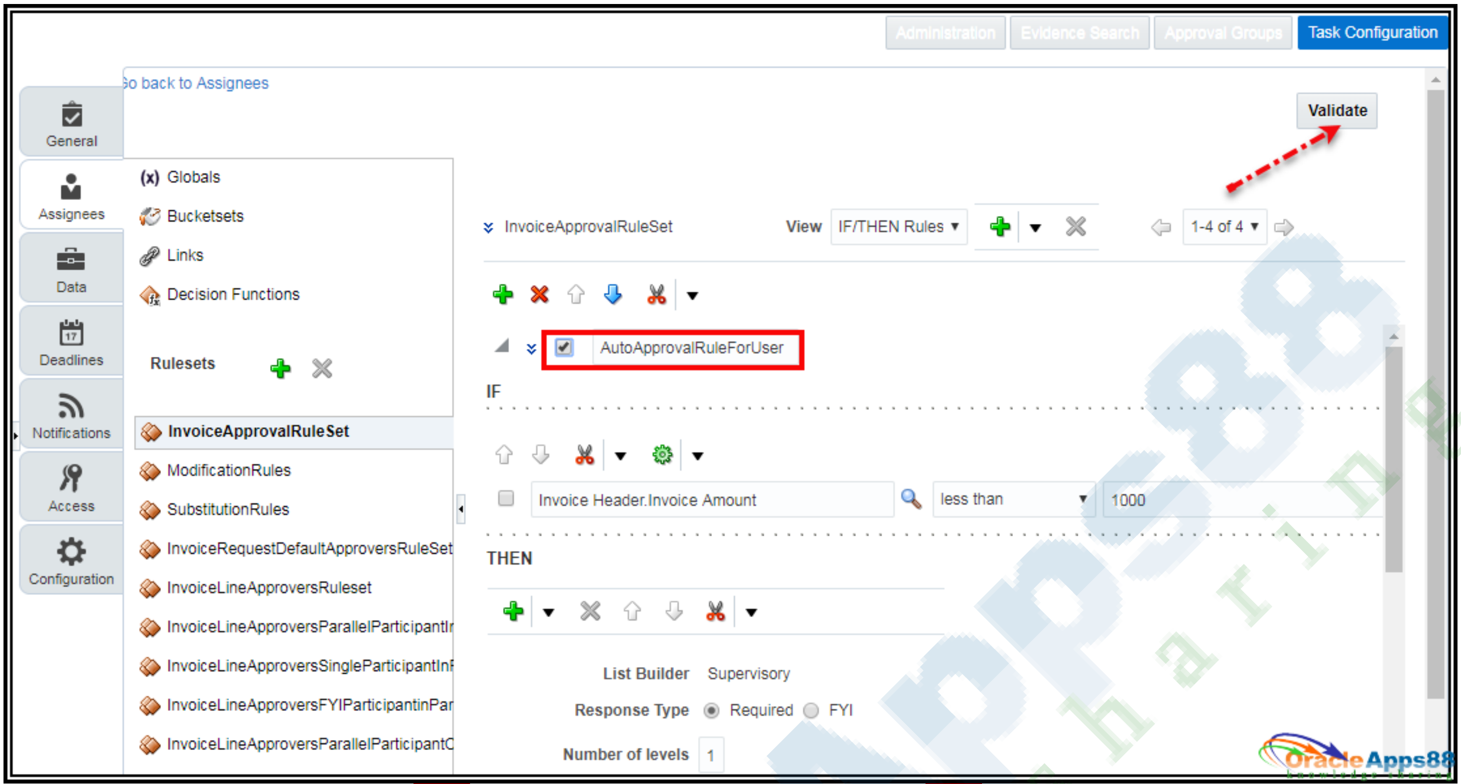

We can change existing rules or we can create new rule to click on the New button

Create a new Rule and Enter the below details:

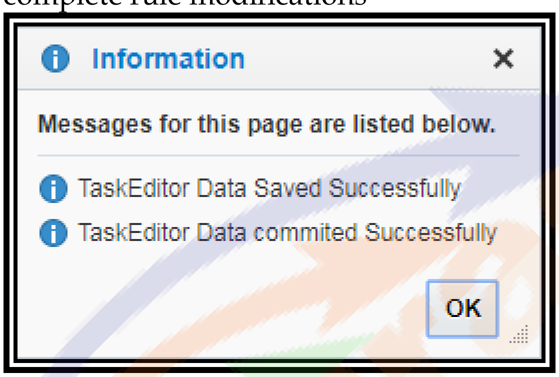
| Field | Value |
|---|---|
| Rule Name | AutoApprovalRuleForUser |
| | |
| Condition | Invoice Header.Invoice Amount – **less than** - **10000** |
| | |
| List Builder | Supervisory |
| Response Type | Required |
| Number of levels | 1 |
| Starting Participant | HierarchyBuilder.getManager("supervisory",Task.Creator,-1,"","") |
| Top Participant | HierarchyBuilder.getPrincipal("ORACLEAPPS",-1,"","") |
| Auto Action Enabled | True |
| Auto Action | "APPROVE" |




Validate the Rule

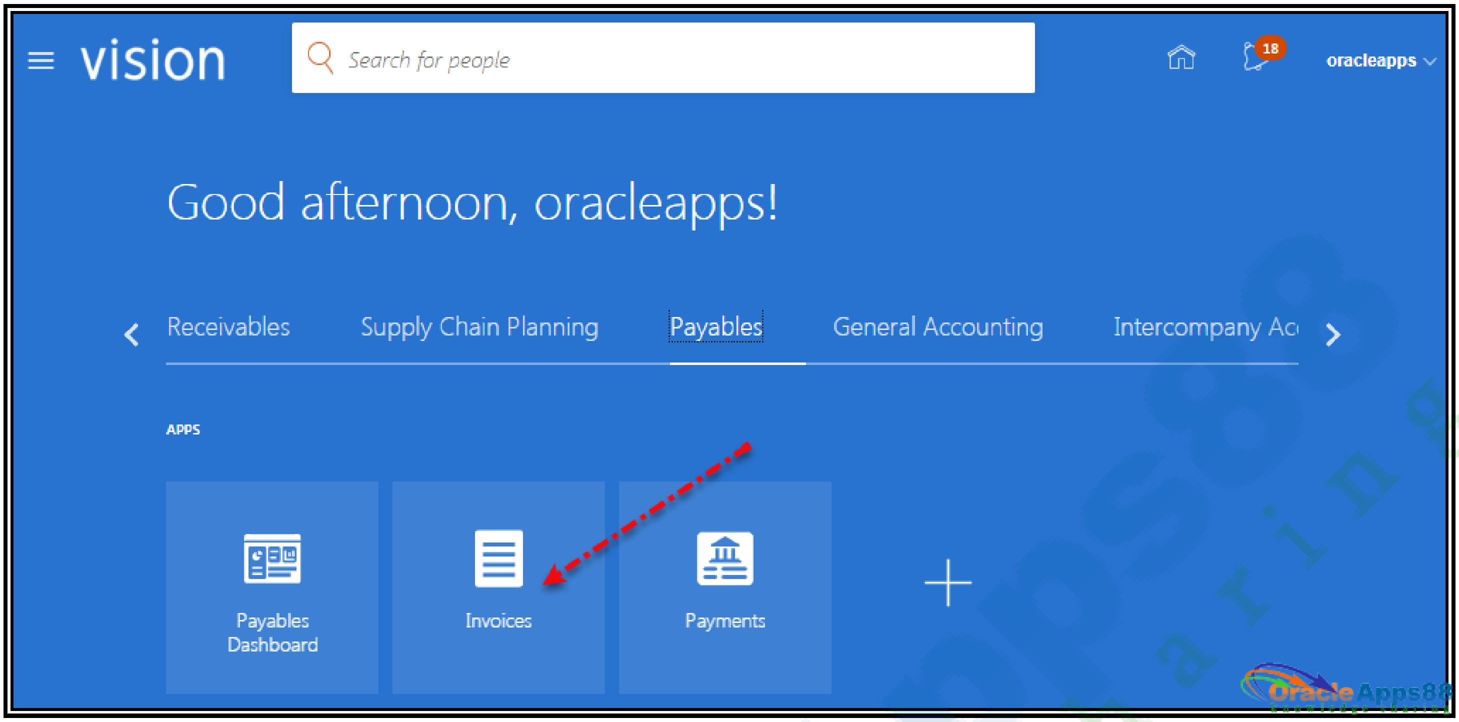



After the changes click on Save button then click on Commit Task button and enter the comments to complete rule modifications

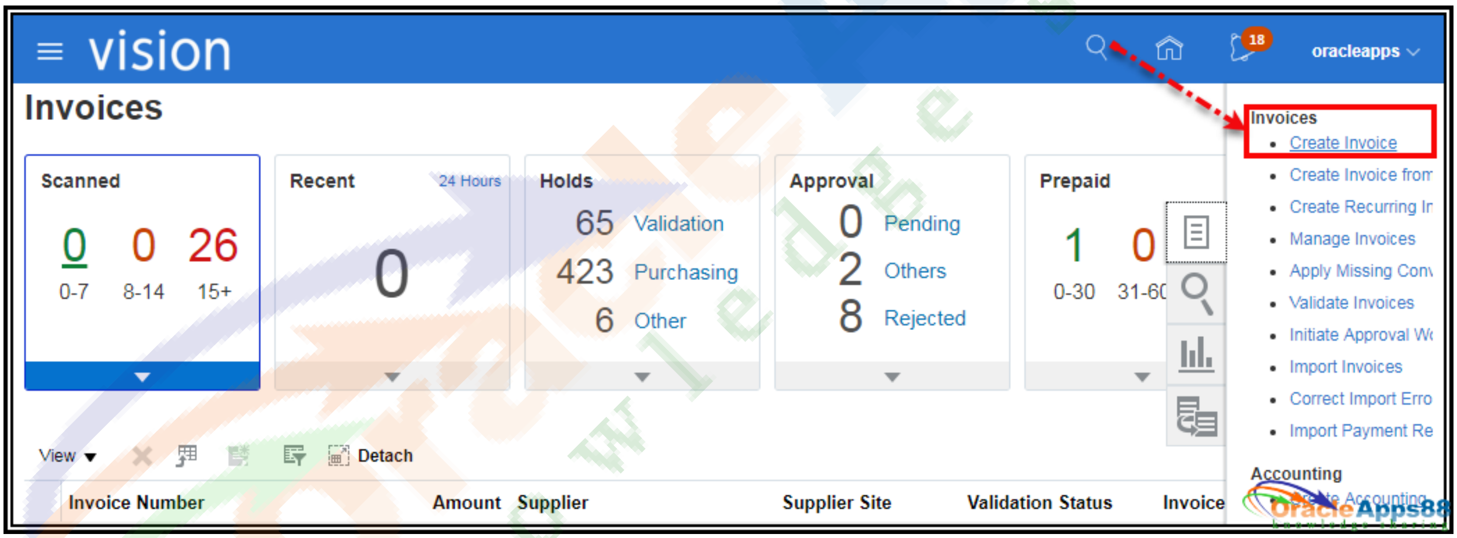



Create the invoice with ORACLEAPPS user and invoice amount lessthan 10000 and submit for approval

Nav : Payables →Invoices



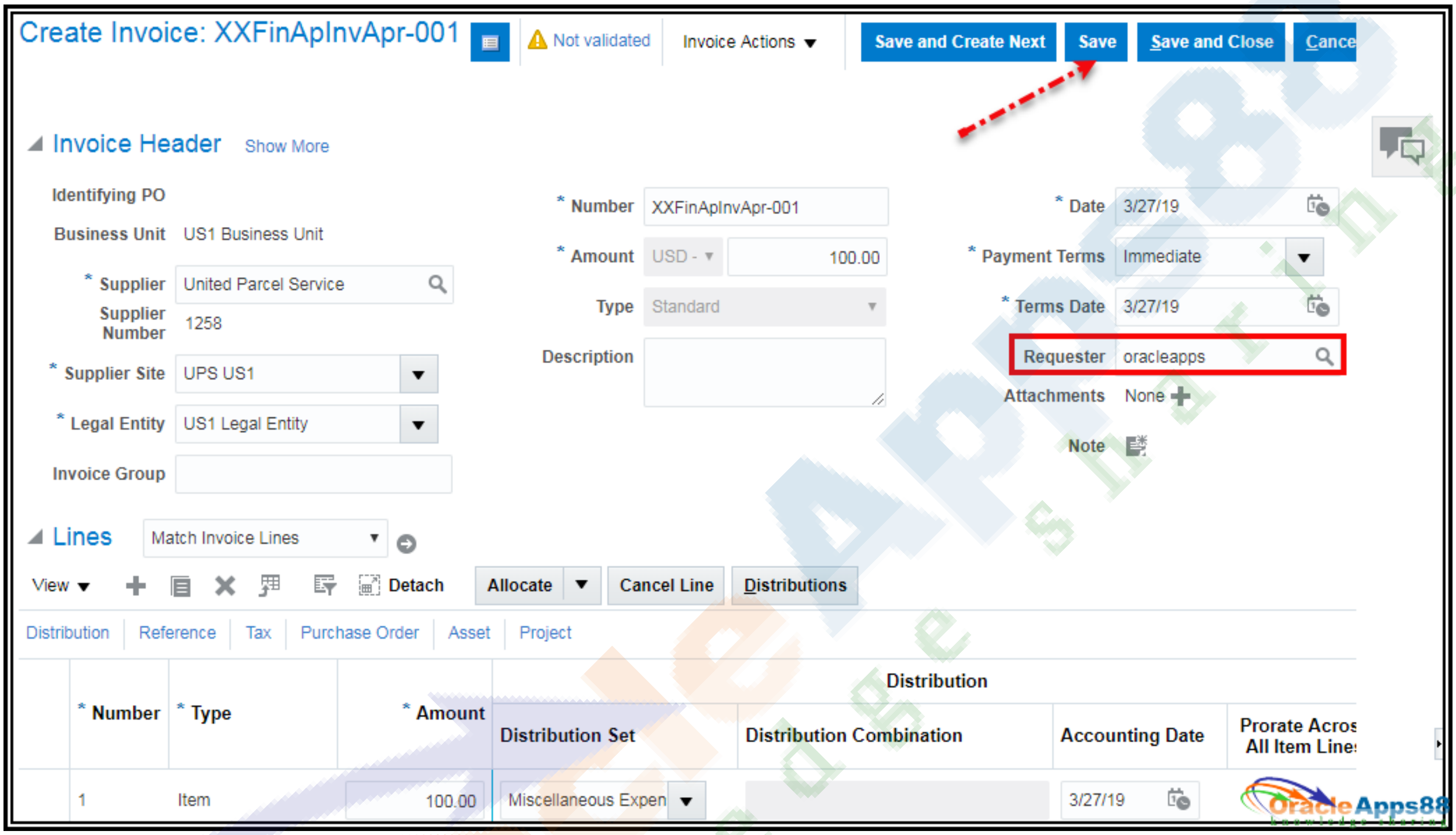

Click on the Create Invoice link



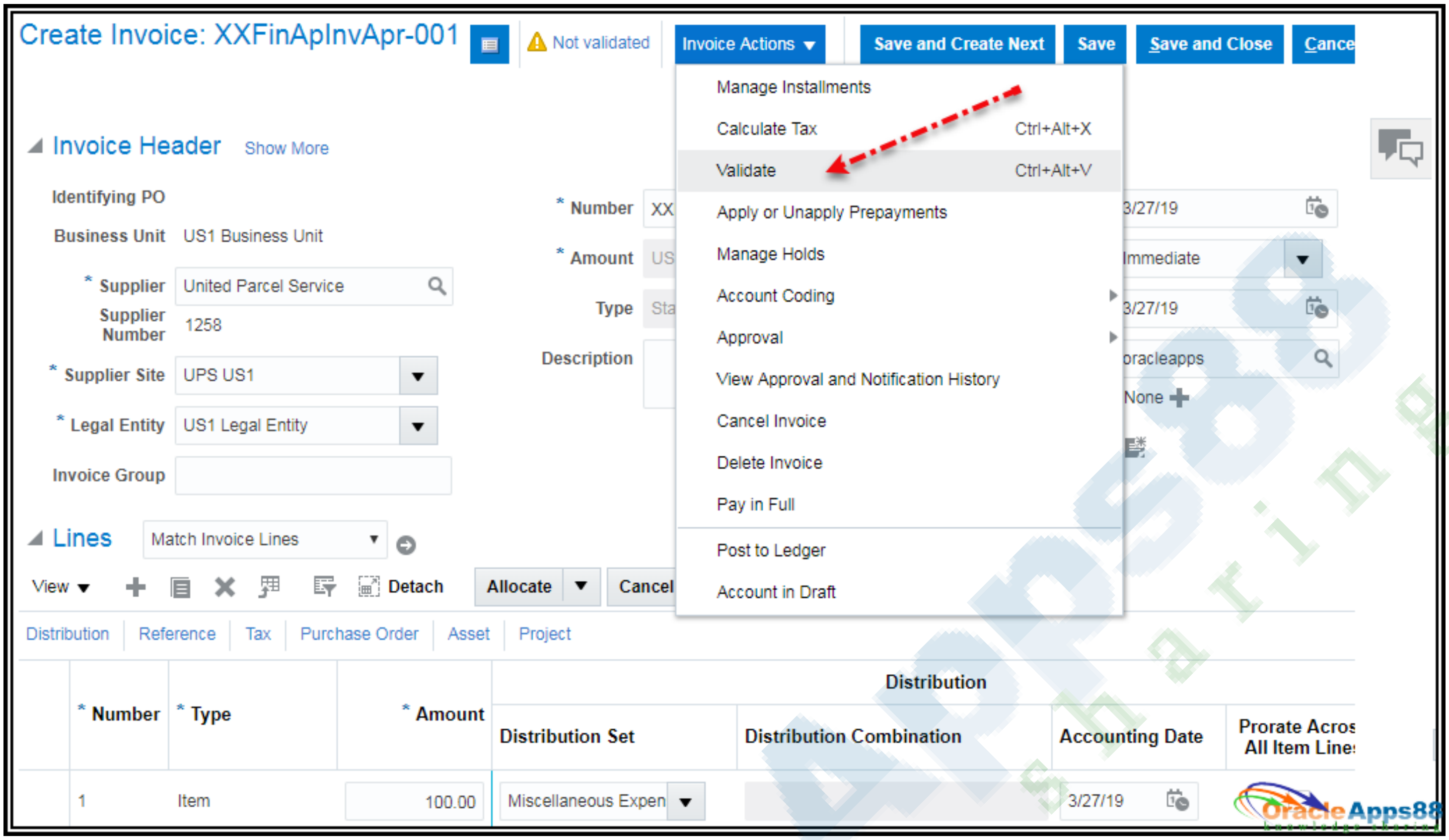

Enter the invoice details and save the invoice

| Name | Value |
|---|---|
| Business Unit | US1 Business Unit |
| Supplier | United Parcel Service |
| Supplier Number | 1258 |
| Supplier Site | UPS US1 |
| Legal Entity | US1 Legal Entity |
| Invoice Number | XXFinApInvApr-001 |
| Amount | 100 |
| Type | Standard |

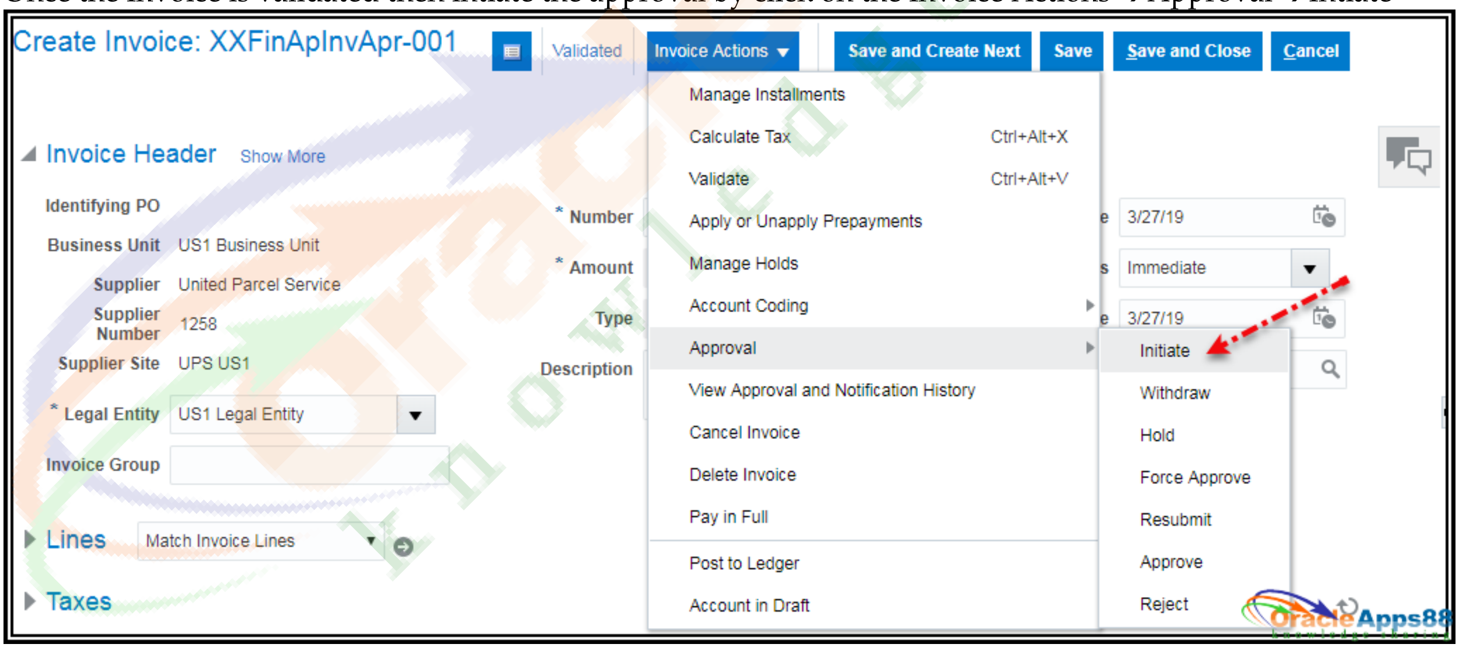
| | |
|---|---|
| Requestor | oracleapps |
| **Line Details** | |
| Type | Item |
| Amount | 100 |
| Distribution Set | Miscellaneous Expenses |



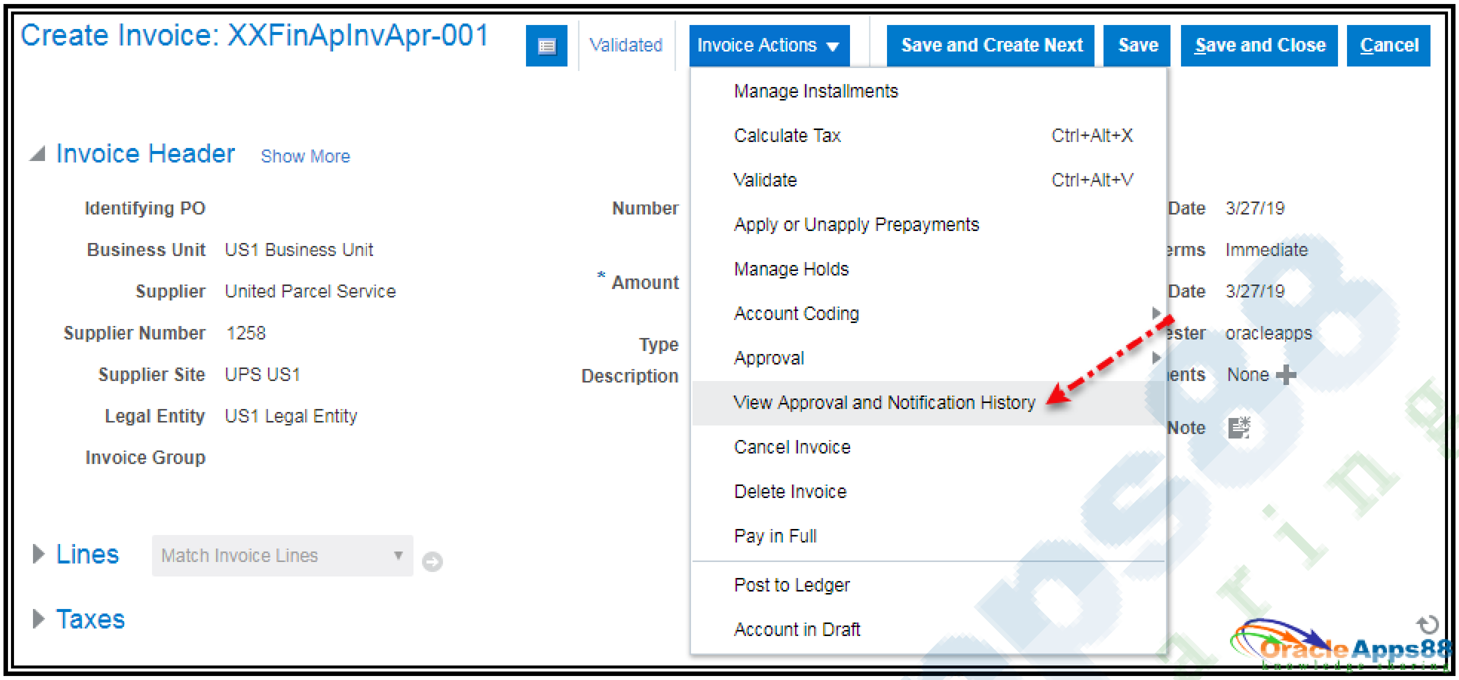

Click on the validate from Invoice Actions



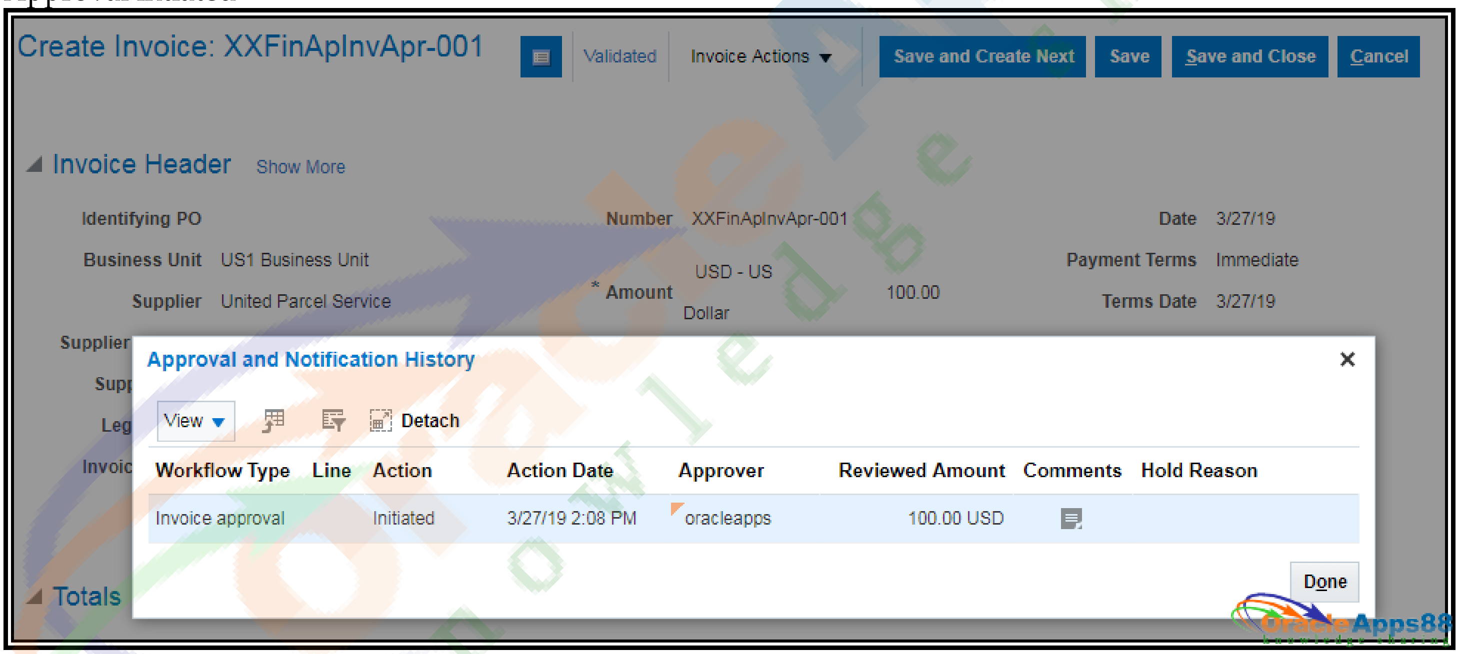

Once the Invoice is validated then intiate the approval by click on the Invoice Actions →Approval →Intiate



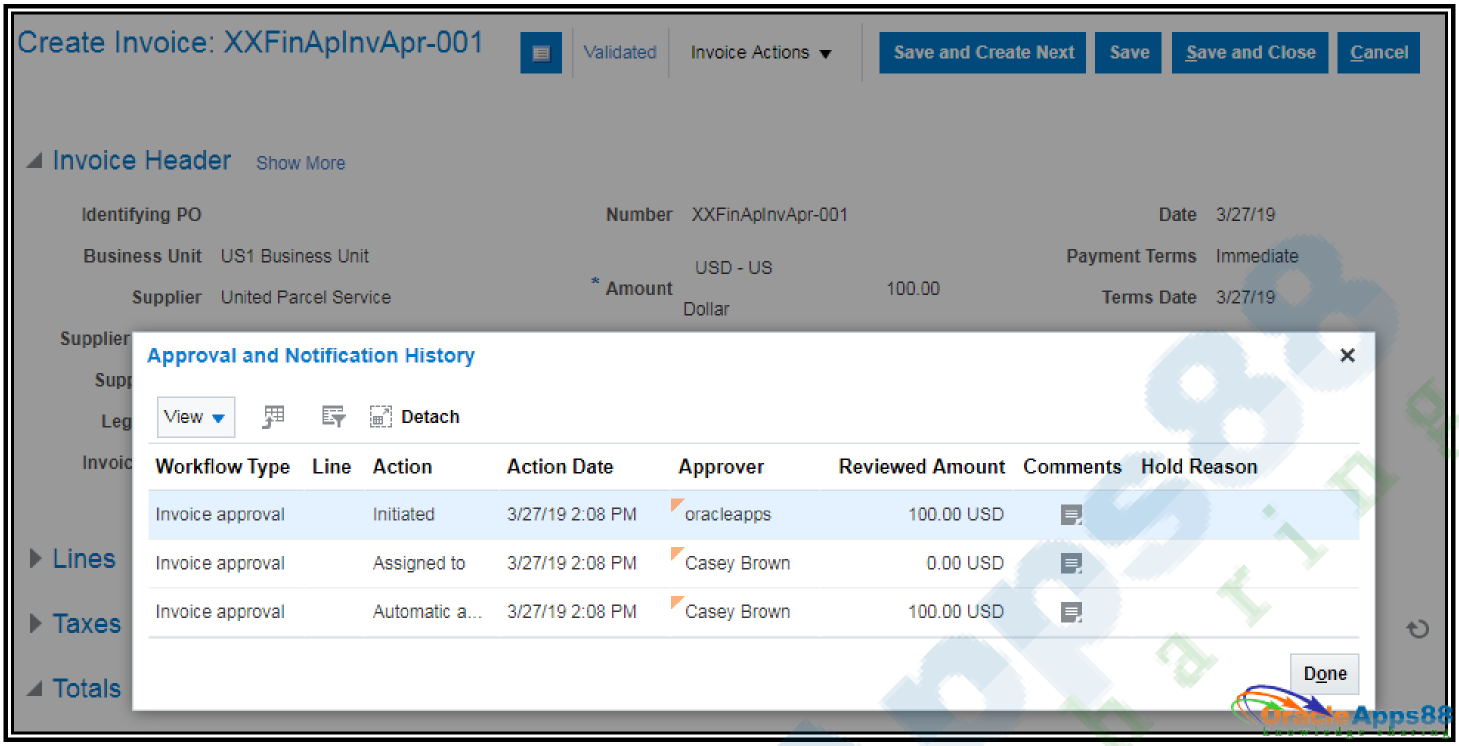

Check the Approval status from Invoice Actions →View Approval and Notification History



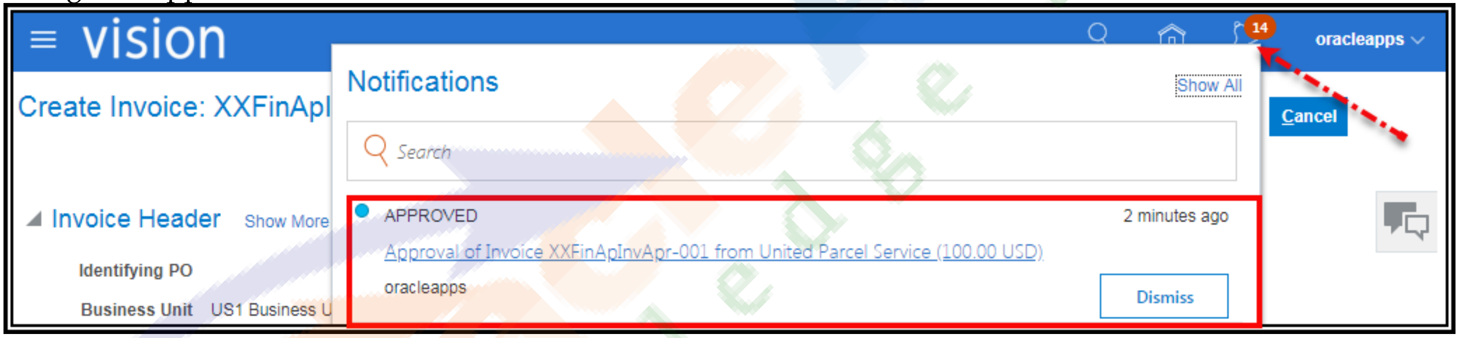

Approval intiated




Auto approval completed




Will ge the appvode notification check from worklist



Approval of Invoice XXFinApInvApr-001 from United Parcel Service (100.00 USD)
Actions
Details
Assignee
Assigned Date 3/27/19 2:08 PM
Outcome Task Completed - Approved
Task Number 314516
Supplier or Party United Parcel Service
Supplier Site UPS US1
Business Unit US1 Business Unit
Requester oracleapps
Invoice Number XXFinApInvApr-001
Invoice Date 3/27/19
Description
Payment Currency USD
Invoice Total 100.00 USD
Amount Summary
Line Type Amount
Item 100.00
Tax 0.00
Cost Center Summary
Cost Center Amount
US Operations 100.00
Total 100.00

### Use Case1: Configure an approval rule to route a notification to a requestor.

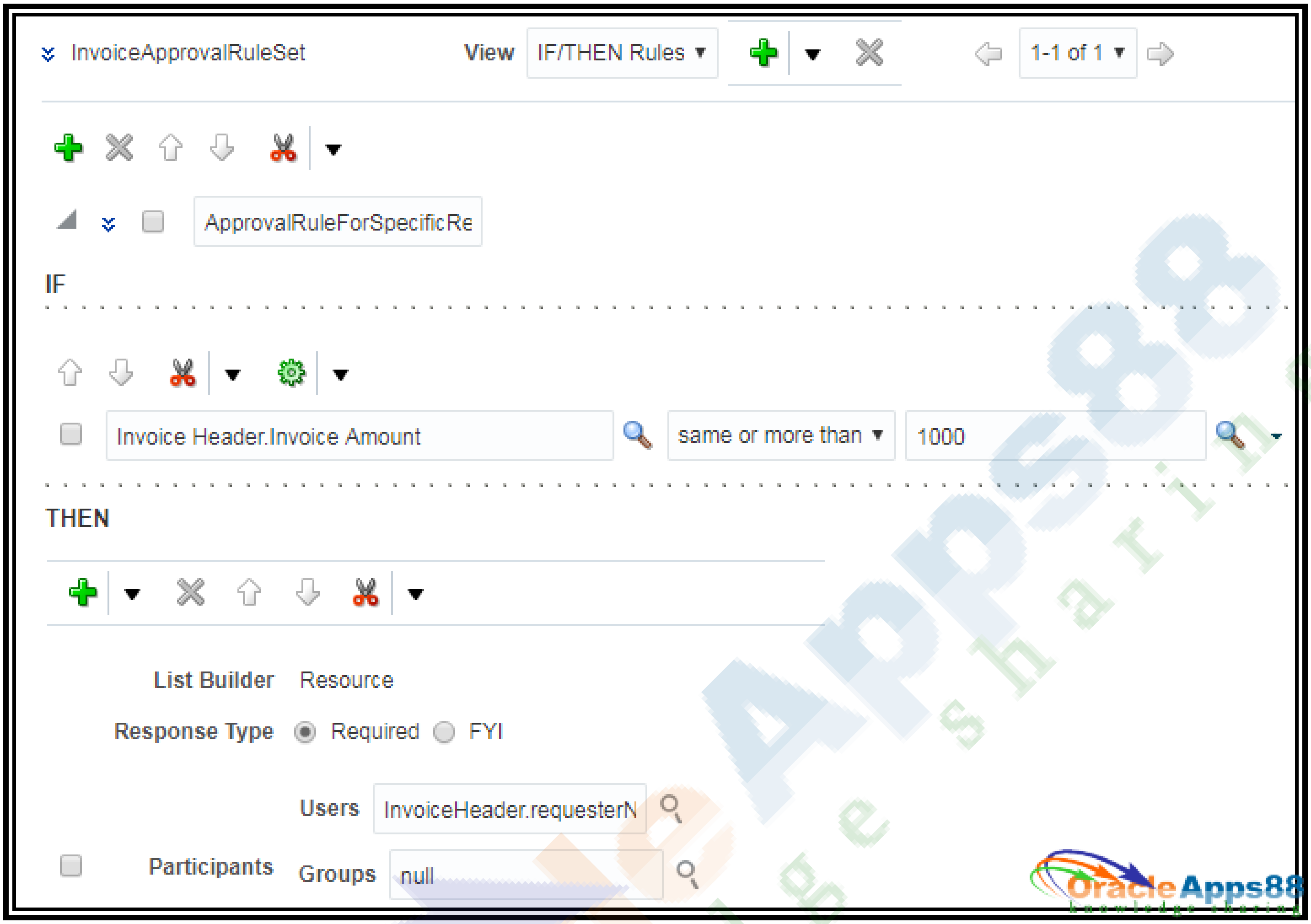
This business case requires an invoice to be routed for approval to a Specific requester/Buyer user who actually requested the goods or service. The buyer's name is captured in the Requestor field on the invoice UI.

**Solution:** To achieve this requirement, configure an approval rule using the resource list builder and in user field enter **InvoiceHeader.requesterName**.

Create an approval rule using the List Builder Resource to route an invoice to a specific requester (Single Approver) entered on the invoice if the invoice amount is more than 1000. Resource is used when an invoice needs to be routed to a single approver for an approval.

Create a new Rule and Enter the below details:

| Field | Value |
|---|---|
| Rule Name | ApprovalRuleForSpecificRequesterUser |
| | |
| Condition | Invoice Header.Invoice Amount – **same or more than - 1000** |
| | |
| List Builder | Resource |
| Response Type | Required |
| Users | InvoiceHeader.requesterName |
| Participants Groups | Null |
| Application Roll | Null |


InvoiceApprovalRuleSet
View
IF/THEN Rules
1-1 of 1
ApprovalRuleForSpecificRe
IF
Invoice Header.Invoice Amount
same or more than
1000
THEN
List Builder
Resource
Response Type
Required
FYI
Users
InvoiceHeader.requesterN
Participants
Groups
null

**Use case2: Configure an approval rule to route a notification to a group of approvers.**
The business requirement is that all invoices related to the operating expenditures incurred needs to be reviewed by two approvers. The invoice first needs to be reviewed and approved by the Payables Department head and then needs to be approved by the Finance Manager. The nature of the expenditure is based on the natural account entered on the invoice.

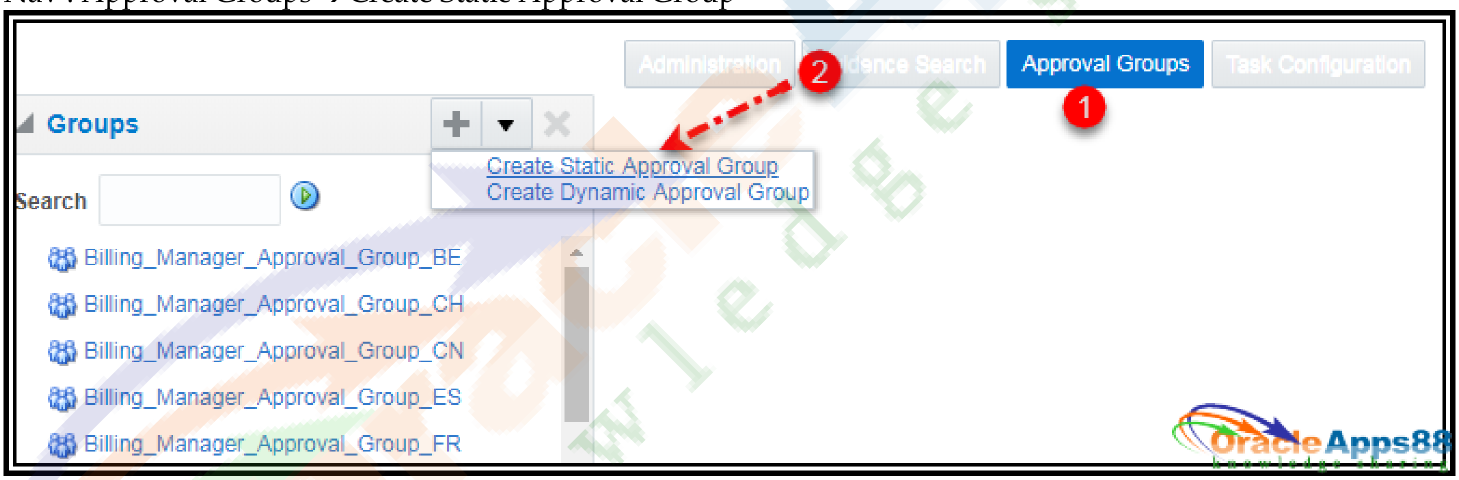
**Example:** An invoice is received for the expenditure incurred related to a marketing event:

1) If the account code combination entered on the invoice contains the natural accounts ranges from **512001** to **512099** then invoice requires the approval from the Payables Department head and the Finance Manager.
2) If the account code combination entered on the invoice does not contain the natural accounts ranges from **512001** to **512099** then invoice requires the approval from the Payables Department head.

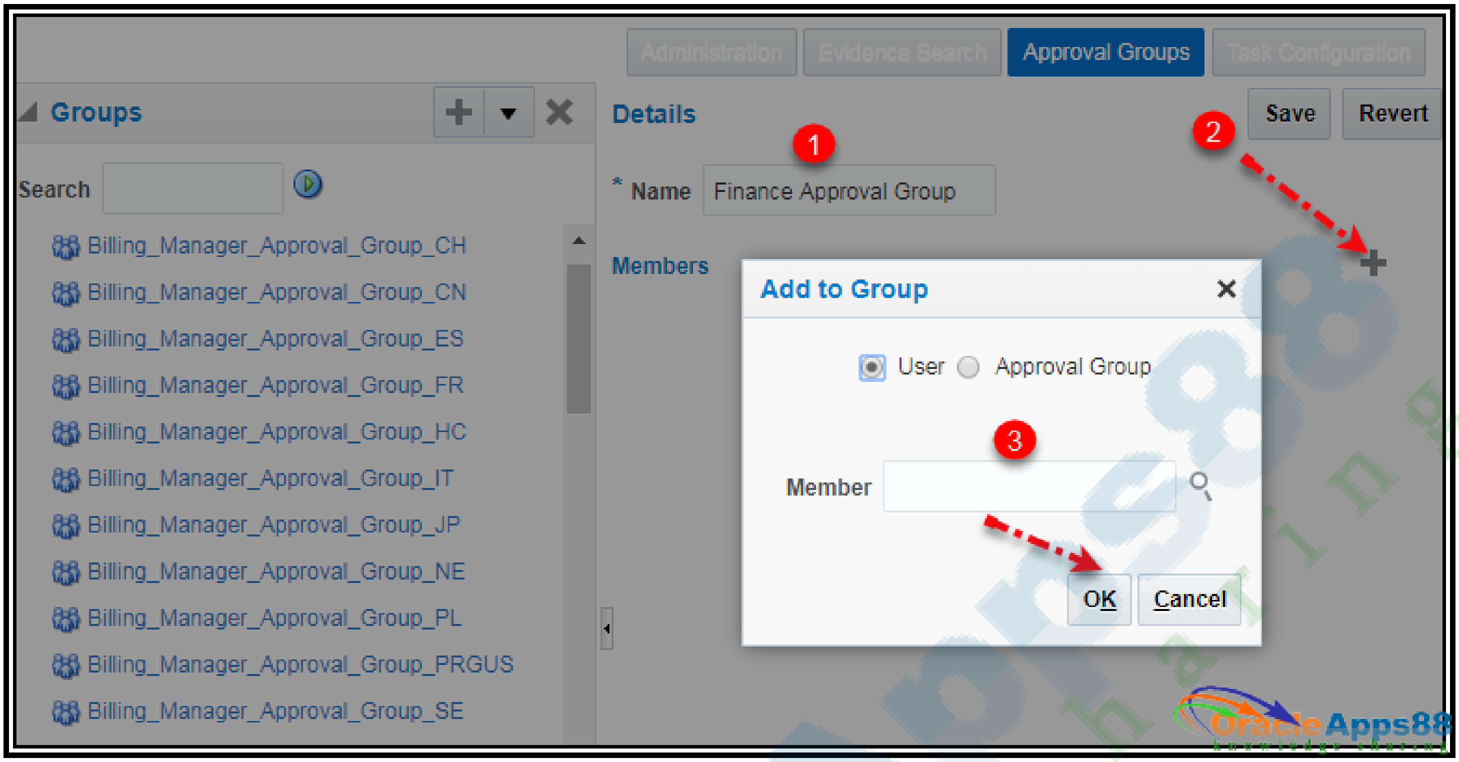
**Solution:**

1. Create an approval group with the Payables Department head and the Finance Manager.
2. Create a rule using Serial type participant in parallel mode with account segment in (**512001**, **512002**, **512003**, to **512099**).You then route the invoice to the approval group which consists of the Payables Department head and the Finance Manager.

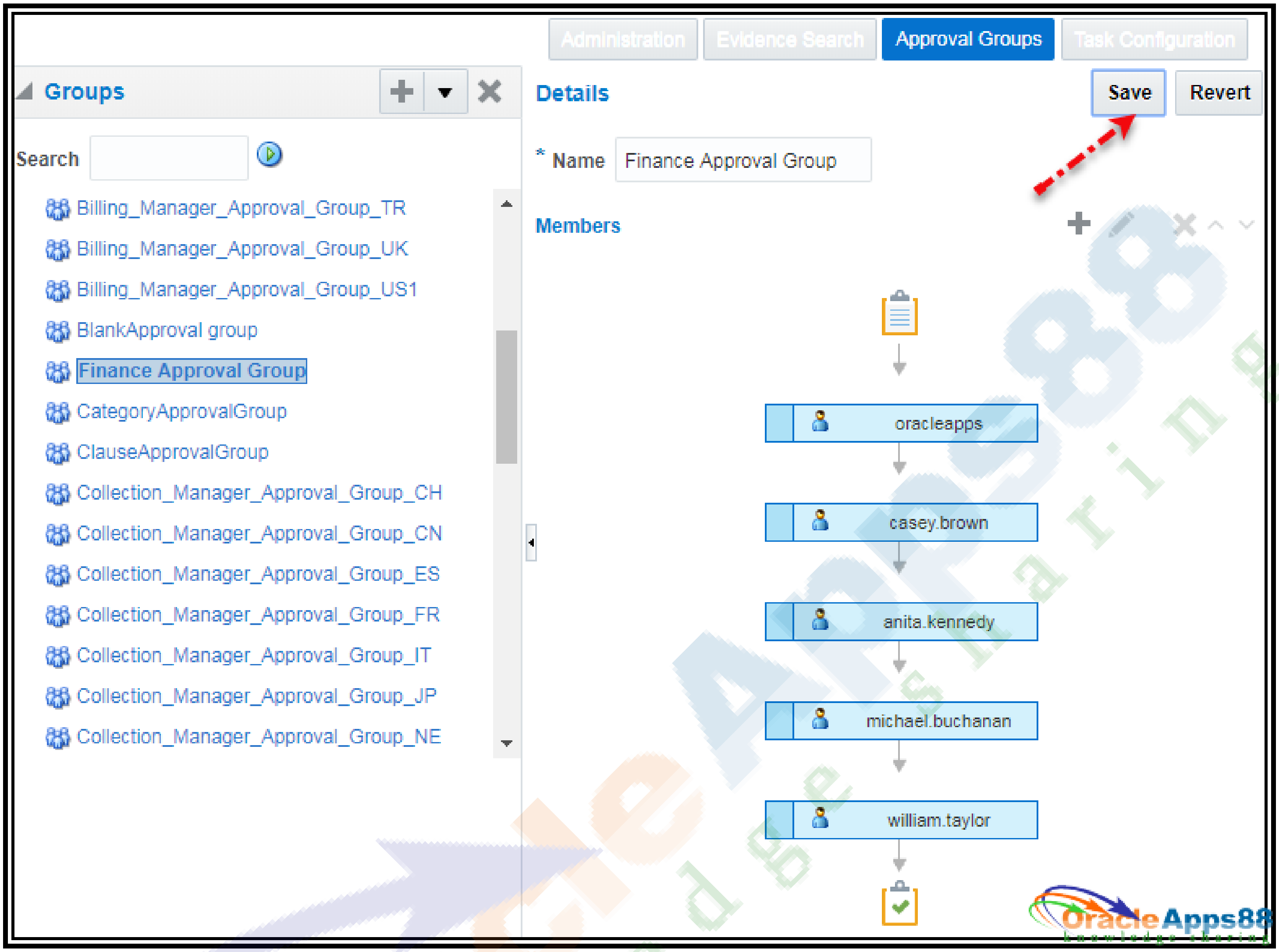
Create the Approval Group
Nav : Approval Groups →Create Static Approval Group




Enter the group Name and click on the add button to enter the members of group

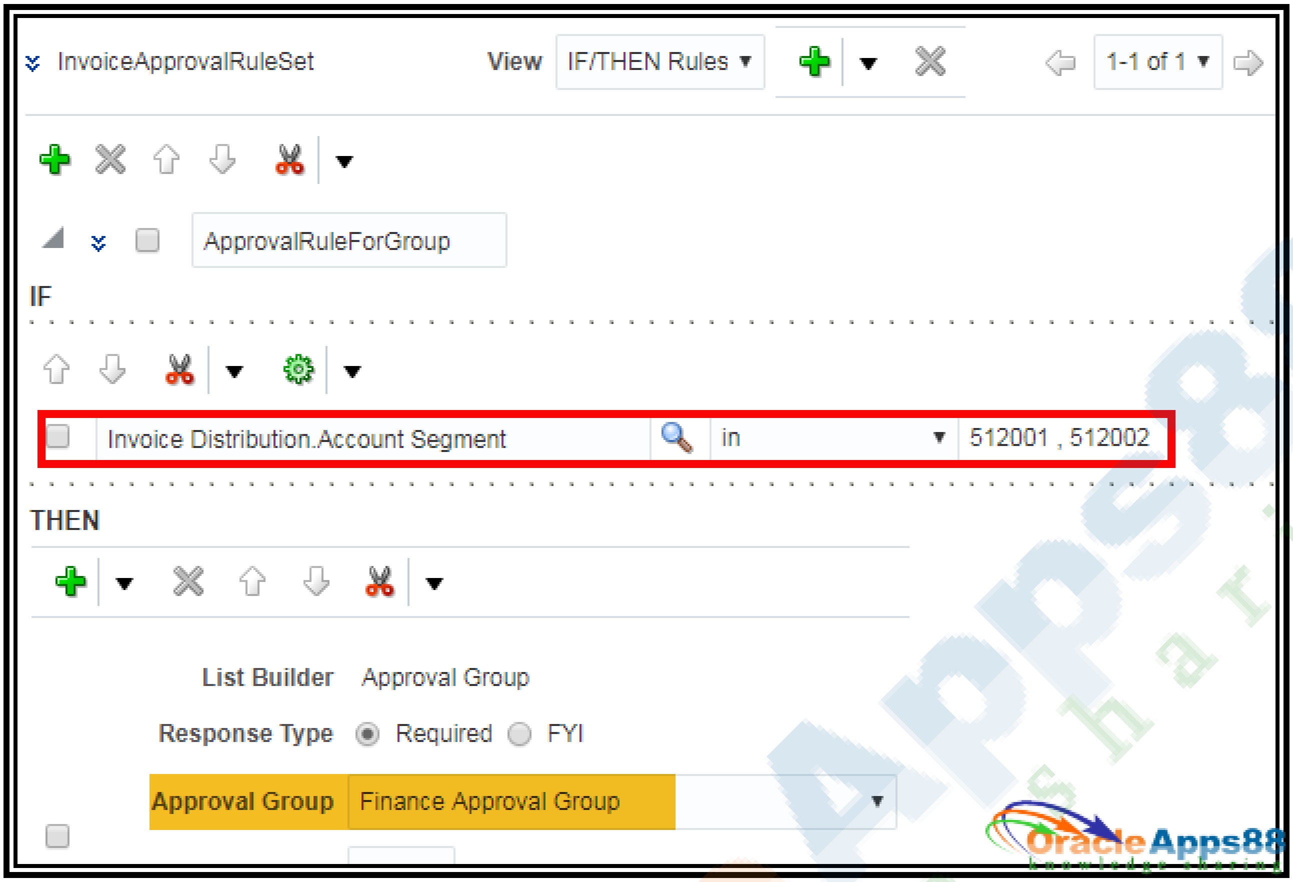



Save the group




Create a new Rule and Enter the below details:

| Field | Value | | |
|---|---|---|---|
| Rule Name | ApprovalRuleForGroup | | |
| | | | |
| Condition | Invoice Distribution.Account Segment | **in** | **512001, 512002** |
| | | | |
| List Builder | Approval Group | | |
| Response Type | Required | | |
| Approval Group | Finance Approval Group | | |
| Allow Empty Groups | False | | |
| | | | |


InvoiceApprovalRuleSet
View
IF/THEN Rules
1-1 of 1
ApprovalRuleForGroup
IF
Invoice Distribution.Account Segment
in
512001 , 512002
THEN
List Builder
Approval Group
Response Type
Required
FYI
Approval Group
Finance Approval Group

**Use Case3: Configure an approval rule to route a notification using a supervisory hierarchy.**

The business requirement is that an invoice needs to be approved by managers based on the amount limits set for each approver.

**Example:**

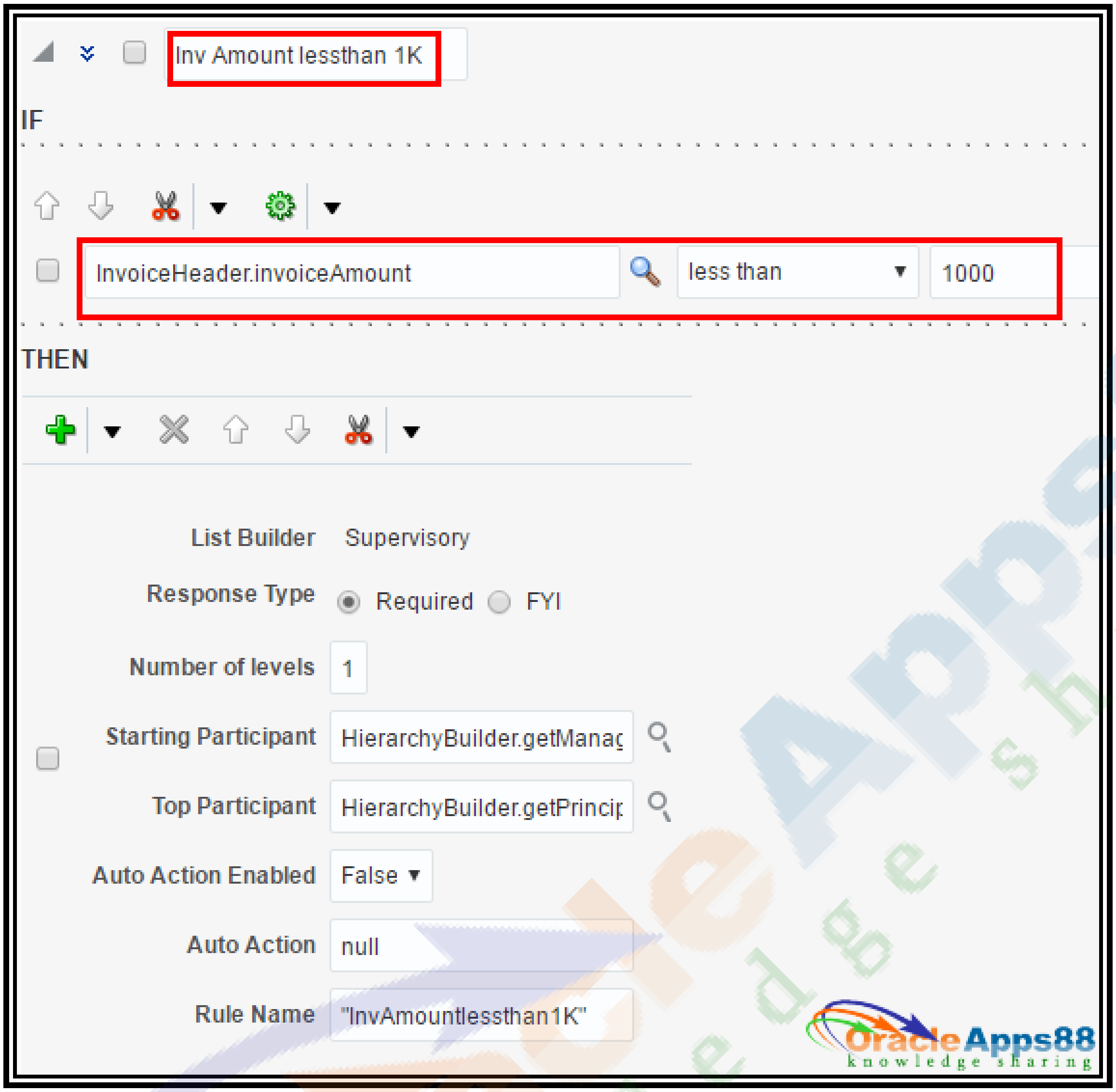
An invoice amount of more than $10,000 dollars needs the approval of two groups. The first group is made up of the Manager, Senior Manager, and Finance Manager. The invoice can be approved by the next group of approvers. That approval group consists of the CFO, COO, and CEO. If the invoice amount is less than $10,000 dollars it only needs to be approved by the Manager, Senior Manager, and Finance Manager depending on the invoice amount.

| Employee Role | Supervisory Hierarchy Level | Approval limit |
|---|---|---|
| Manager | 1 | <1,000 |
| Senior Manager | 2 | 1,001 – 10,000 |
| Finance Manager | 3 | >10,001 |
| CFO,COO,CEO (Any one can approve) | 4 | >10,001 |

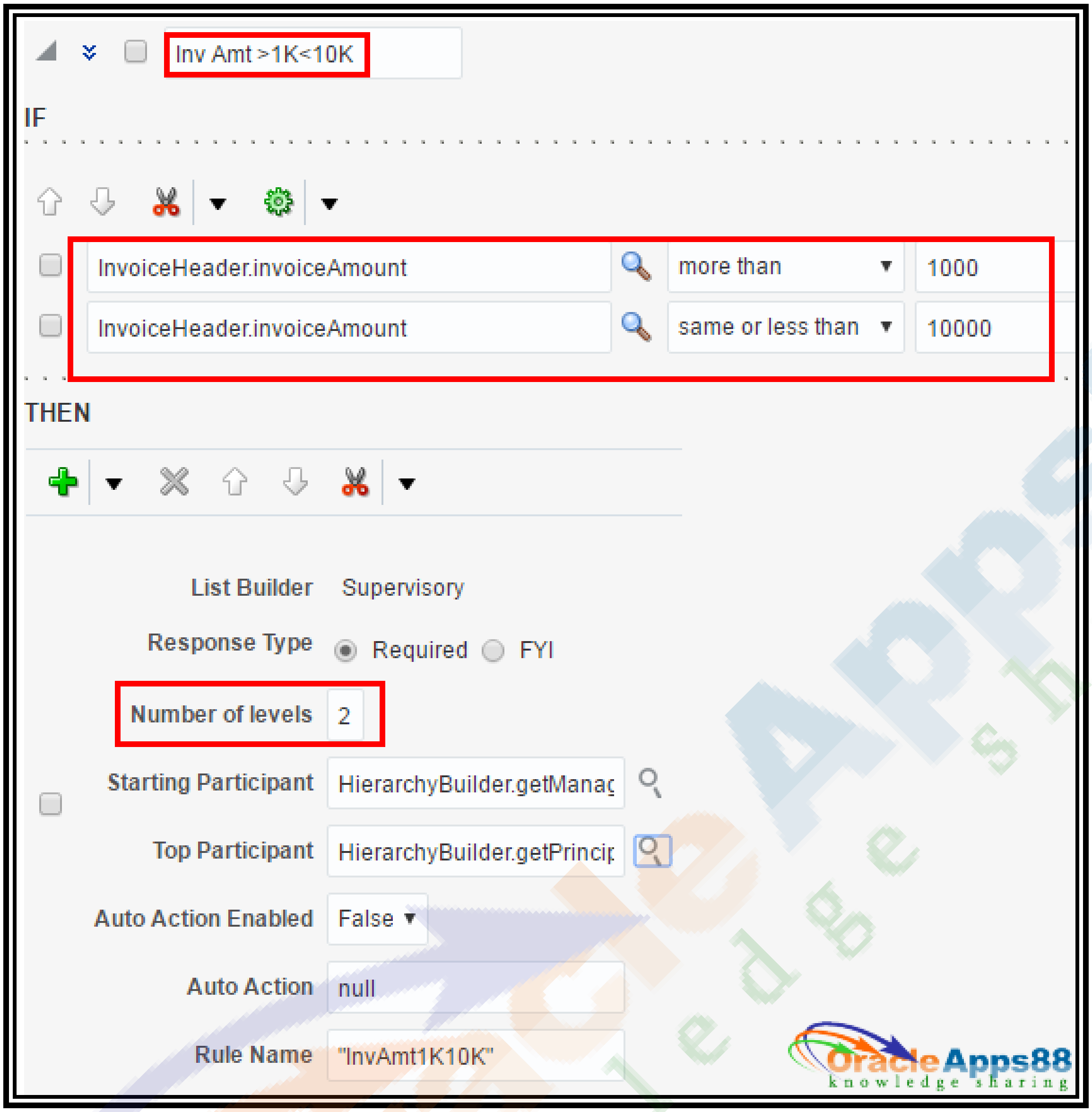
The first three approvals are done by the managers of the invoice requestor using supervisory hierarchy. Final approval has to be done by any one of the approver out of 3 approvers from approval group.

**Solution:** This requirement can be achieved by using two participants (First one is **Serial type participant in parallel mode** to complete first three levels of approvals and next is to use **Parallel type participant in parallel mode**)

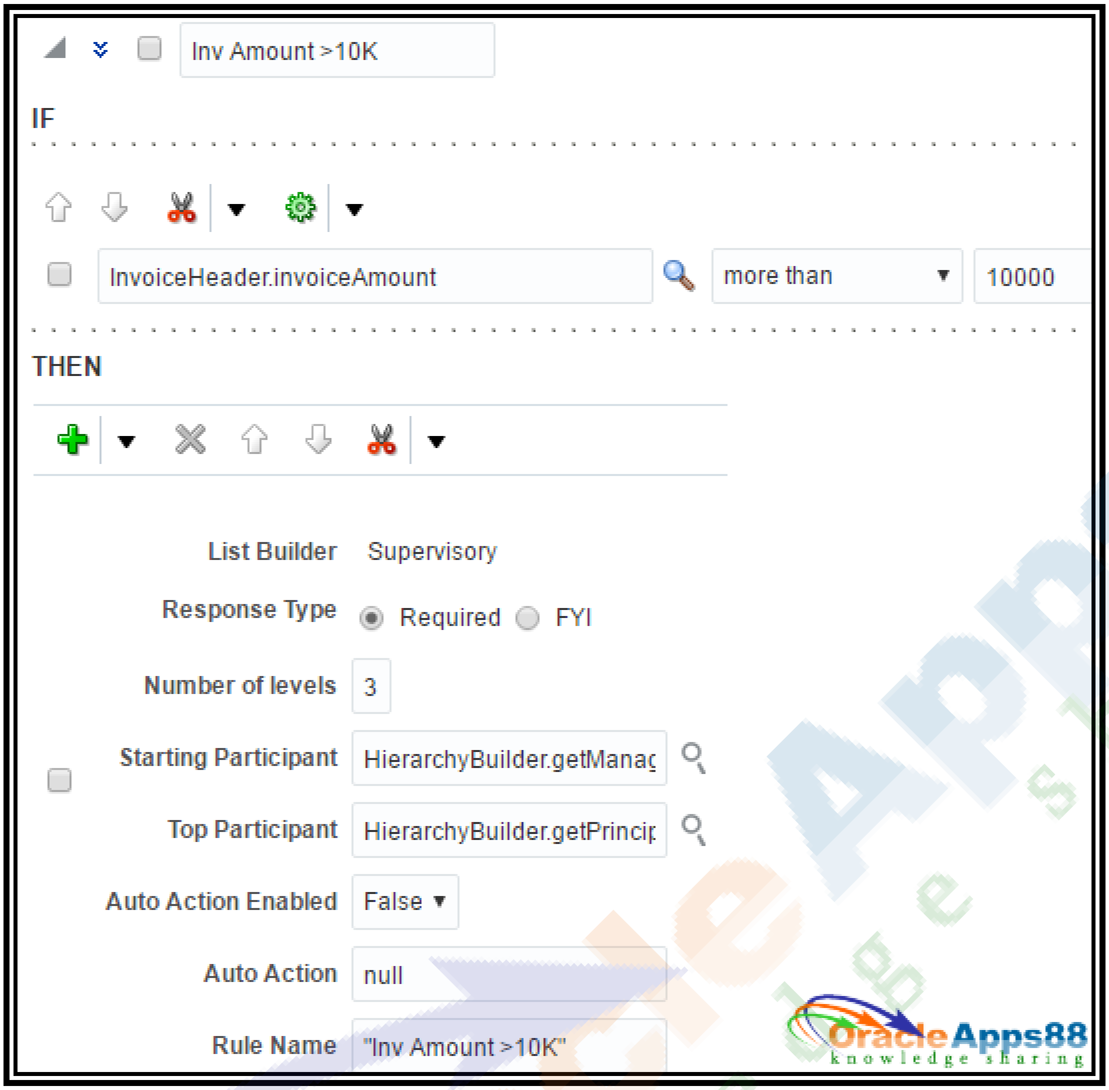
1. Configure the approval rule for the invoice amount less than 1000 using serial type participant in parallel mode with supervisory hierarchy.



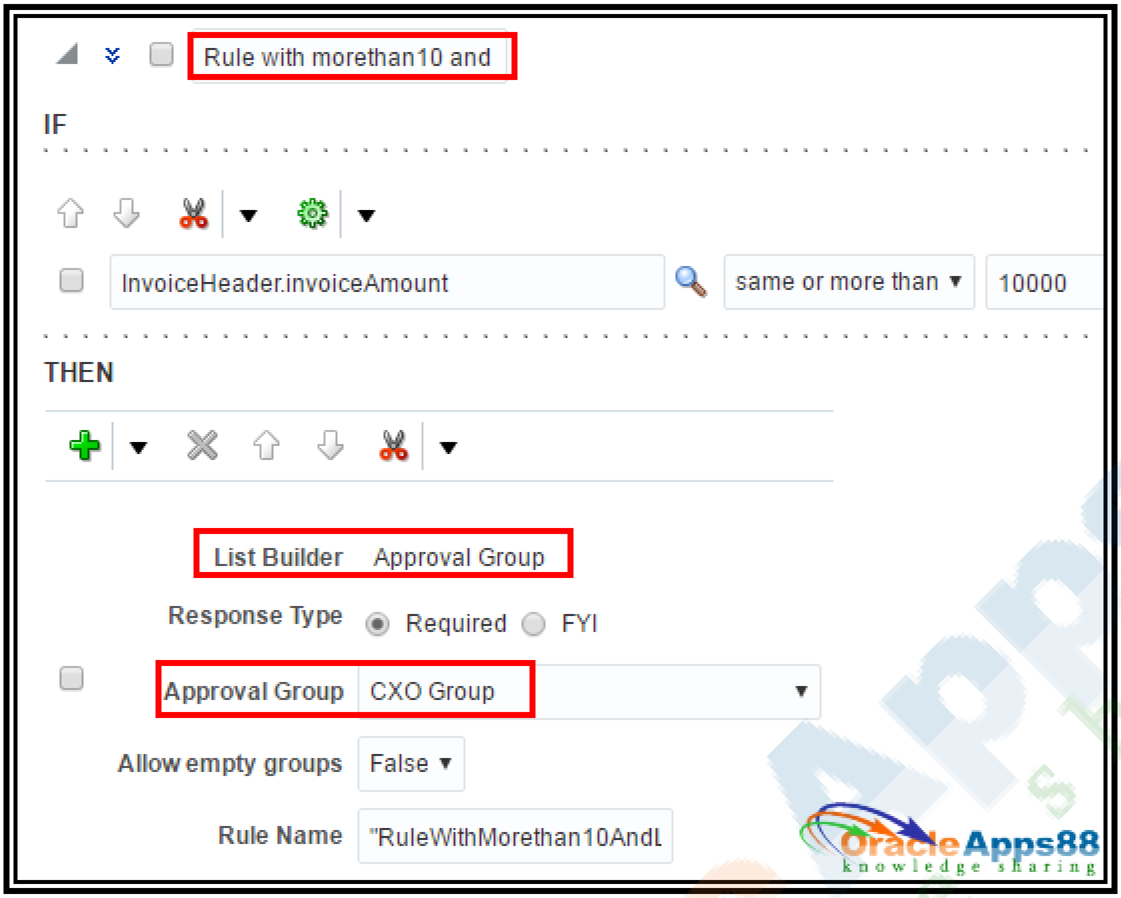

2. Configure the approval rule for the invoice amount more than 1,000 and less than 10,000 using serial type participant in parallel mode with supervisory hierarchy.



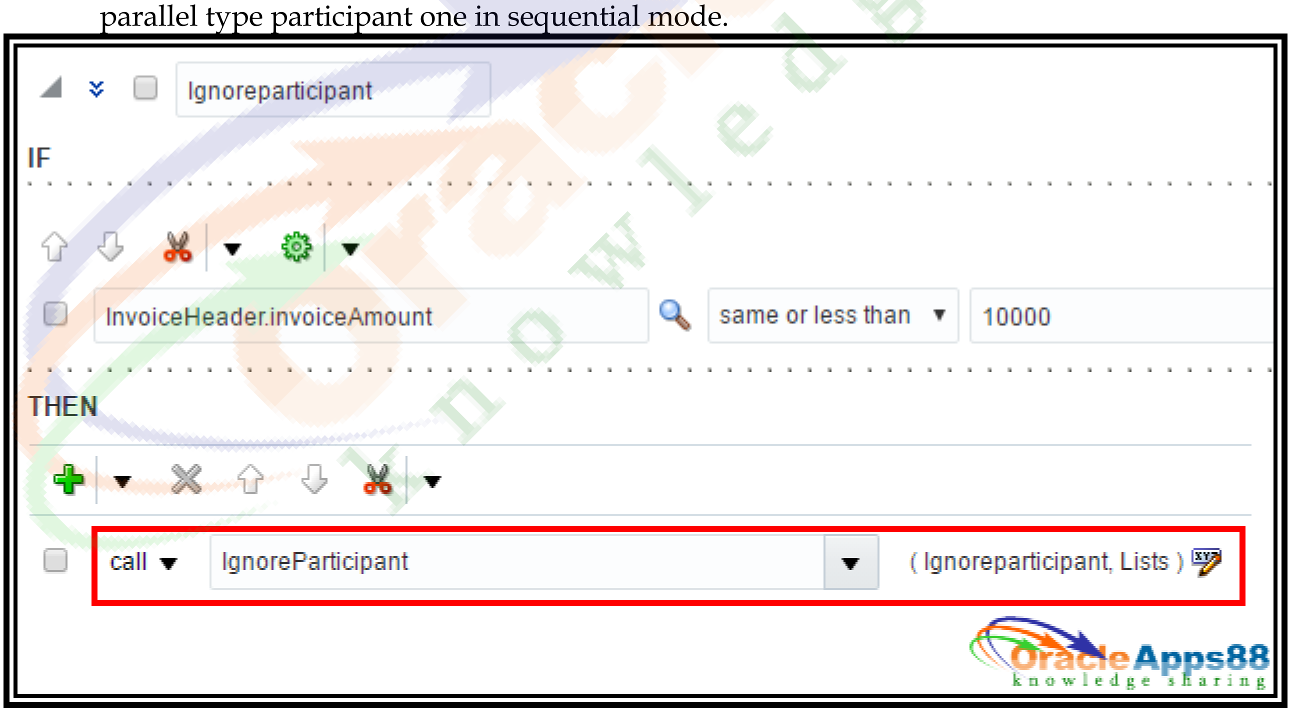

3. Configure the approval rule for the invoice amount more than 10,000 using serial type participant in parallel mode with supervisory hierarchy.




4. Configure the approval rule for the invoice amount more than 10,000 using parallel type participant one in sequential mode with the approval group.




5. Configure the approval rule to ignore the participant ID the invoice amount less than 10,000 using the parallel type participant one in sequential mode.

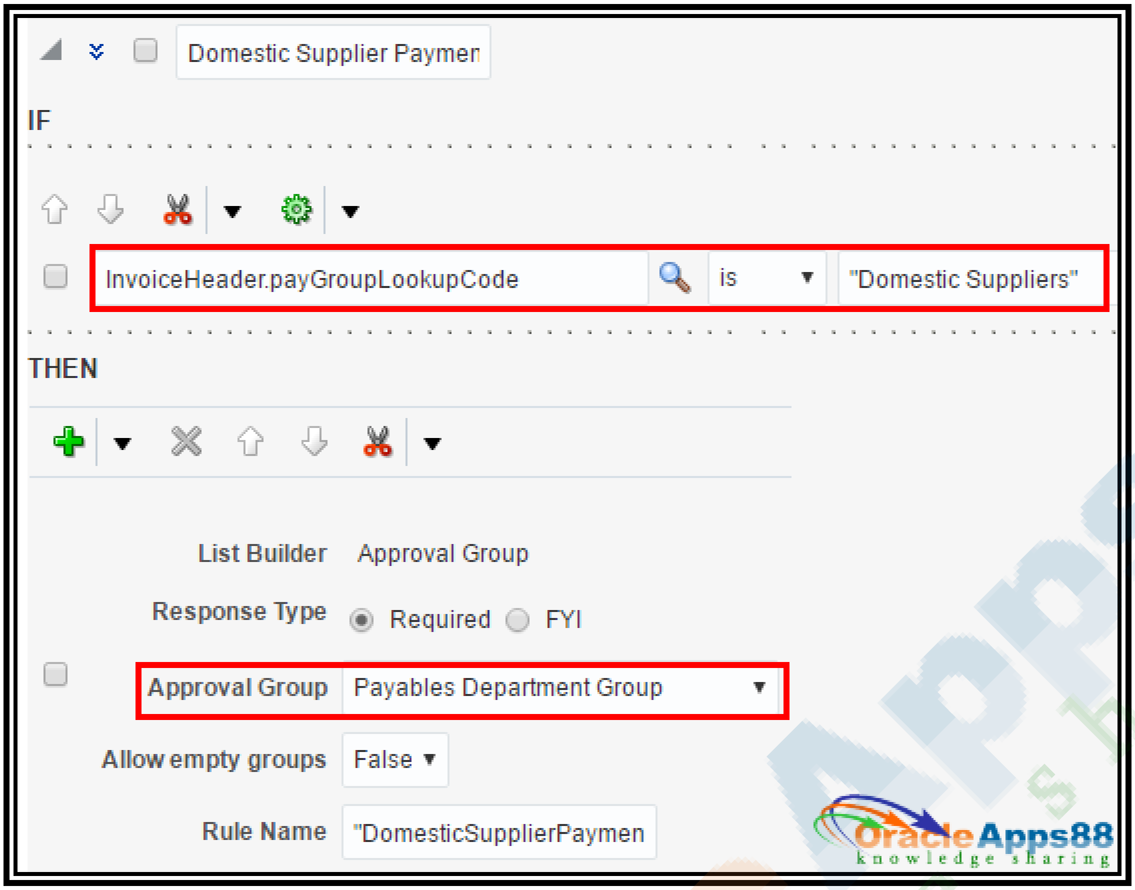


## Use Case4: Configure an approval rule to route notification to a group of approvers simultaneously and the first approver wins.

The business requirement is to send an invoice for approval process to a group of approvers; the group consists of the Finance Manger and the Finance Director. Invoices related to **Foreign Suppliers**, that are captured through the pay group assignment at the invoice header level can be approved any one of the approvers. Invoices related to Domestic Suppliers, will be approved by the Payables Department group.

**Solution:** To achieve this requirement, first define an approval group and configure an approval rule using **Single type participant in parallel mode** participant with the list builder **Approval Group** and assign the approval group to the rule.


Configure an approval rule using **Single type participant in parallel mode** participant with the list builder **Approval Group** and assign the approval group **Payables department** to the rule.


Domestic Supplier Paymen
IF
InvoiceHeader.payGroupLookupCode
is
"Domestic Suppliers"
THEN
List Builder
Approval Group
Response Type
Required
FYI
Approval Group
Payables Department Group
Allow empty groups
False
Rule Name
"DomesticSupplierPaymen

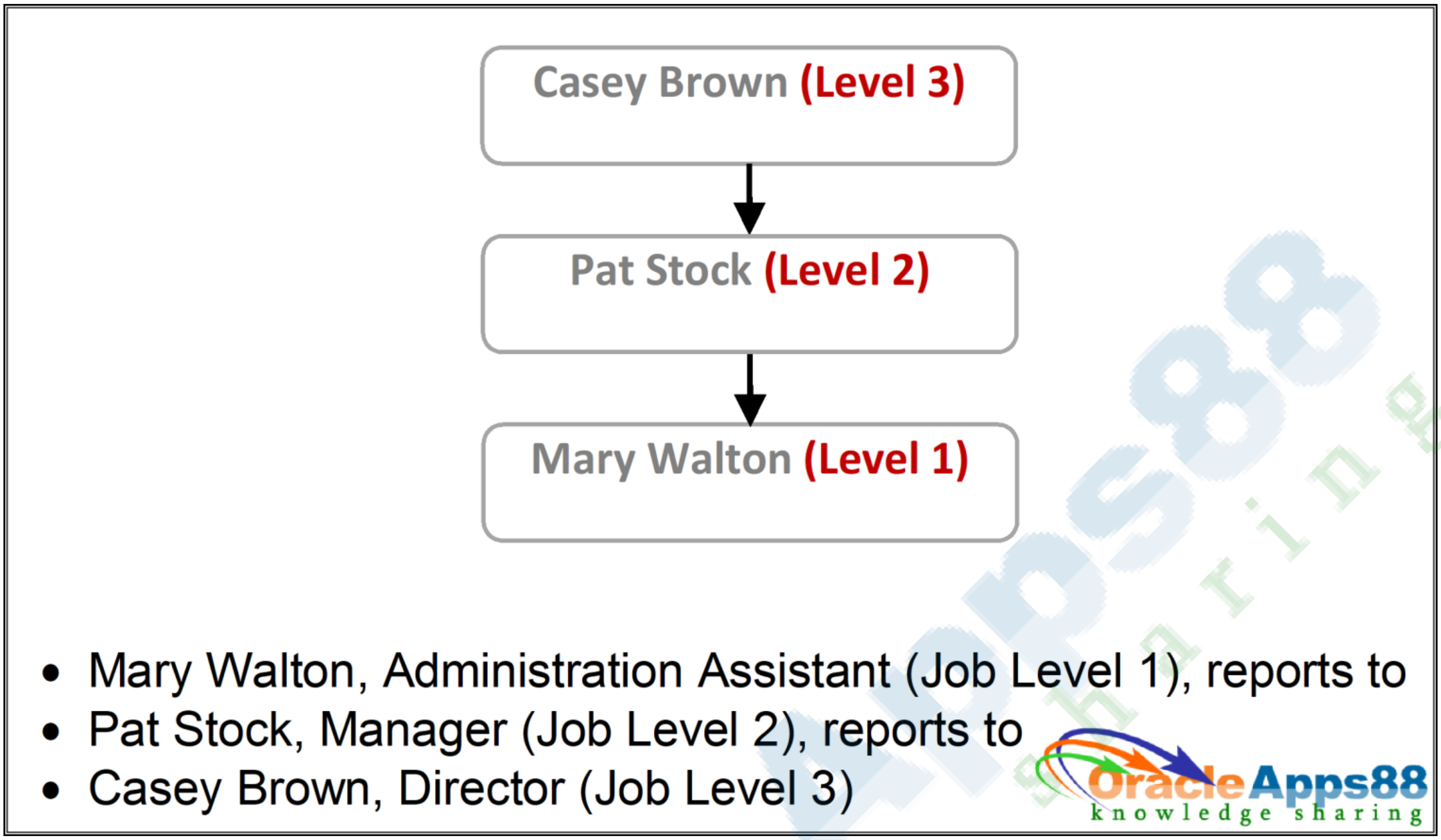
**Use Case5: Configure an approval rule to route a notification using job level hierarchy.**

The business requirement is to initiate an approval process for invoices based on the employee's job role and the amount limit set for a specific job role. If an invoice is created by the project lead and the invoice amount is in between $1-$5000, then the invoice has to be approved by their manager.

**Solution:** This requirement can be achieved by configuring the approval rule using job level hierarchy and trigger approvals based on the invoice amount limit set to each job level.
The table below shows approval limit for each job level hierarchy:

| Employee Role | Job Level | Approval limit |
|---|---|---|
| Manager | 1 | $5,000 |
| Senior Manager | 2 | $10,000 |
| Director | 3 | $20,000 |
| Senior Director | 4 | $30,000 |
| Vice President | 5 | $50,000 |
| SVP | 6 | $100,000 |
| EVP | 7 | $150,000 |
| CEO | 8 | $500,000 |

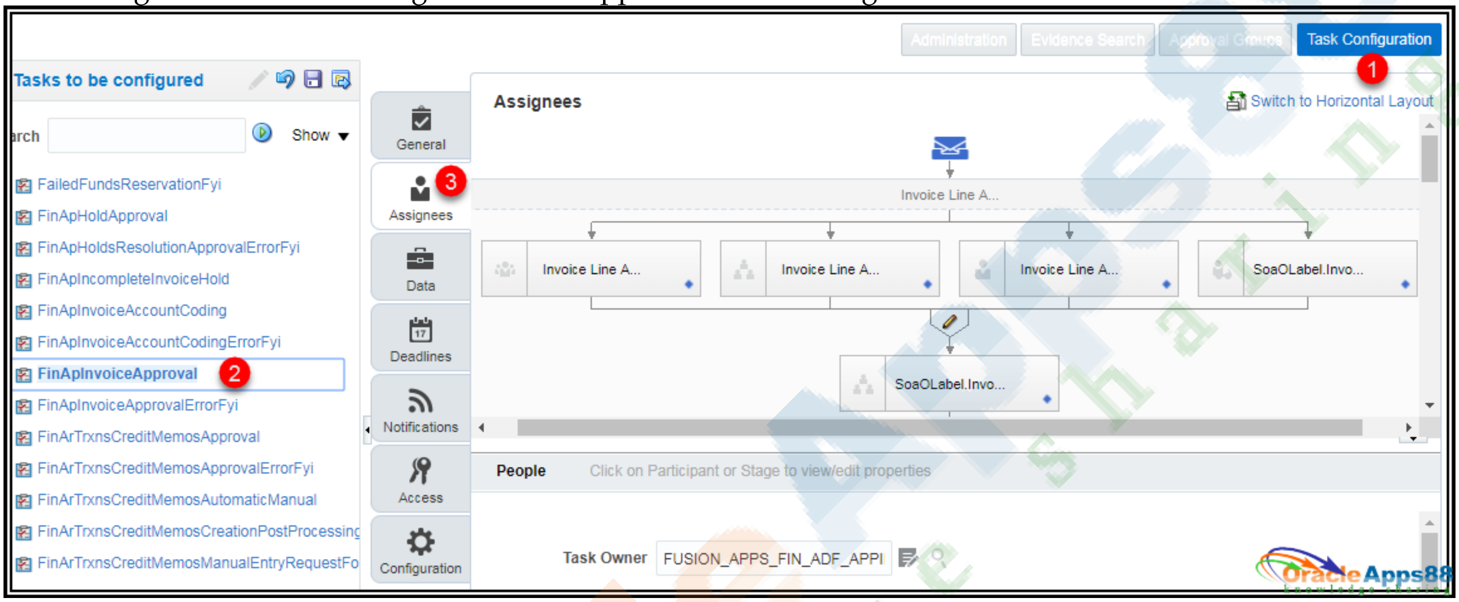
Job level routings are based on the supervisory hierarchy defined in Oracle Fusion Human Capital Management. The approval list is generated based on the starting position specified in a rule and continuing until an approver with a sufficient job level is found. The supervisory hierarchy needs to be defined along with the corresponding job levels.
An example of the Job Level approval structure for Acme Corp:



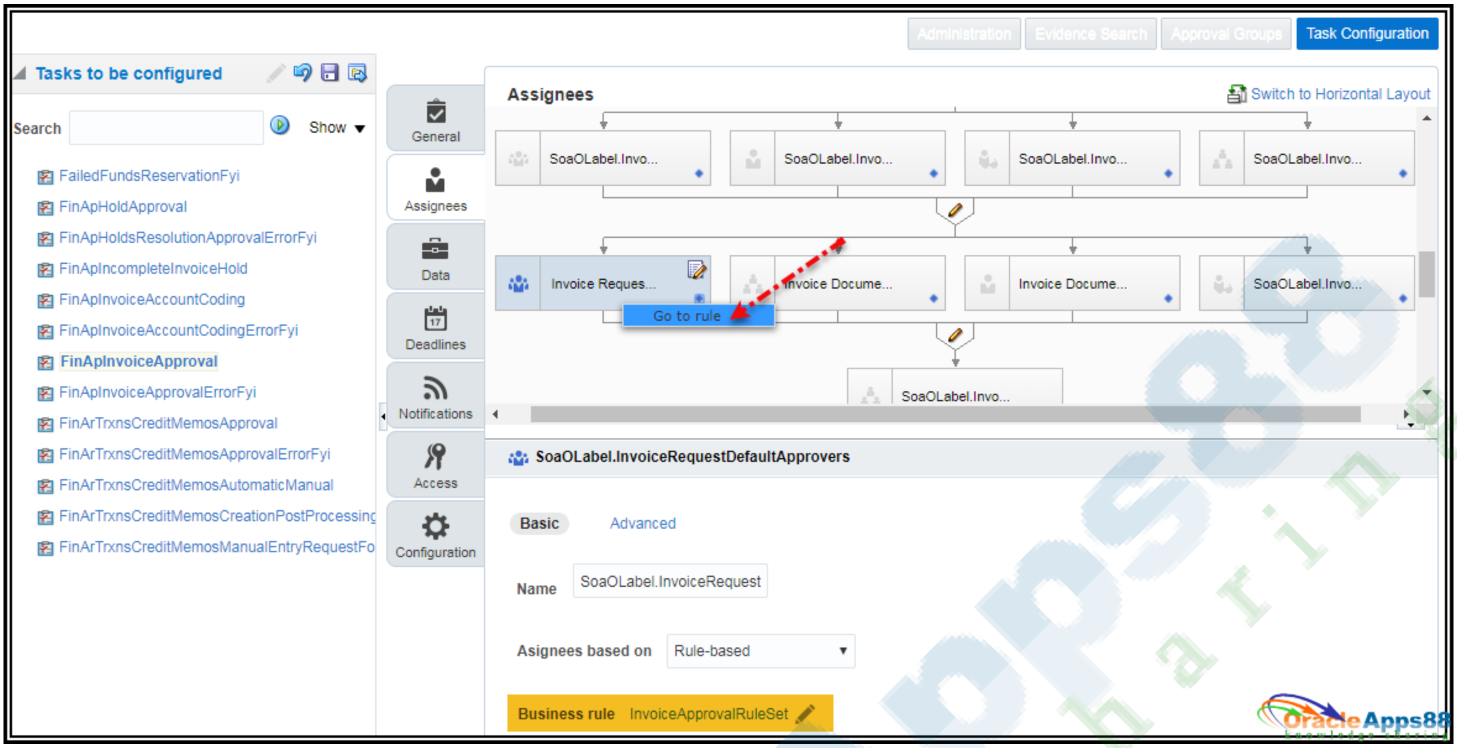

**Note:** For complete details on setting up supervisory hierarchy and job levels, refer to the Oracle Fusion Human Capital Management guides or online help.

**Steps**

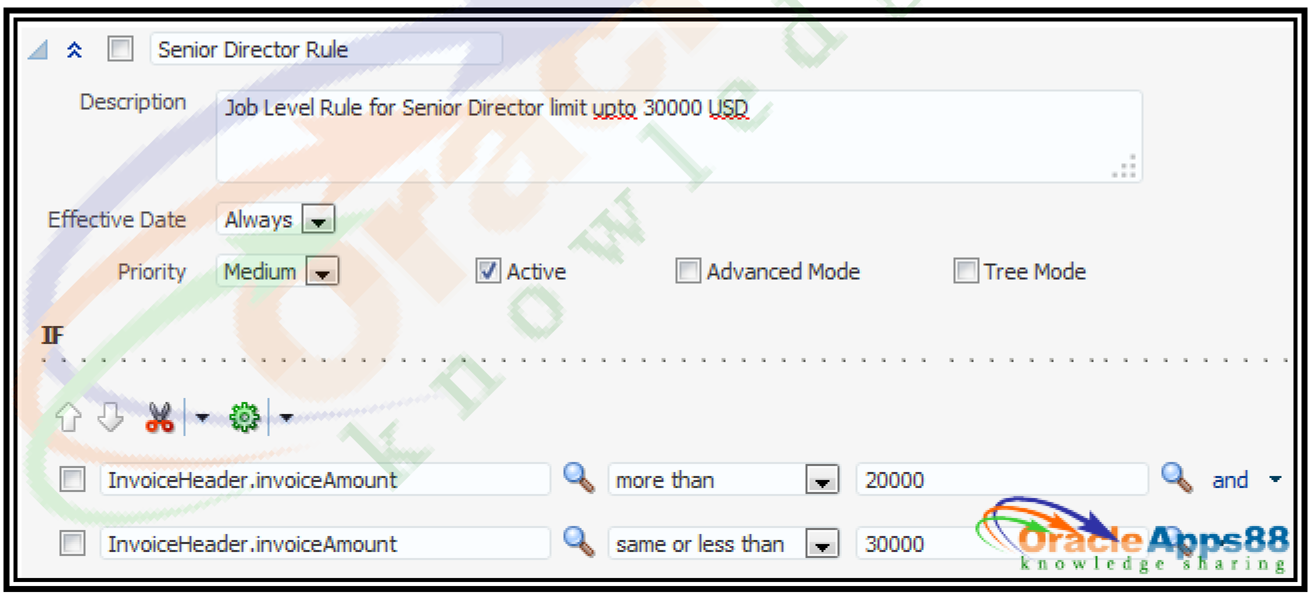
1. Define the various job levels in HCM:
   - Navigate to Navigator -> Workforce Management -> Work Force Structures.
   - Click on Manage Jobs to create various job levels.
2. Assign job levels to the users in the HCM:
   - Navigate to Navigator -> Personal Management -> Search for the employee.
   - Click on Manage Employment
   - Click on Edit -> Update the Job for a user or employee.
3. Login into BPM or Navigate to BPM Approval Rules through FSM Task.



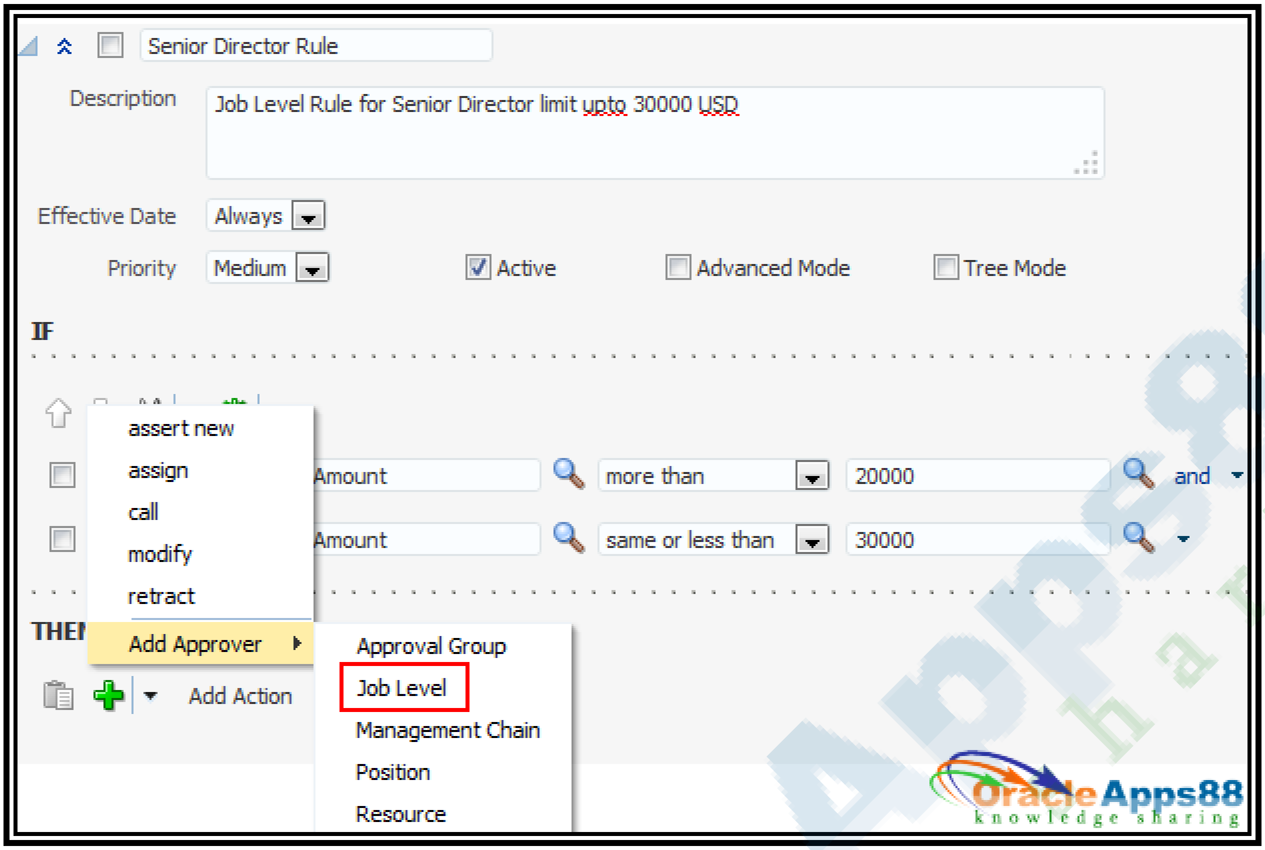

4. Navigate to the Invoice approvals task **FinApInvoiceApproval**.
5. Click on Rules Tab.
6. Click on Edit Icon.
7. Click on 'Invoice Requests Approval' Participant and click on Go to rule.



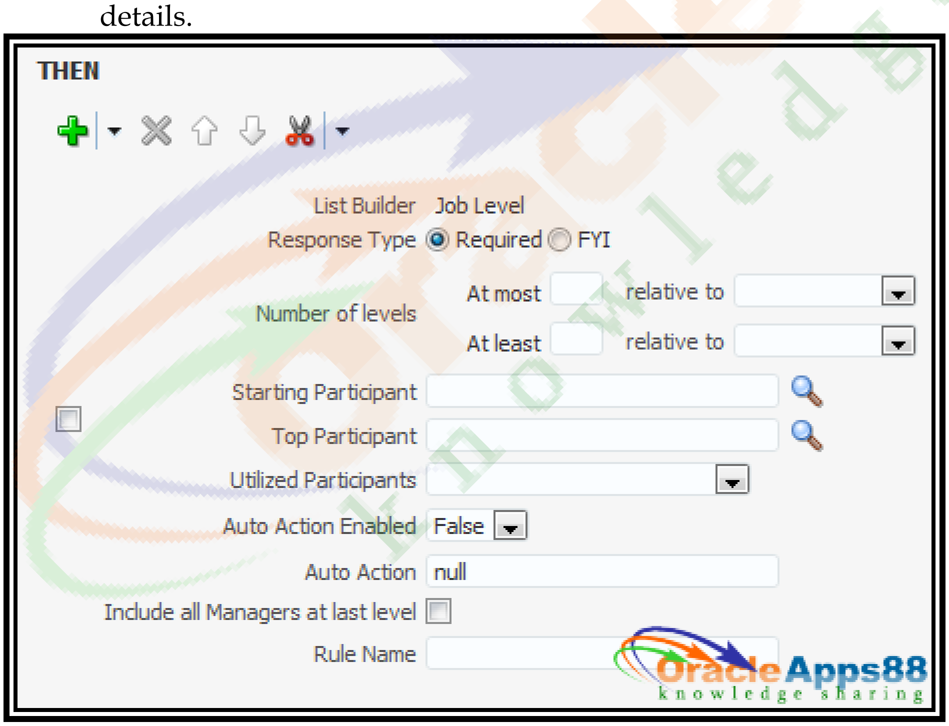

8. Click on '+' icon for adding new rule.
9. Steps for creating the rule for senior director level whose approval limit is upto 30000 USD.
   - Enter the Rule Name and Description as required.
   - Define condition as:
      i. **InvoiceHeader.invoiceAmount** more than 20000 **and**
      ii. **InvoiceHeader.invoiceAmount** same or less than 30000




10. Define Job Level Action by navigating to Add Action -> Add Approver -> Job Level.




11. The Number of levels required to perform the approval action should be specified along with other details.




A lower bound and an upper bound for job levels should be specified. These levels can be relative to the starting point, the task requester, or an absolute job level.

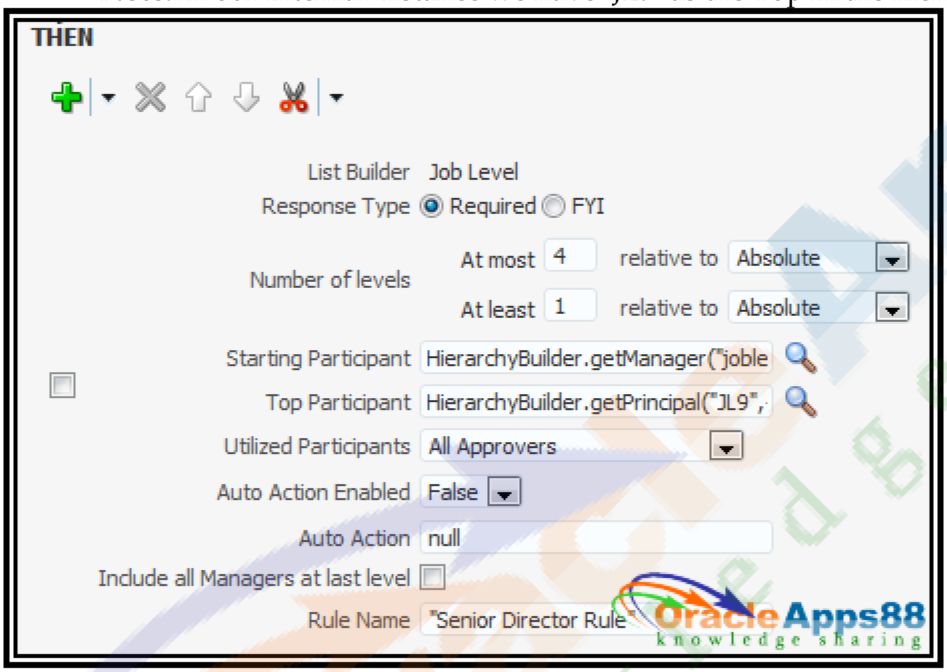
12. For a senior director level approval at least a Job Level 4 is required and at most a Job Level 4(approval rule is modeled using absolute levels).

- Enter At least level as 4.
- Enter At most level as 4.
- Add starting participant as:**HierarchyBuilder.getManager("joblevel",InvoiceHeader.requesterName,-1,"","").**

**Note:** Considering approval of an invoice starts from the manager of invoice requester. Assuming the invoice entry clerk manually enters the requester during invoice creation

- Add the Top Participant as HierarchyBuilder.getPrincipal("<Top Job Level Name>",-1,"","").
- Enter Utilized Participants as **All Approvers.**
- Auto Action Enabled False.
- Auto Action null.

**Note:** In our internal instance we have 'JL9' as the Top in the hierarchy.




NOTE: Similar to the above rule you need to create rules for other job levels in your organization.

### Use Case6: Configure an approval rule to send notifications using a position hierarchy.

The business requirement is to use two different position hierarchies; one hierarchy for requisition and PO approvals, and another hierarchy for Invoice approvals. Requisition and PO approval follows a cost center hierarchy and invoice approval follows a budget hierarchy.
This requirement can be achieved using the separate position hierarchy defined for budget purposes.
The following steps explain how to configure positions, a position hierarchy, and an approval rule using the position hierarchy.

**Steps:**

- Define various positions in HCM:
  - Navigate to Navigator -> Workforce Management -> Work Force Structures
  - Click on Manage Positions to create various positions.

- Assign position the users in HCM:
  - Navigate to Navigator -> Personal Management -> Search for the employee.
  - Click on Manage Employment
  - Click on Edit -> Update the Position for a user/employee.

- Create position hierarchy:
  - Navigate to Navigator -> Workforce Management -> Work Force Structures.
  - Click on Manage Positions Trees to create various positions.

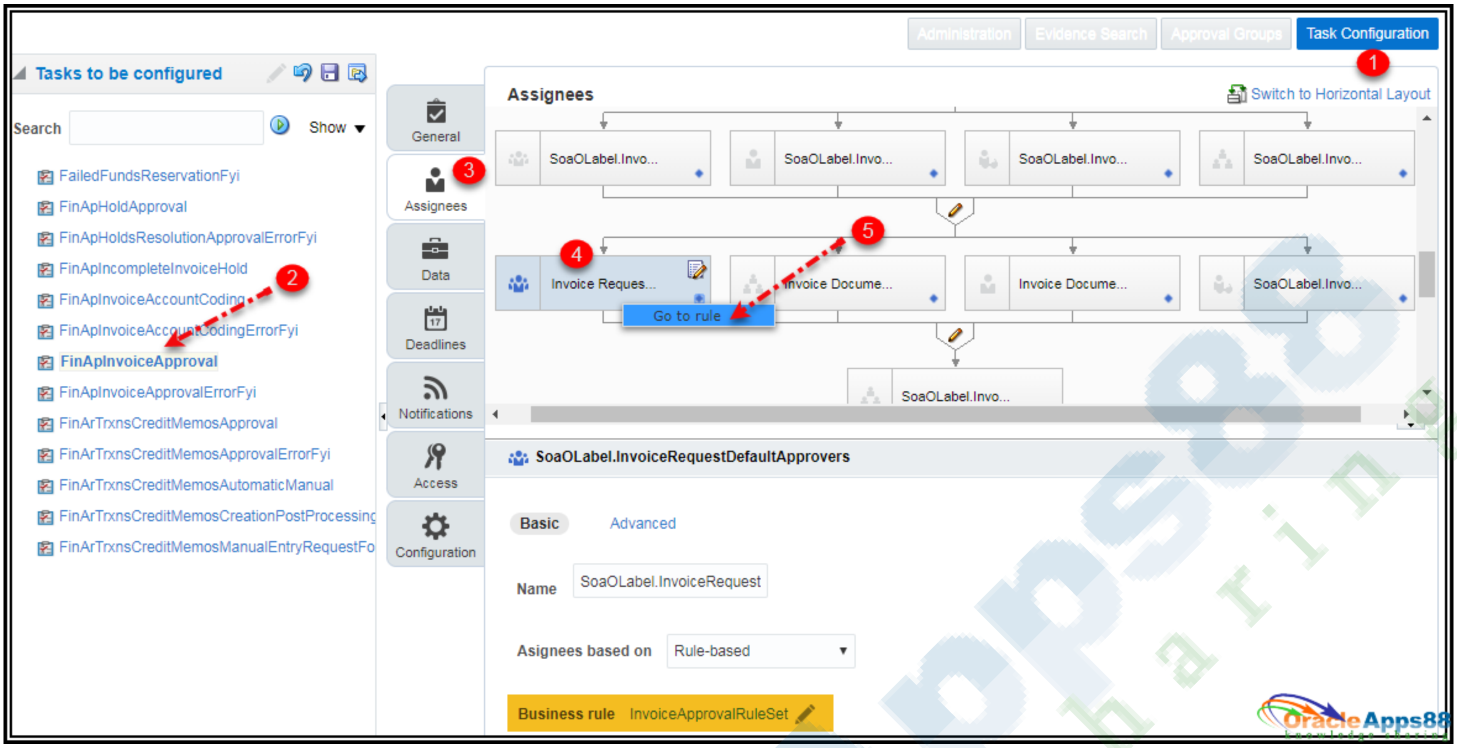
**Note:** Refer to the HCM documentation for detailed steps on how to define positions, assign positions to the employees, and define position hierarchy.

1. Login into BPM or Navigate to BPM Approval Rules through FSM Task.

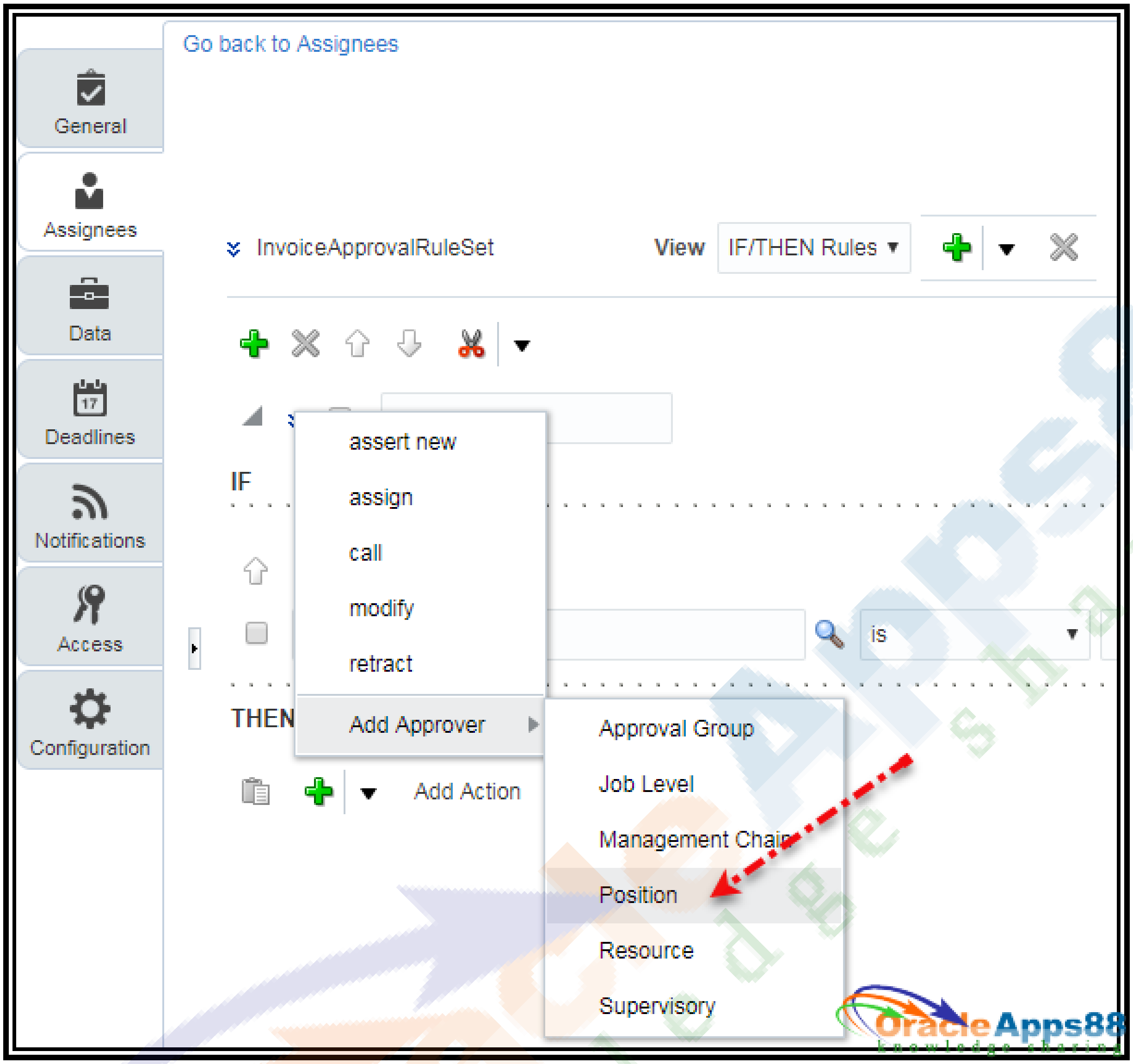
2. Click on -> Task Configuration link to get to the AP invoice approval task.

3. Click on **FinAPInvoiceApproval** task to configure invoice approval rules.

4. Click on -> **Invoice Document Approvers**. Configure participants approval by using sequential participant in parallel mode.

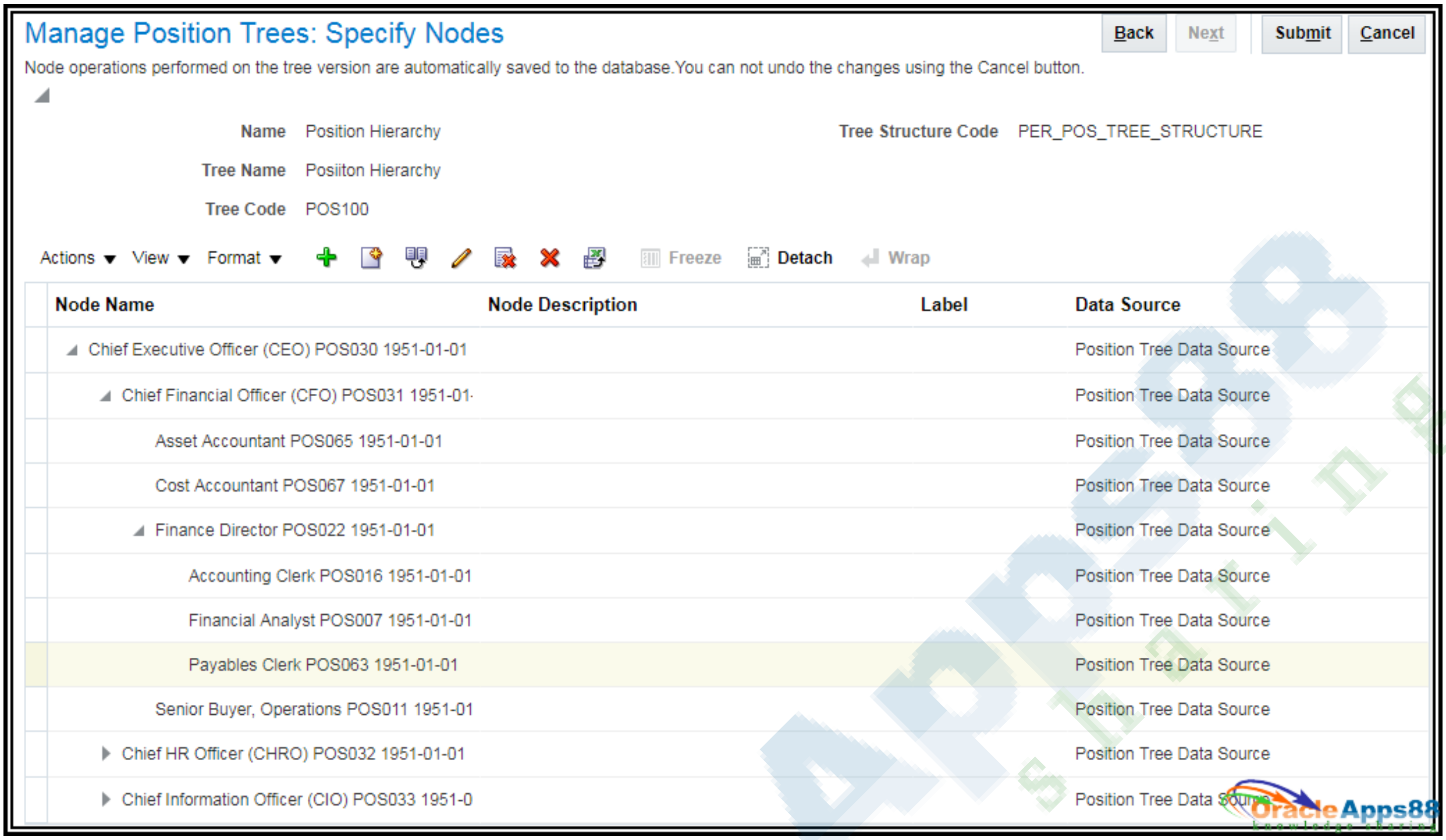


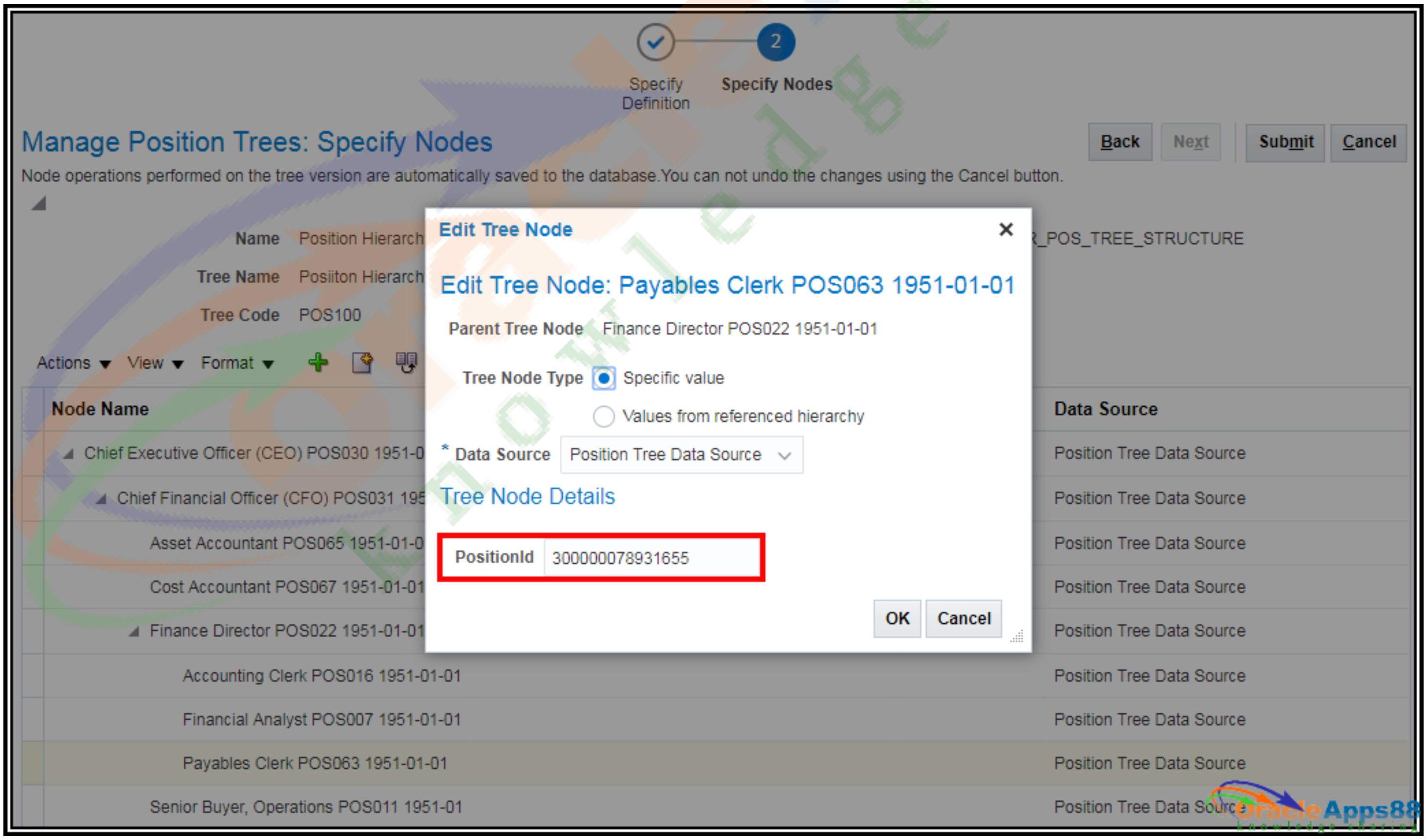

5. Configure a rule using the list builder called **Position** to route the notification to the approver using position hierarchy.




6. Enter the position ID and position hierarchy name to send the approval notification to the first approver and last approver using starting and top participants. In this case, first approval notification will be sent to the position ID: **100010024200079** and then it follows the position hierarchy of **Fusion_Seed_Position_Hier** for up to 2 levels.
   Position ID (sub-header) in the next point (Point7), steps are included on how to get the Position ID.


7. Obtain the Position ID for a position.
   The Position ID of a position is required to configure the approval rule using position list builder. The Position ID for a position can be found by using the method below:
   1. Click -> on the **Manage Position Trees** and select the position hierarchy. Select the position and click on Edit icon to see the Position ID of a particular position.


Manage Position Trees: Specify Nodes
Back
Next
Submit
Cancel
Node operations performed on the tree version are automatically saved to the database.You can not undo the changes using the Cancel button.
Name Position Hierarchy
Tree Name Posiiton Hierarchy
Tree Code POS100
Tree Structure Code PER_POS_TREE_STRUCTURE
Actions View Format Freeze Detach Wrap
Node Name
Node Description
Label
Data Source
Chief Executive Officer (CEO) POS030 1951-01-01 Position Tree Data Source
Chief Financial Officer (CFO) POS031 1951-01- Position Tree Data Source
Asset Accountant POS065 1951-01-01 Position Tree Data Source
Cost Accountant POS067 1951-01-01 Position Tree Data Source
Finance Director POS022 1951-01-01 Position Tree Data Source
Accounting Clerk POS016 1951-01-01 Position Tree Data Source
Financial Analyst POS007 1951-01-01 Position Tree Data Source
Payables Clerk POS063 1951-01-01 Position Tree Data Source
Senior Buyer, Operations POS011 1951-01 Position Tree Data Source
Chief HR Officer (CHRO) POS032 1951-01-01 Position Tree Data Source
Chief Information Officer (CIO) POS033 1951-0 Position Tree Data Source

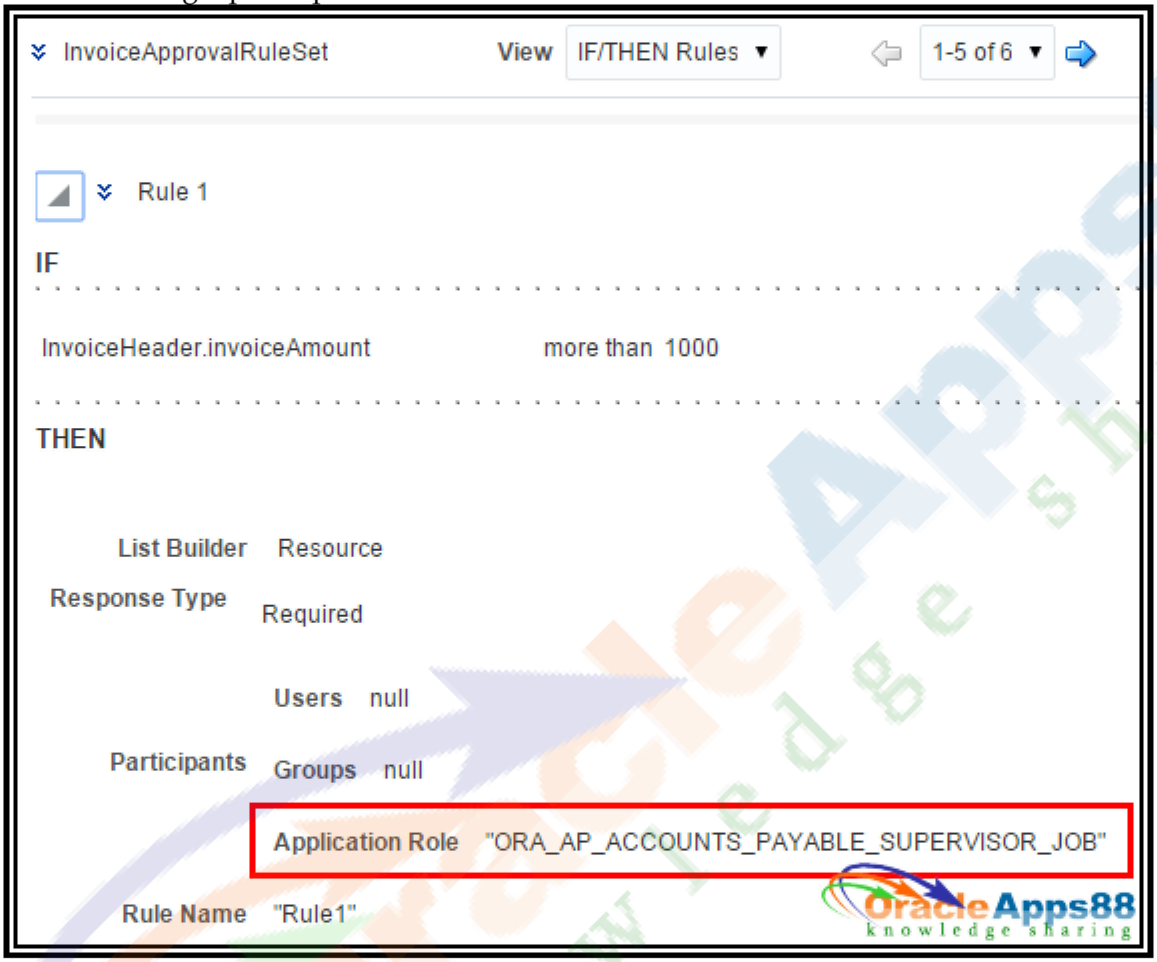

Specify Definition
2
Specify Nodes
Manage Position Trees: Specify Nodes
Back
Next
Submit
Cancel
Node operations performed on the tree version are automatically saved to the database.You can not undo the changes using the Cancel button.
Edit Tree Node
Edit Tree Node: Payables Clerk POS063 1951-01-01
Parent Tree Node Finance Director POS022 1951-01-01
Tree Node Type Specific value
Values from referenced hierarchy
* Data Source Position Tree Data Source
Tree Node Details
PositionId 300000078931655
OK
Cancel
Node Name
Data Source
Chief Executive Officer (CEO) POS030 1951-0 Position Tree Data Source
Chief Financial Officer (CFO) POS031 195 Position Tree Data Source
Asset Accountant POS065 1951-01-0 Position Tree Data Source
Cost Accountant POS067 1951-01-01 Position Tree Data Source
Finance Director POS022 1951-01-01 Position Tree Data Source
Accounting Clerk POS016 1951-01-01 Position Tree Data Source
Financial Analyst POS007 1951-01-01 Position Tree Data Source
Payables Clerk POS063 1951-01-01 Position Tree Data Source
Senior Buyer, Operations POS011 1951-01 Position Tree Data Source

**Note:** Refer to the HCM documentation for detailed steps on how to get the Position ID for a particular position.

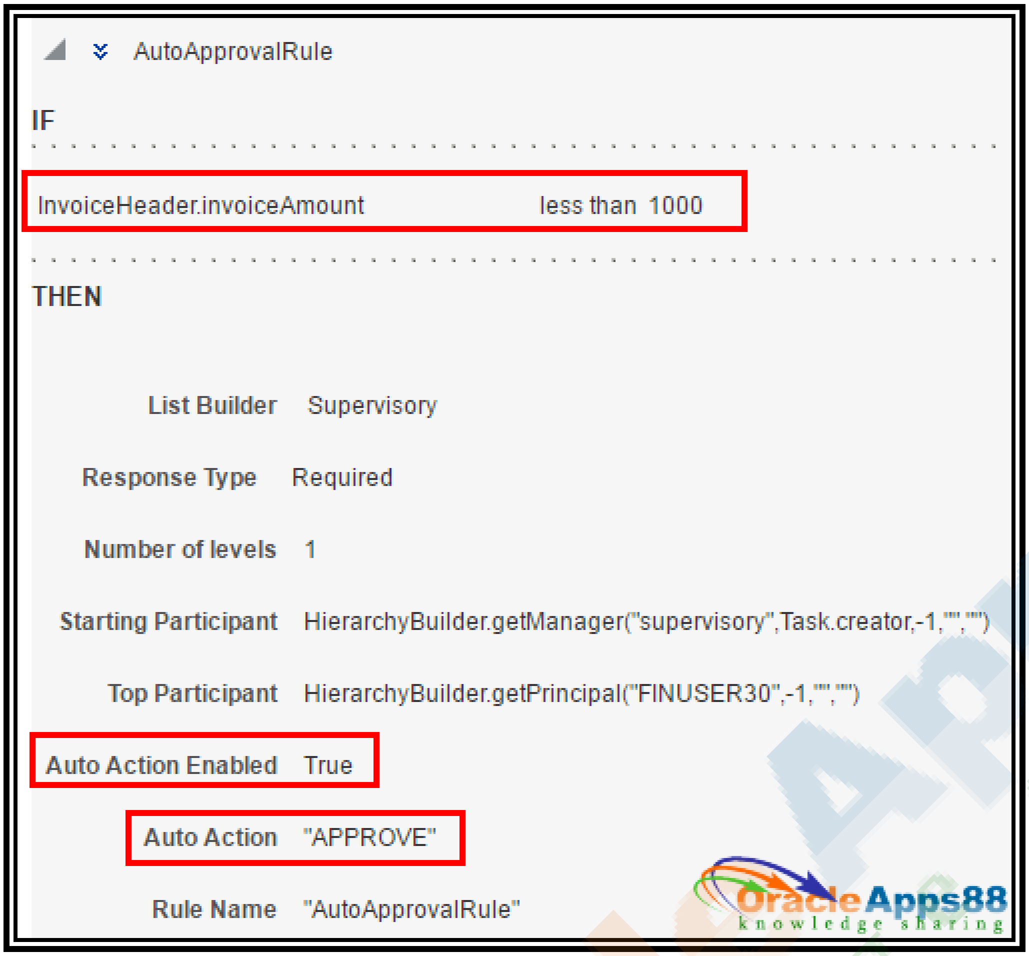
## Use Case7: Configure an approval rule to notify all users who are using the same application role.

The business requirement is to route an approval notification to a particular application role (AP Supervisor). Regardless of the number of users who have access to that role, they all get the approval notification and the first responder is the approver.

**Solution:** To achieve this requirement, configure an approval rule with the application role called **ORA_AP_ACCOUNTS_PAYABLES_SUPERVISOR_JOB.** When an application role is used, the rule always works as "Single participant".




If invoice amount is less than 1000 dollars then invoice needs to be auto approved.

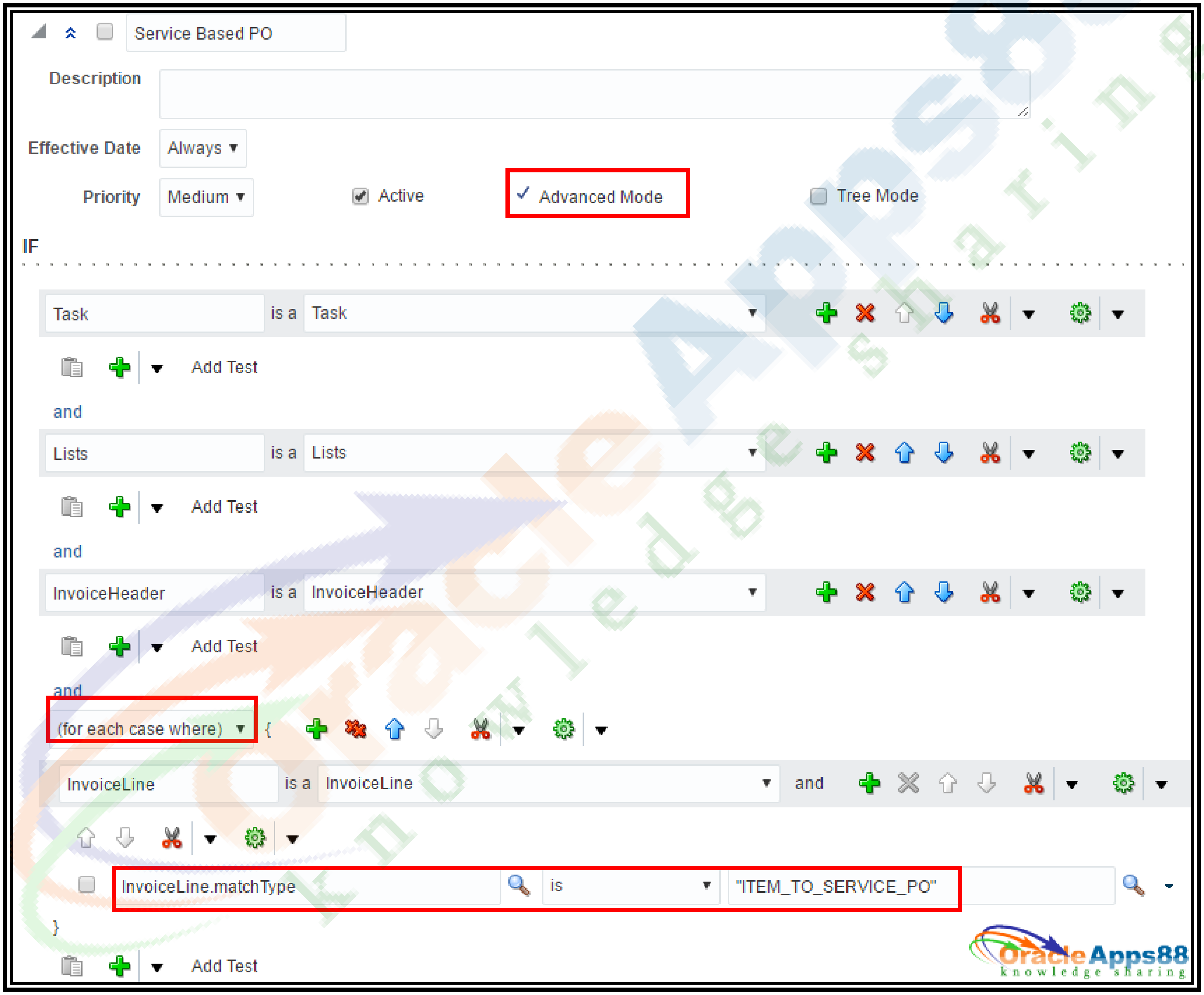

AutoApprovalRule
IF
InvoiceHeader.invoiceAmount less than 1000
THEN
List Builder Supervisory
Response Type Required
Number of levels 1
Starting Participant HierarchyBuilder.getManager("supervisory",Task.creator,-1,"","")
Top Participant HierarchyBuilder.getPrincipal("FINUSER30",-1,"","")
Auto Action Enabled True
Auto Action "APPROVE"
Rule Name "AutoApprovalRule"
OracleApps88
knowledge sharing

## Use Case 8: Configure an approval rule to route the invoice to the requestor if the invoice is matched to a service based PO

The business requirement is to route the invoice to the requestor if the invoice is matched to a service based PO and in all other cases, the invoice should be autoapproved.

**Solution:**

1. Configure an approval rule by enabling advanced mode options.
2. For the test,set the condition as: **InvoiceHeader/invoiceLine1.matchType** is **ITEM_TO_SERVICE_PO**.

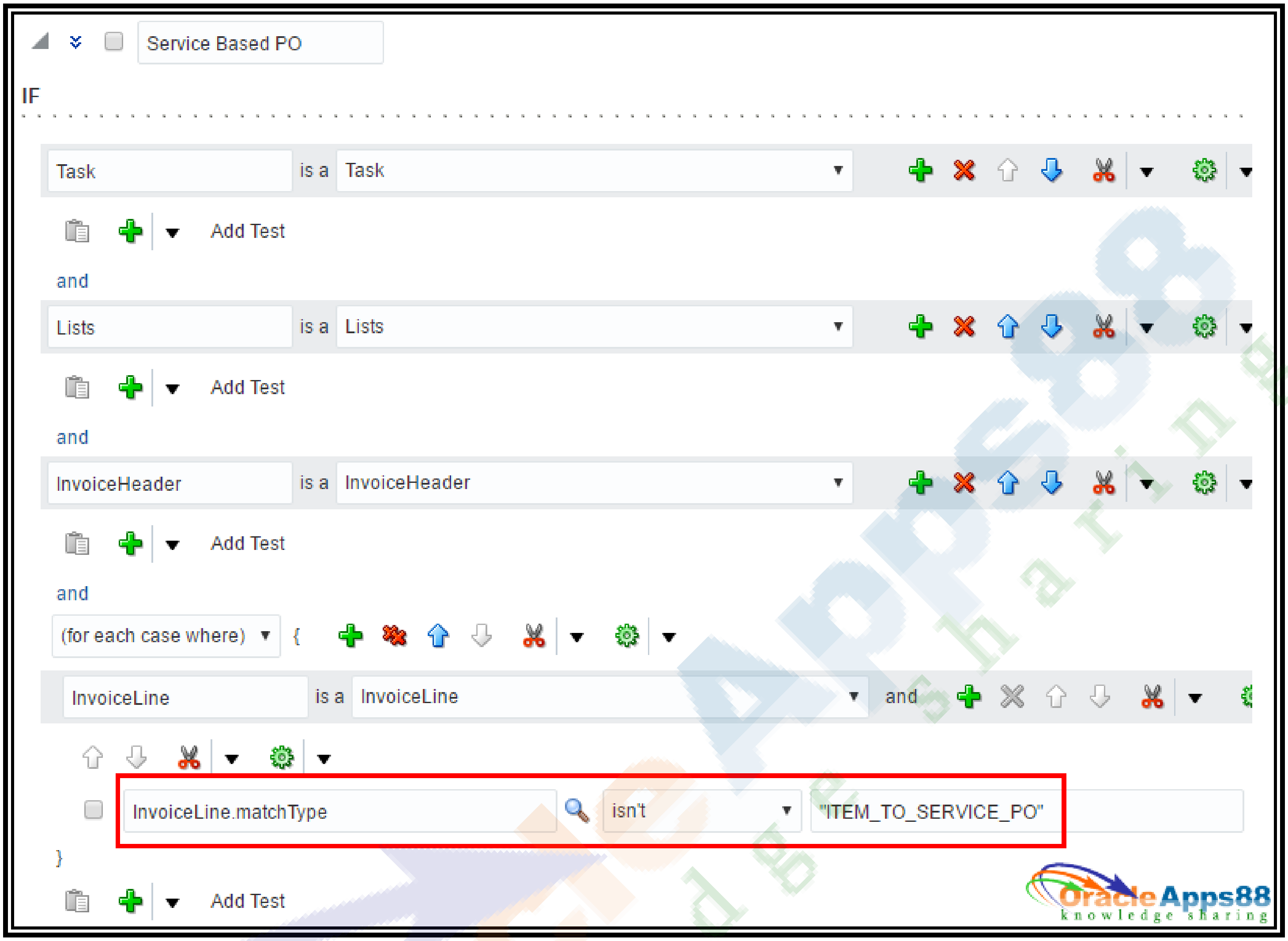



1) In **THEN** Section, Select List Builder as **Supervisory** and select Get User and provide **InvoiceHeader.requesterName** to route the invoice to the requester.

THEN

| | |
|---|---|
| List Builder | Supervisory |
| Response Type | Required |
| Number of levels | 1 |
| Starting Participant | HierarchyBuilder.getManager("supervisory",InvoiceHeader.requesterName,-1,"","") |
| Top Participant | HierarchyBuilder.getPrincipal("FINUSER30",-1,"","") |
| Auto Action Enabled | False |
| Auto Action | null |
| Rule Name | "ServiceBasedPO" |

2) In the case of auto approval, configure another rule using the condition as **InvoiceHeader/invoiceLine1.matchType** isn't **ITEM_TO_SERVICE_PO**.




3) In **THEN** Section, Set Auto Action Enabled to True and Auto Action to **APPROVE**.

THEN

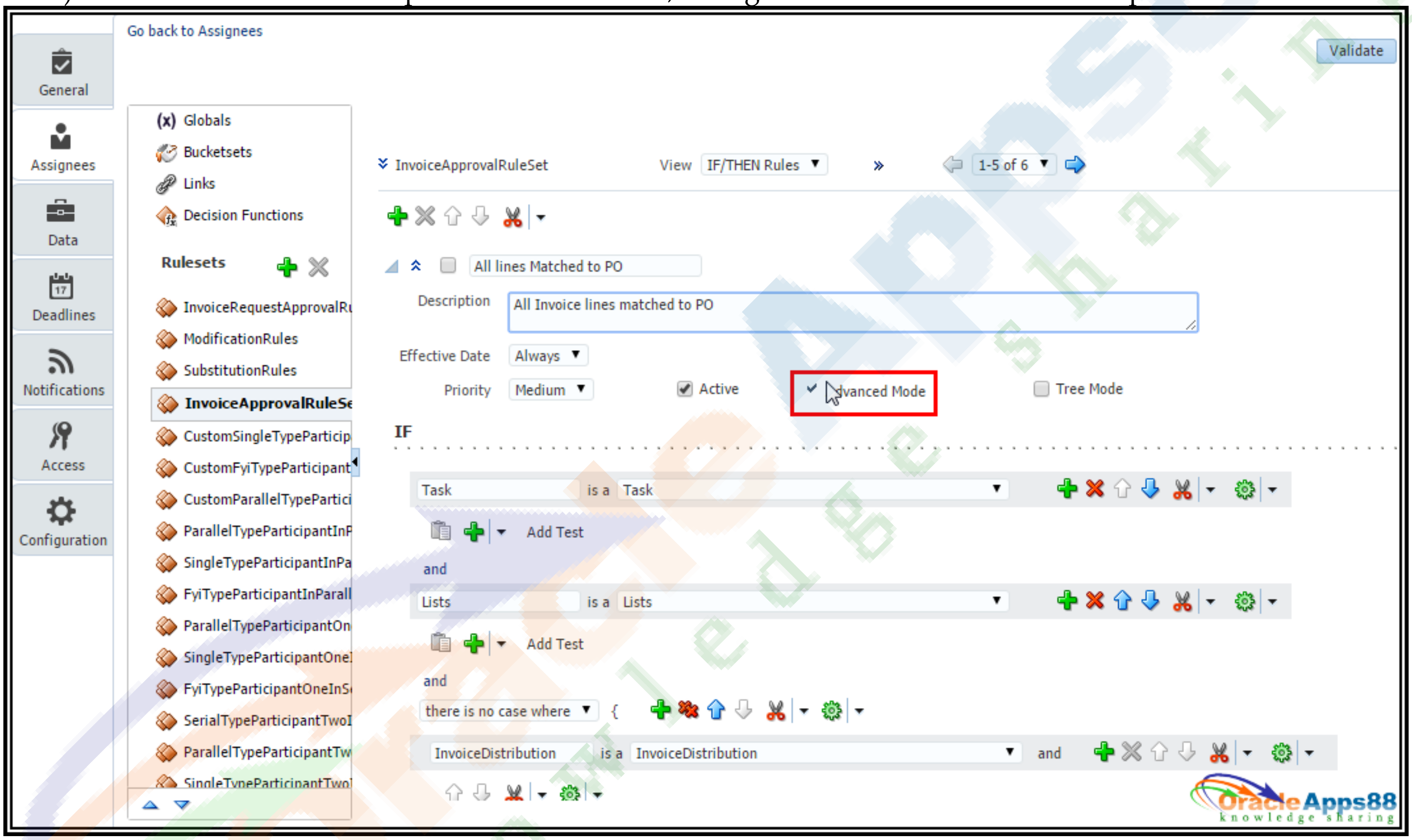
| | |
|---|---|
| List Builder | Supervisory |
| Response Type | Required |
| Number of levels | 1 |
| Starting Participant | HierarchyBuilder.getPrincipal(InvoiceHeader.requesterName,-1,"","") |
| Top Participant | HierarchyBuilder.getPrincipal("FINUSER30",-1,"","") |
| Auto Action Enabled | True |
| Auto Action | "APPROVE" |
| Rule Name | "ServiceBasedPO" |

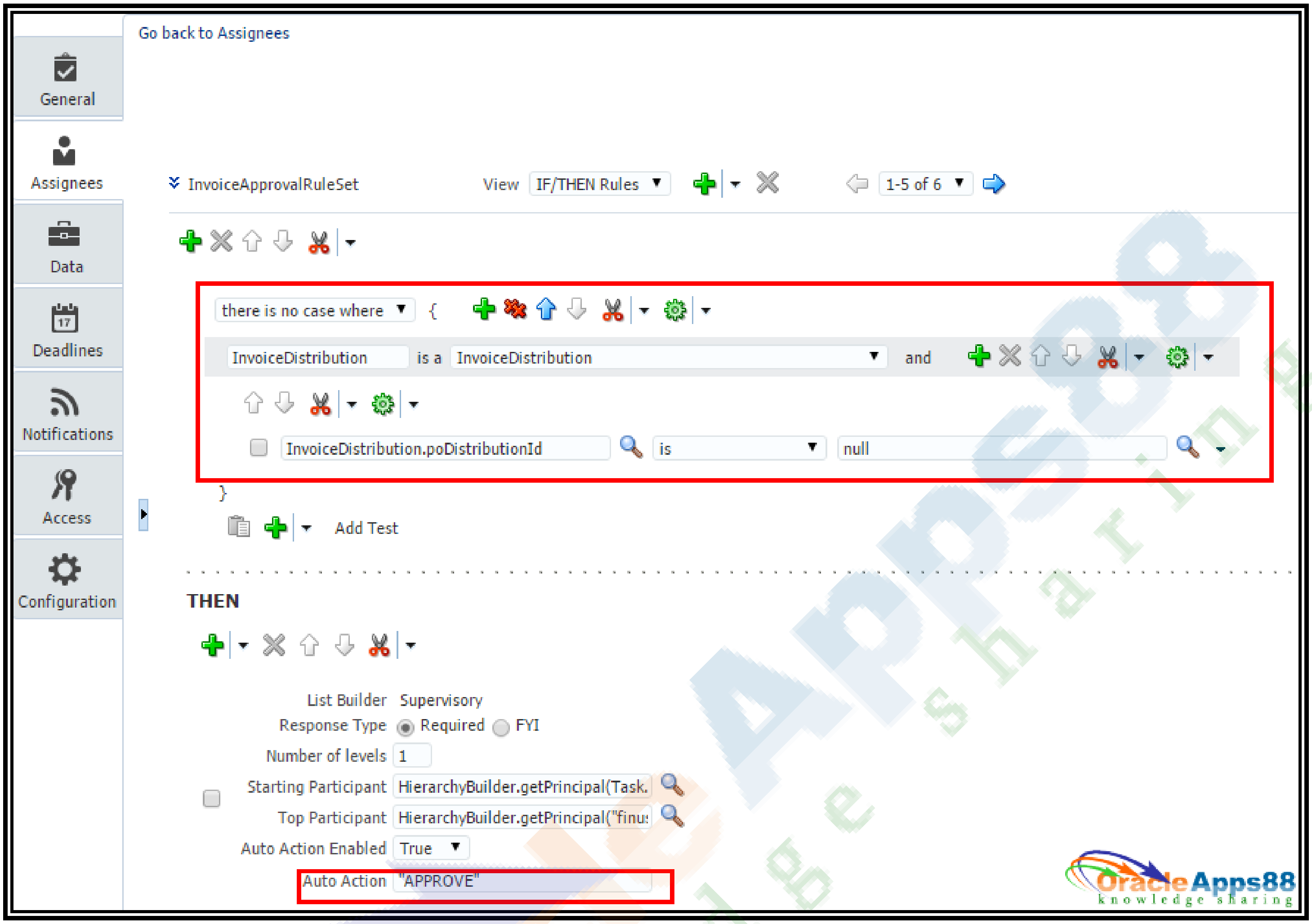
## Use Case9: Configure approval rules using advanced options.

The business requirement is as follows:
1. If an invoice is matched to a PO then it should be autoapproved.
2. If an invoice is matched to a PO and the user added unmatched invoice lines then it should be routed to the approver.

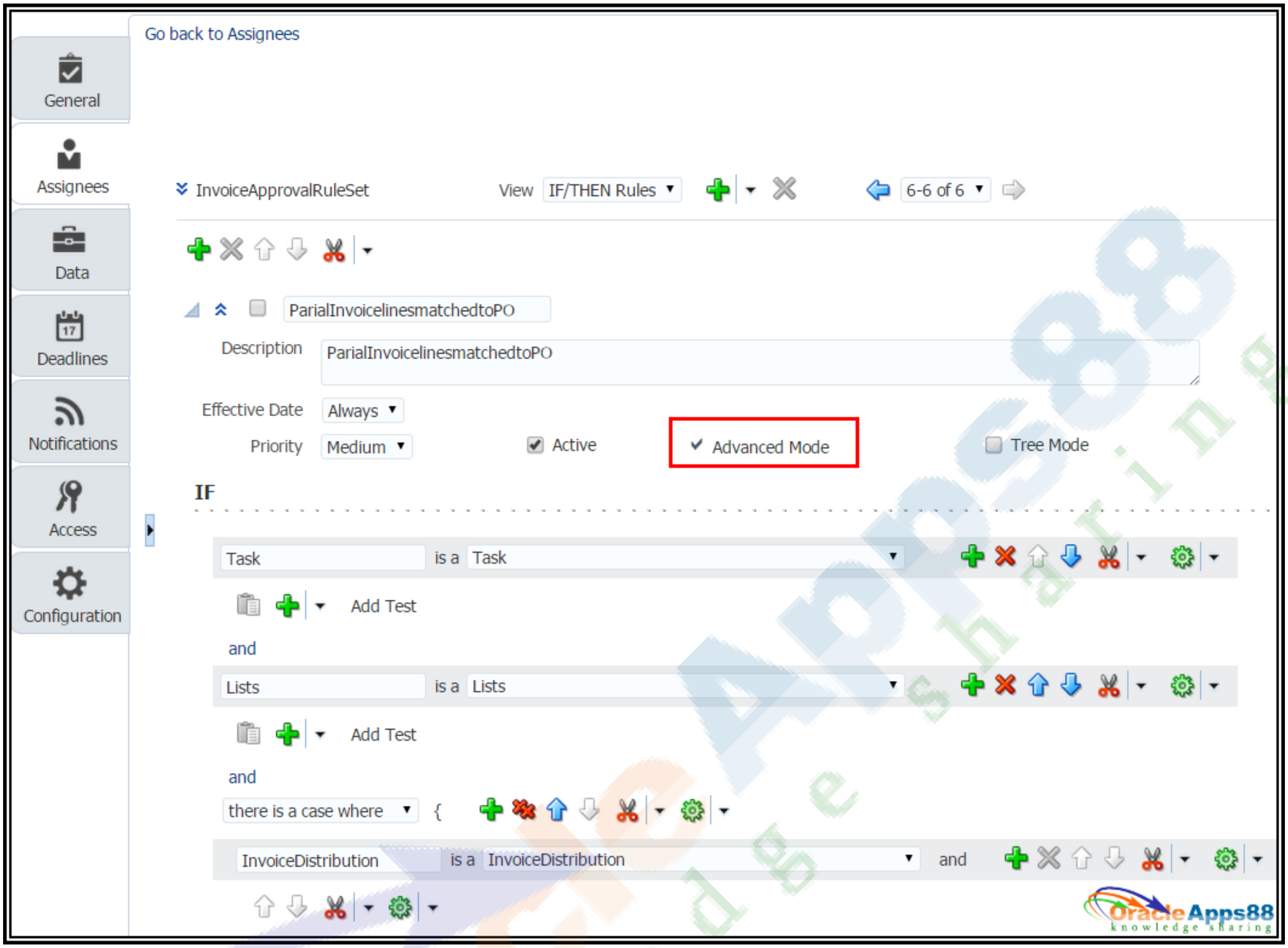
**Solution:** To achieve this requirement, you need to configure approval rules using advanced options using PO header ID.
To achieve the above requirement, we need to configure two approval rules one is for all invoice lines matched to PO and another rule is for partial invoice lines matched to PO.

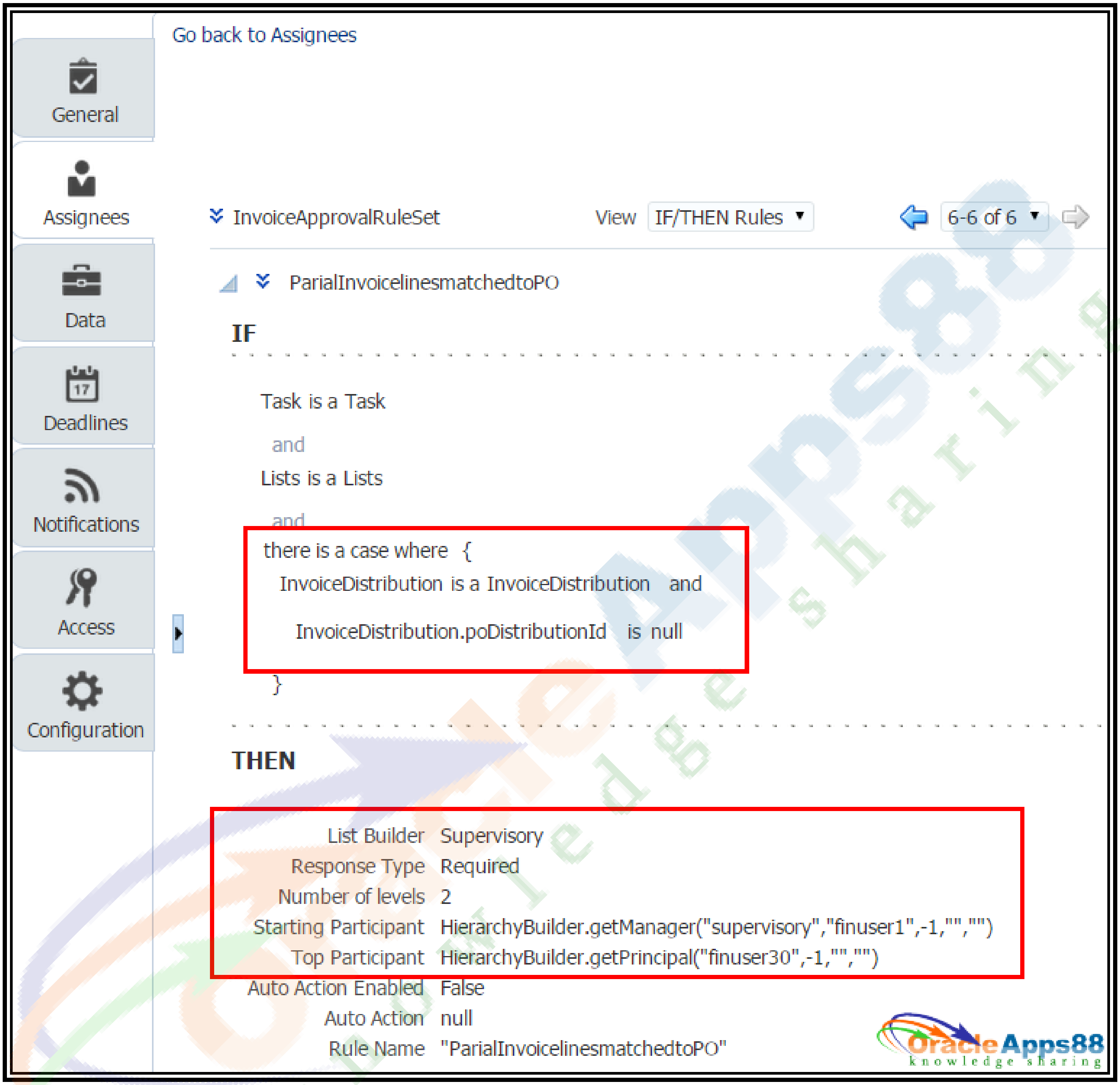
1) Rule1: To achieve the requirement for 1 and 2, configure one rule with advanced options as follows:






2) Rule2: Configure another approval rule with advanced options as follows to meet the requirement3:


Go back to Assignees
General
Assignees
Data
Deadlines
Notifications
Access
Configuration
InvoiceApprovalRuleSet
View IF/THEN Rules
6-6 of 6
ParialInvoicelinesmatchedtoPO
Description
ParialInvoicelinesmatchedtoPO
Effective Date Always
Priority Medium
Active
Advanced Mode
Tree Mode
IF
Task is a Task
Add Test
and
Lists is a Lists
Add Test
and
there is a case where {
InvoiceDistribution is a InvoiceDistribution and

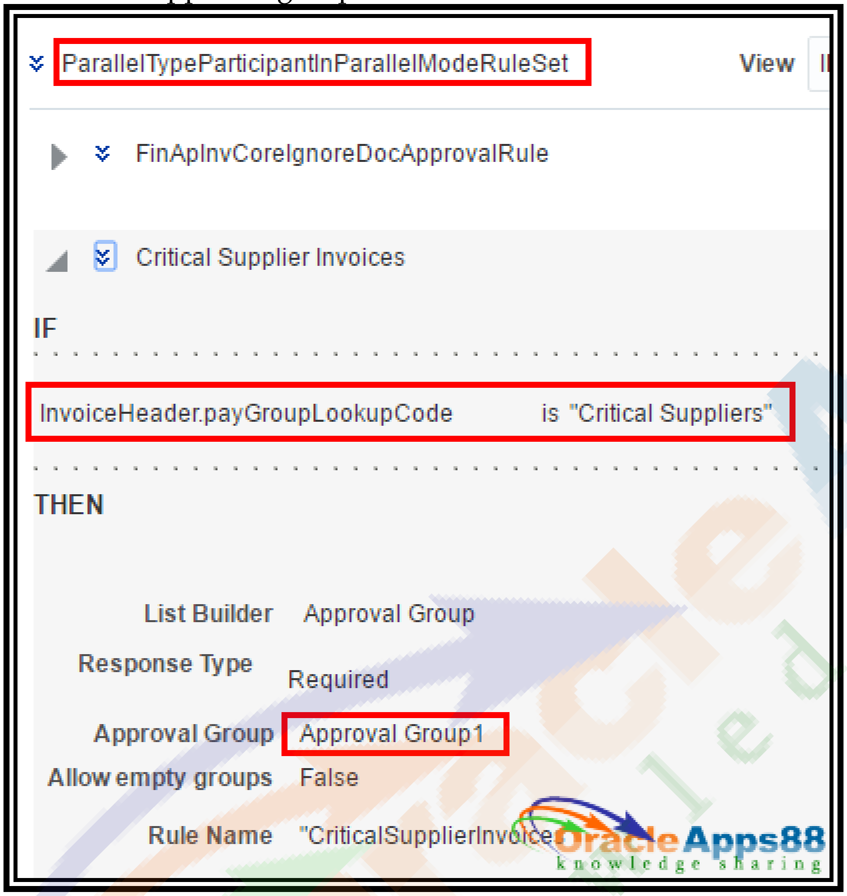



**Note: Approval rules configured based on PO distribution ID are available on the invoice distributions.** To work these rules for Unmatched Invoices, the invoice needs to be validated first or the invoice distributions need to be generated explicitly by opening the invoice distributions UI and click on Ssave and Close, which generates the distributions.

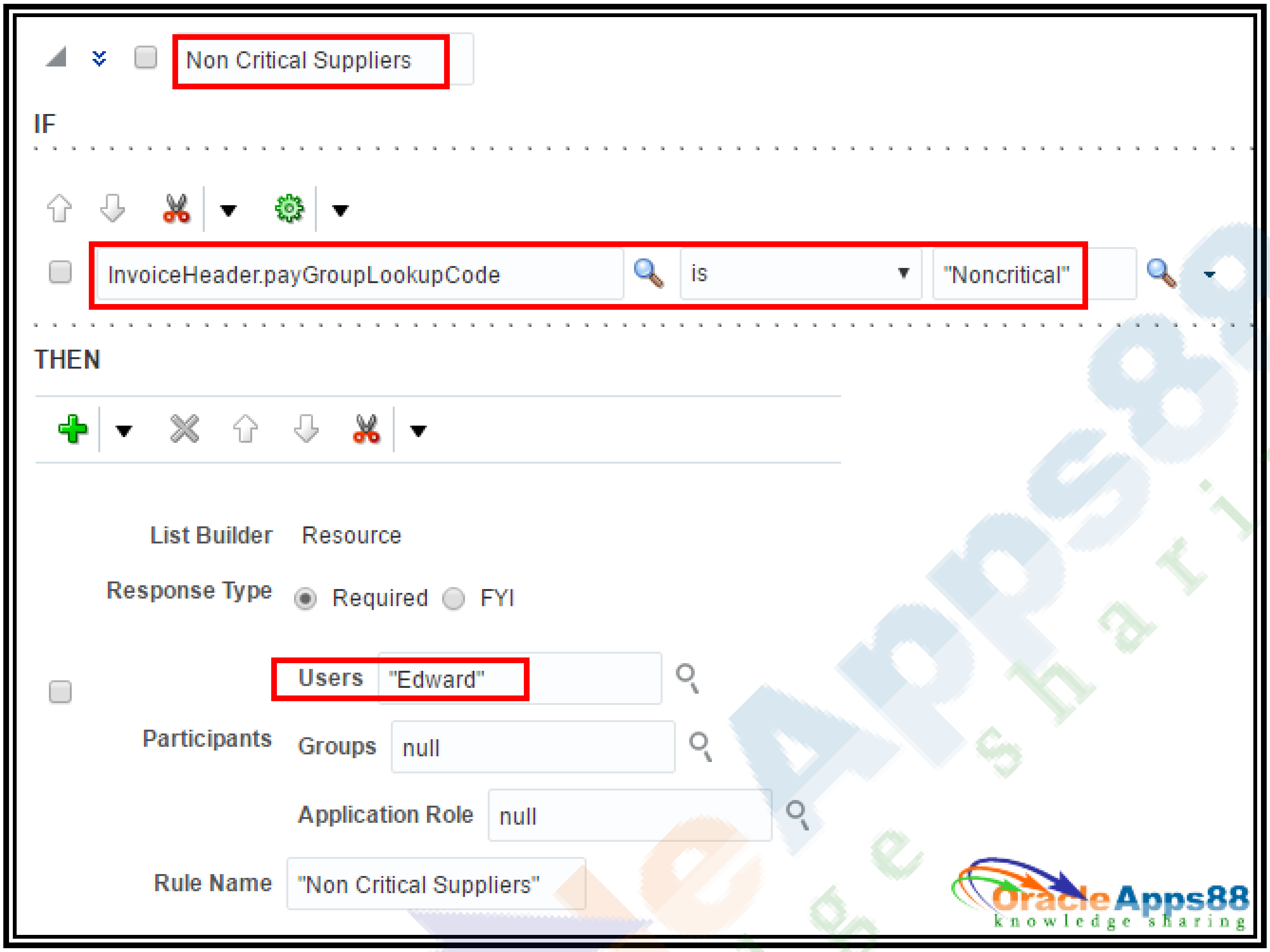
### Use Case10: Configure an approval rule to send a notification to a group of approves and once the invoice is approved, generate an FYI notification to the CEO.

The business requirement is that invoices related to **Critical** Suppliers should be sent for an approval to a group of approvers; consisting of the Finance Manager, Procurement Manager, and CFO. All of them have to approve the invoice and a notification sent to the CEO of the company for information purposes and no action required from the CEO. If invoices are related to **Noncritical** Suppliers then the invoice has to approved by Finance Manager.

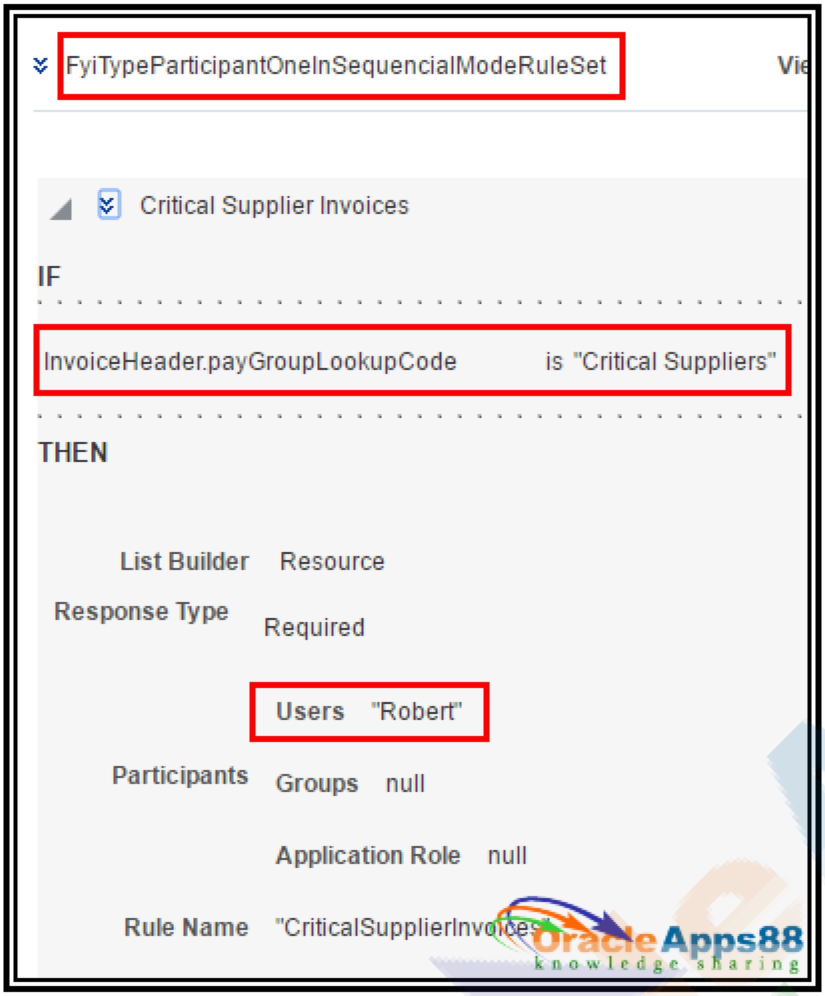
**Screen shot:** Configure the first approval rule using **ParallelTypeParticipantInParallel modeRuleSet** with the list builder approval group.




**Screen shot:** Configure another approval rule using **ParallelTypeParticipantInParallel modeRuleSet** with the list builder resource to route invoice to Finance Manager “Edward”.




**Screenshot:** Configure another approval rule using **FyiTypeparticipantOneinSequentialModeRuleSet** with the list builder **Resource** and give user name of the CEO.


FyiTypeParticipantOneInSequencialModeRuleSet
Critical Supplier Invoices
IF
InvoiceHeader.payGroupLookupCode is "Critical Suppliers"
THEN
List Builder Resource
Response Type Required
Users "Robert"
Participants Groups null
Application Role null
Rule Name "CriticalSupplierInvoices"

### Use Case 11: Configure an approval rule to stop FYI completion notification to a user for a specific set of invoices.

The business requirement is if an expense is incurred in **USD** or **EUR** currency out of the Budgeted Funds and the invoice amount is more than 500 dollars then the invoice has to be approved by a set of approval groups. It does not matter which group approves the invoice first.

Invoices with amounts less than 500 dollars need to be autoapproved.

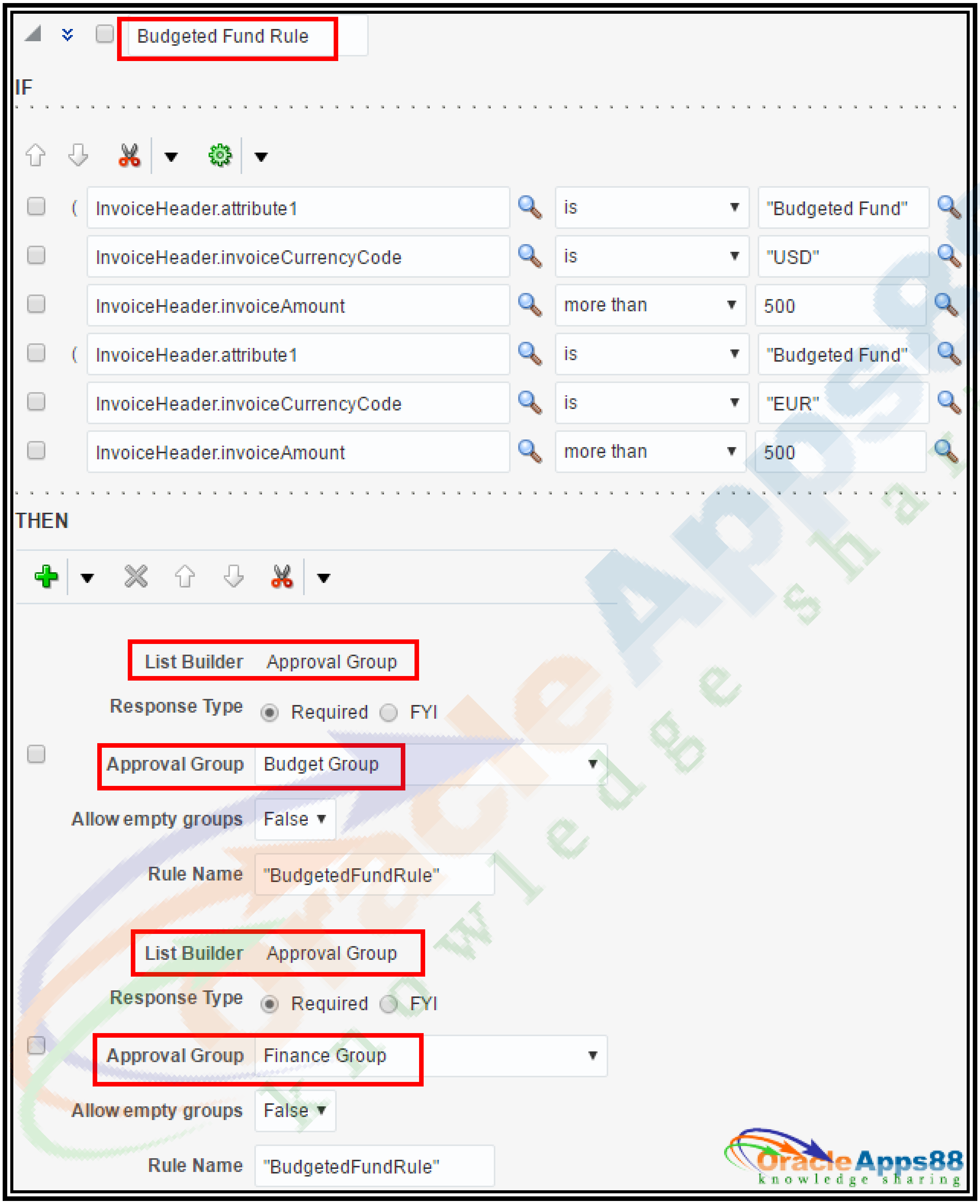
Apart from this, the business user only wants to be notified for those invoices that were approved through the workflow process and not for those invoices that were auto approved.

**Solution:**
To achieve this business requirement, configure the approval rules as follows:

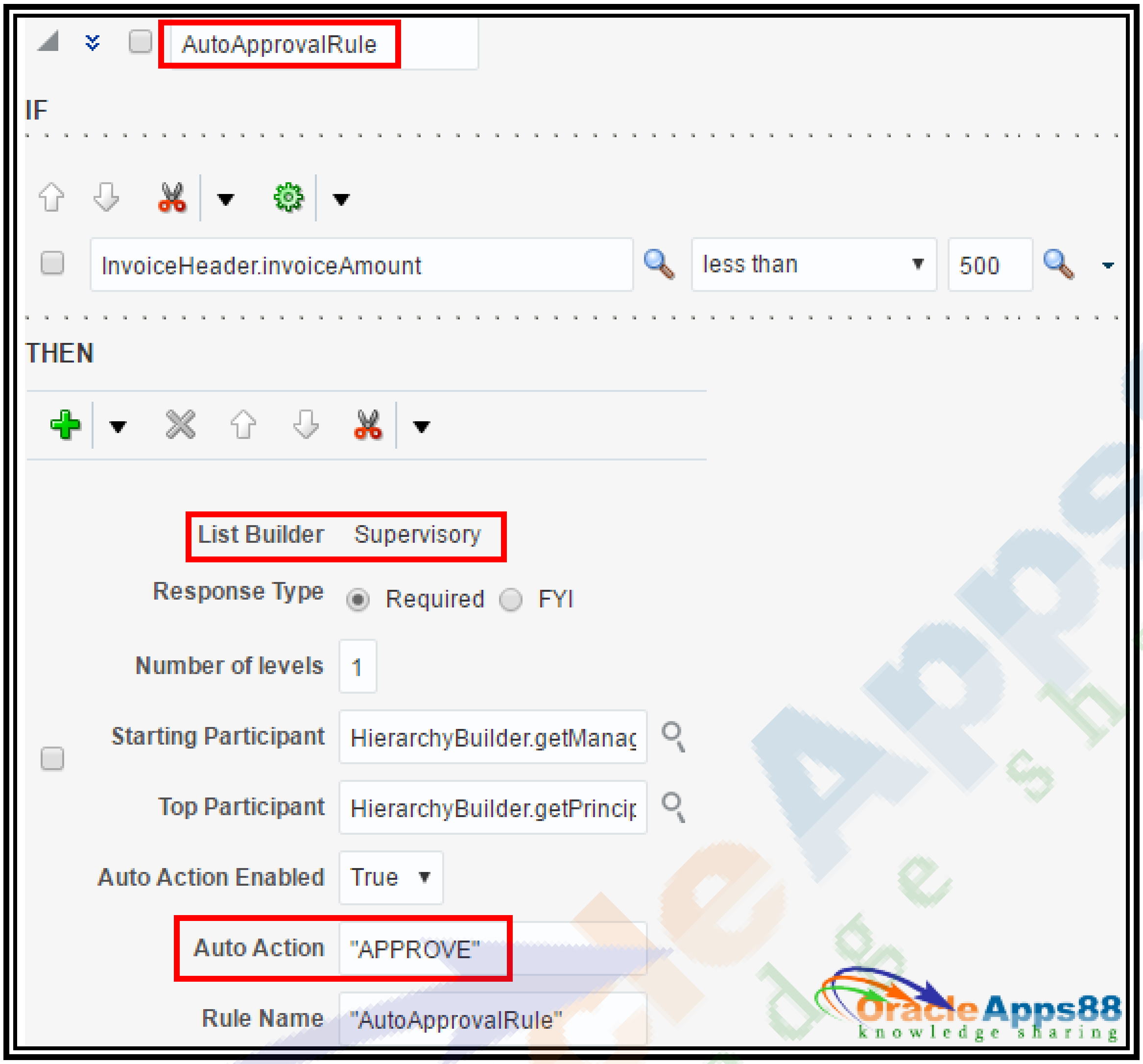
1. Create one rule using serial participant with nested conditions and configure two THEN parts using two approval groups (Budget Group and Finance Group).
2. Create a second rule for auto approval using serial participant.

3. The delivered product doesnot stop sending notifications for autoapproved invoices only, but the following workaround can be used to achieve the business requirement.
    - Delete the notification setting for **Complete** task status.
    - Configure an approval rule with FYI participant two in sequential mode to send FYI notification only for those invoices which are not autoapproved.

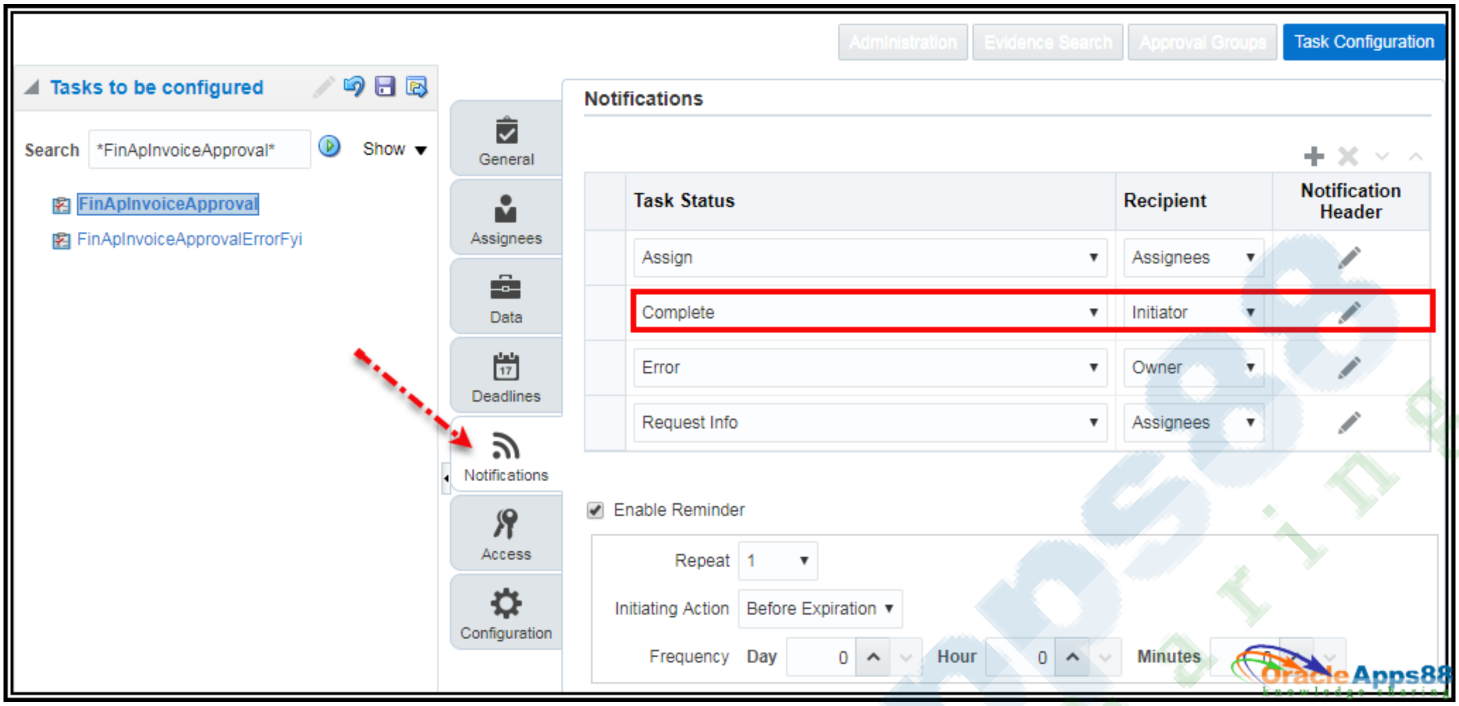
**Rule1:** Create one rule using serial participant with nested conditions and configure two THEN parts using two approval groups (Budget Group and Finance Group).



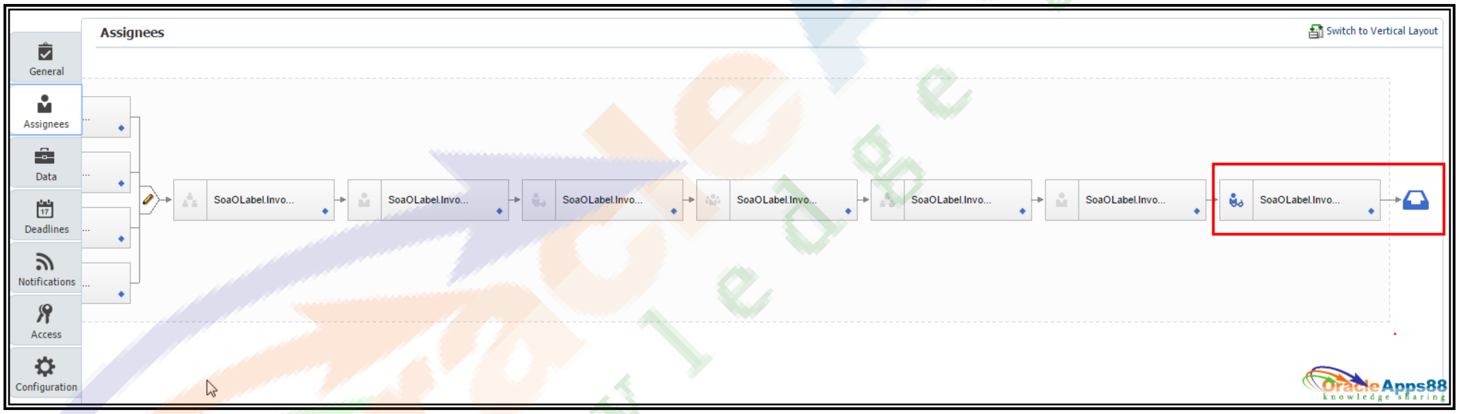

**Rule2:** Create a second rule for auto approval using serial participant.



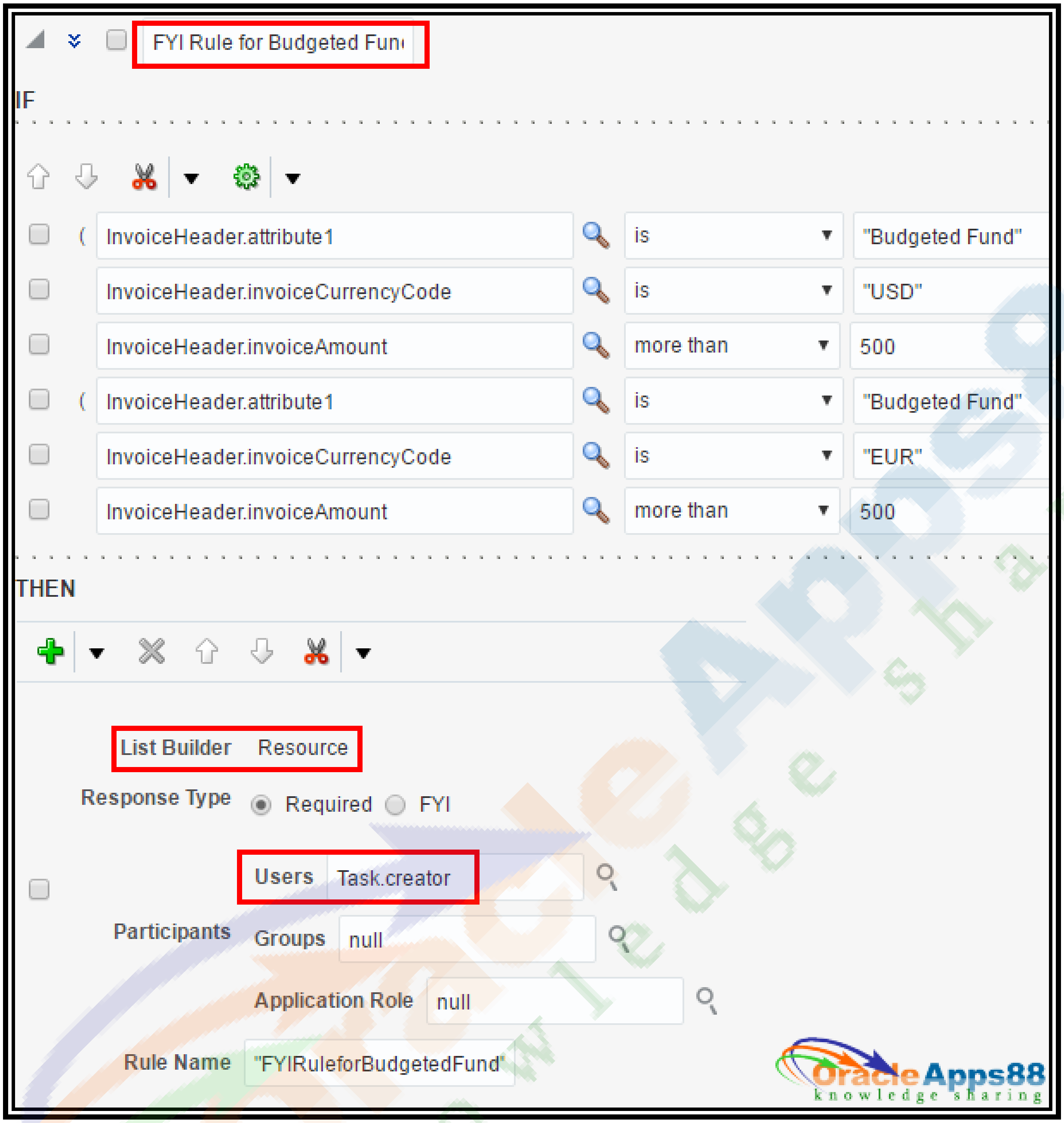

**Rule3: Rule for FYI notifications for invoices that are approved only through the approval workflow.**
Navigate to Notifications and Task status > delete the entry for Complete task status.



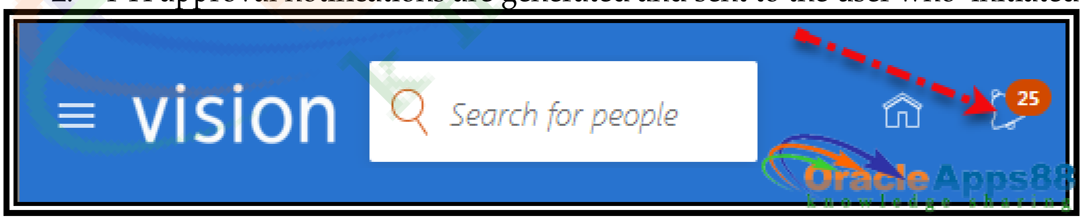

Select the FYI ParticipantTwoInSequencialModeRuleSet.




1. Configure a rule as shown in the below screenshot to send FYI notification only for invoices that are not autoapproved. To achieve this, use the same approval condition which was used to send the approval notification for all other invoices that are not autoapproved. If you have multiple rules configured, then you need to configure them here as well.




2. FYI approval notifications are generated and sent to the user who initiated the approval process.



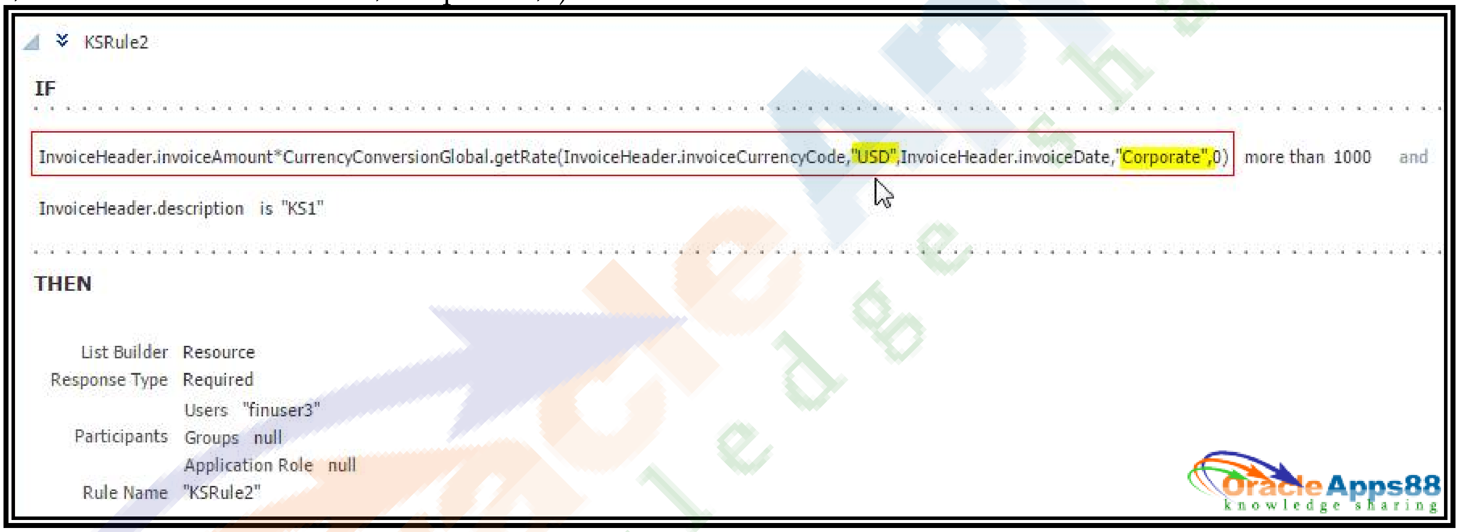
## Use case 12: Configure an approval rules in one currency that is applicable across various countries and currencies.

The business requirement is to configure approval rules based on the invoice amount limit in functional currency (USD) only and another approval rule that is applicable across countries. The business user creates invoices in their respective local currency but the amount limit is defined in the functional currency (USD).

Since all the approval limits are defined in USD, all the invoice amounts need to be converted into USD for approval rules evaluation.

**Solution:** To achieve the requirement, you need to configure the approval using the following function which converts the invoice amount to USD.
By using this function, the customer does not need to define the approval rules for each countries specific currency.

**Rule Definition:**
Configure an approval rule with the IF condition to convert the currency amount to the functional currency:
InvoiceHeader.invoiceAmount*CurrencyConversionGlobal.getRate(InvoiceHeader.invoiceCurrencyCode,"USD",InvoiceHeader.invoiceDate,"Corporate",0)



### Use Case13: Configure an approval rule to send a notification to a project manager.

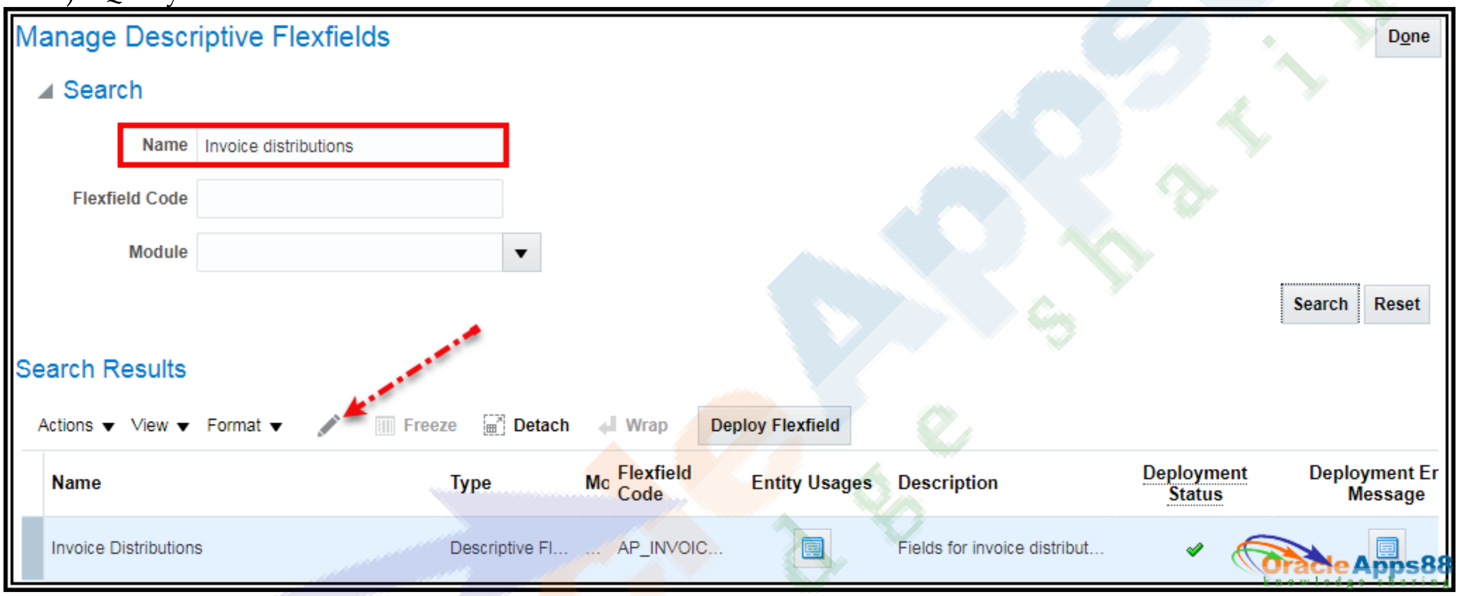
The business requirement is to route project related invoices to respective project managers based on the project number selected on invoice distributions.

**Solution:** Currently, this requirement is not supported with the delivered product. But a work around is in place to capture the project manager in a Descriptive Flexfield (DFF) and configure approval rules using DFF values.

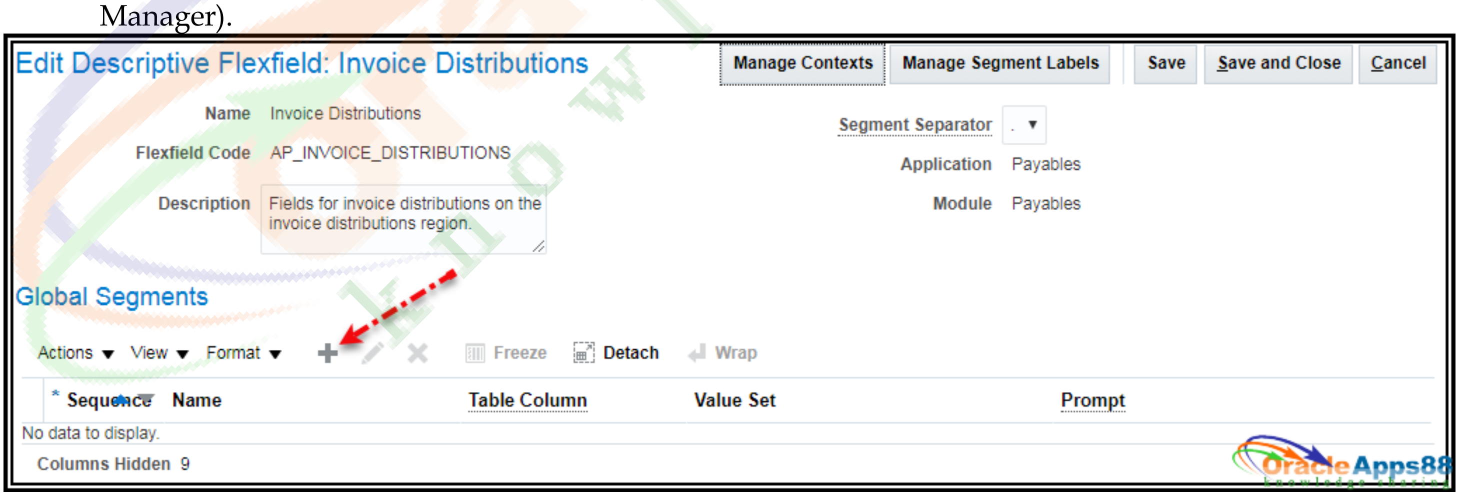
Steps to configure DFF for capturing the project manager and configuring the approval rules using the DFF value:

1) Navigation: Go to Setup and Maintenance and query for the task **Manage Descriptive Flexfields**.

2) Query **Invoice distributions** DFF and click on the Edit icon.

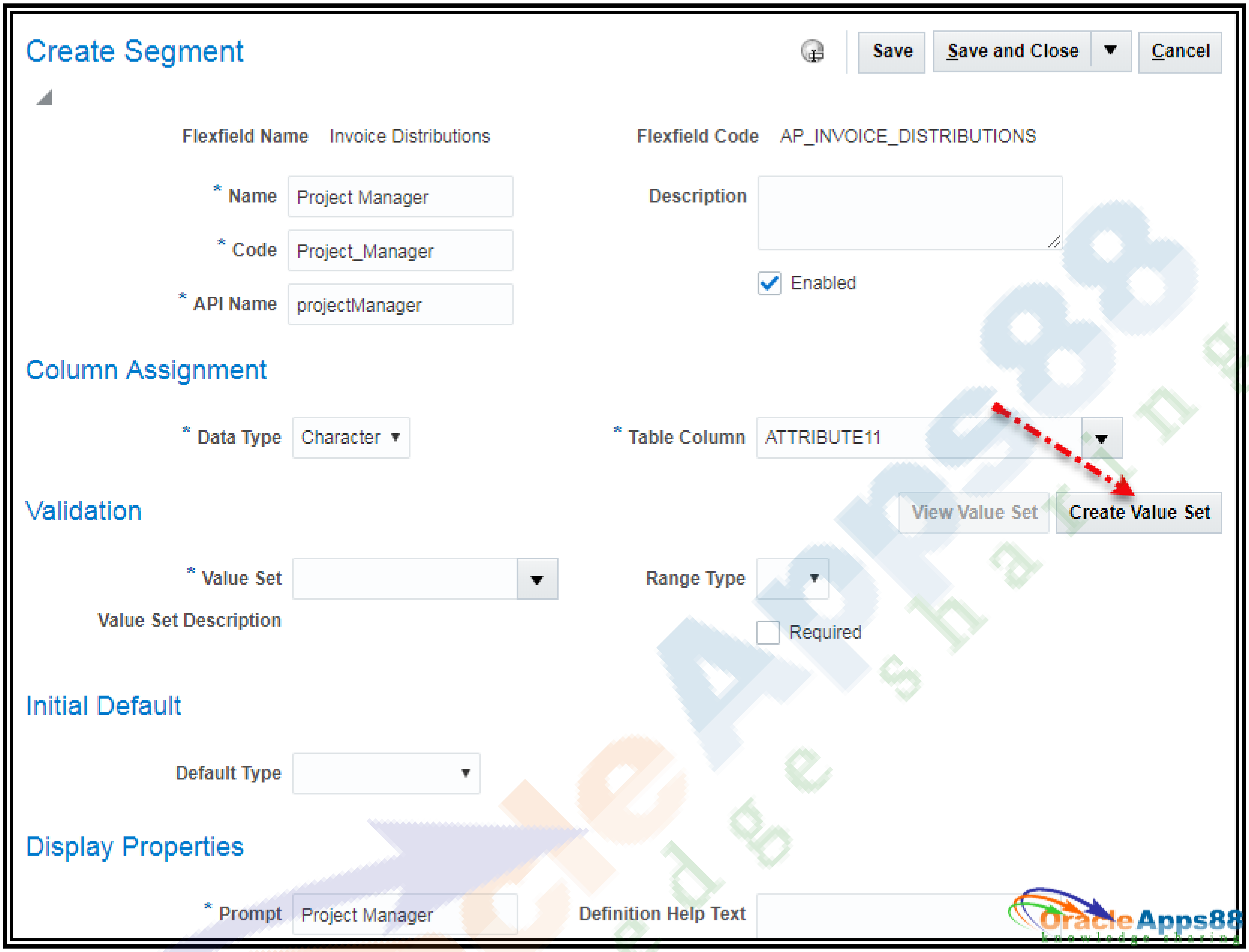


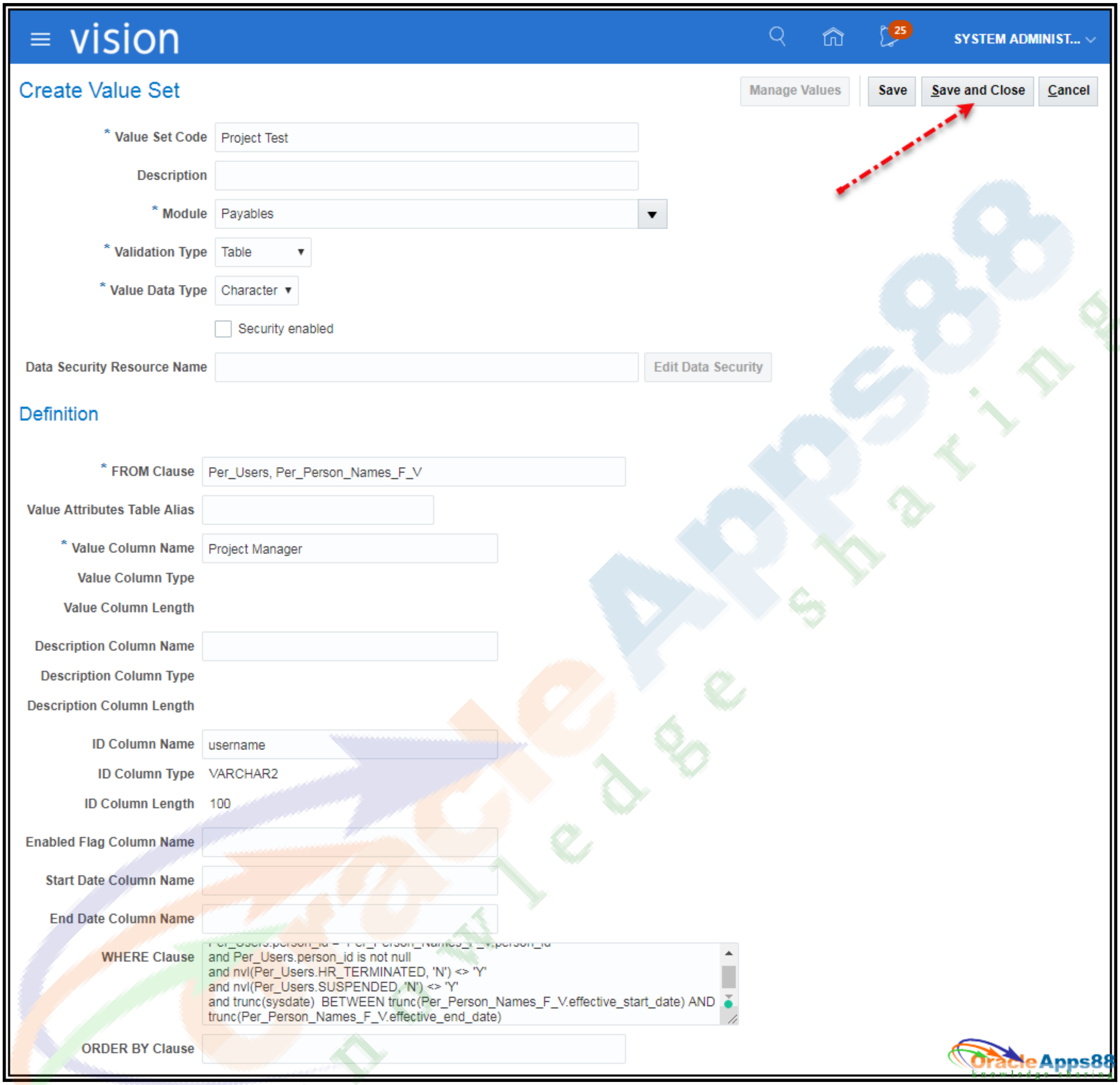

3) Define global segment value to capture Project Manager (here attribute 11 is used to define Project Manager).



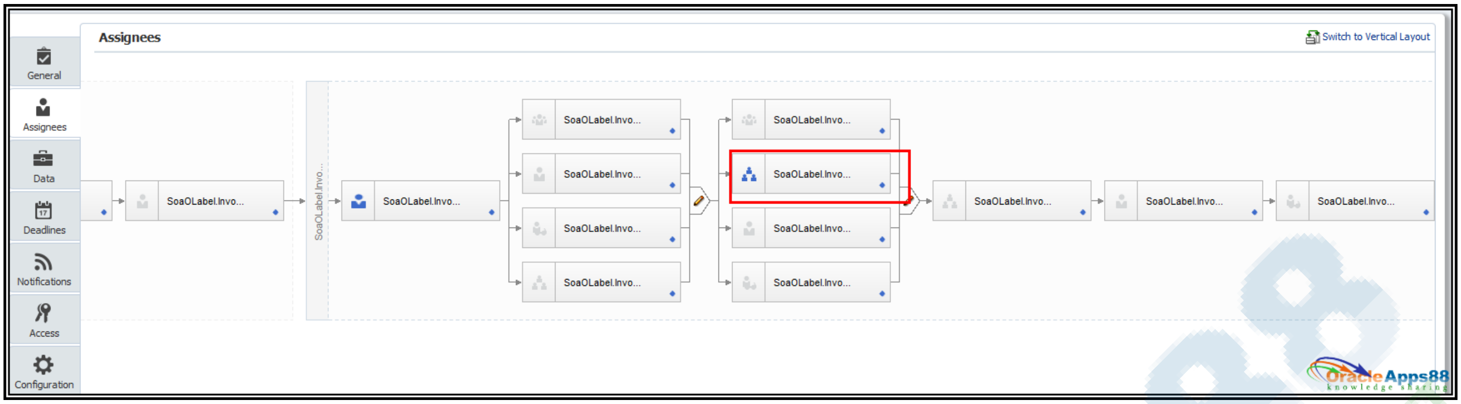

4) Define value set using SQL query (query provided below). Here we defined a value set called **Project Test** based on table validation type and selected display type as LOV values. This query provides all user names corresponding to user login names.

| | |
|---|---|
| **Value Set Code** | Project Test |
| **Description** | |
| **Module** | Payables |
| **Validation Type** | Table |
| **Value Data Type** | Character |
| **From Clause** | Per_Users, Per_Person_Names_F_V |
| **Value Column Name** | display_name |
| **ID column name** | username |
| **Where clause** | Per_Users.person_id = Per_Person_Names_F_V.person_id and Per_Users.person_id is not null and nvl(Per_Users.HR_TERMINATED, 'N') <> 'Y' and nvl(Per_Users.SUSPENDED, 'N') <> 'Y' and trunc(sysdate) BETWEEN trunc(Per_Person_Names_F_V.effective_start_date) AND trunc(Per_Person_Names_F_V.effective_end_date) |

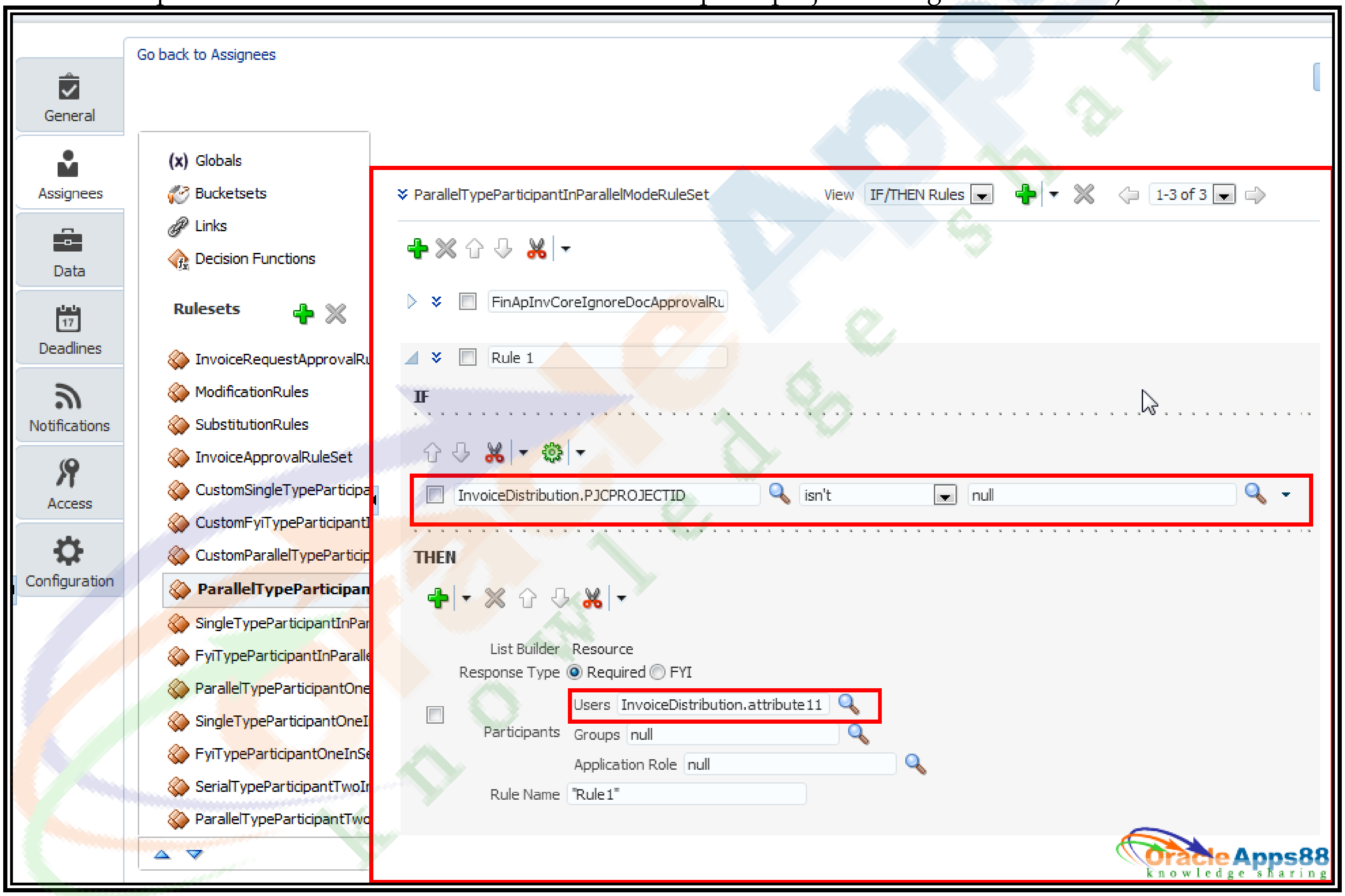

Create Segment
Save
Save and Close
Cancel
Flexfield Name Invoice Distributions
Flexfield Code AP_INVOICE_DISTRIBUTIONS
* Name Project Manager
* Code Project_Manager
* API Name projectManager
Description
Enabled
Column Assignment
* Data Type Character
* Table Column ATTRIBUTE11
Validation
View Value Set
Create Value Set
* Value Set
Range Type
Value Set Description
Required
Initial Default
Default Type
Display Properties
* Prompt Project Manager
Definition Help Text




5) Define the approval rule in BPM to route project invoices to a particular user selected in DFF in invoice distributions (In this example, we have used parallel participants in parallel mode to configure approval rule).

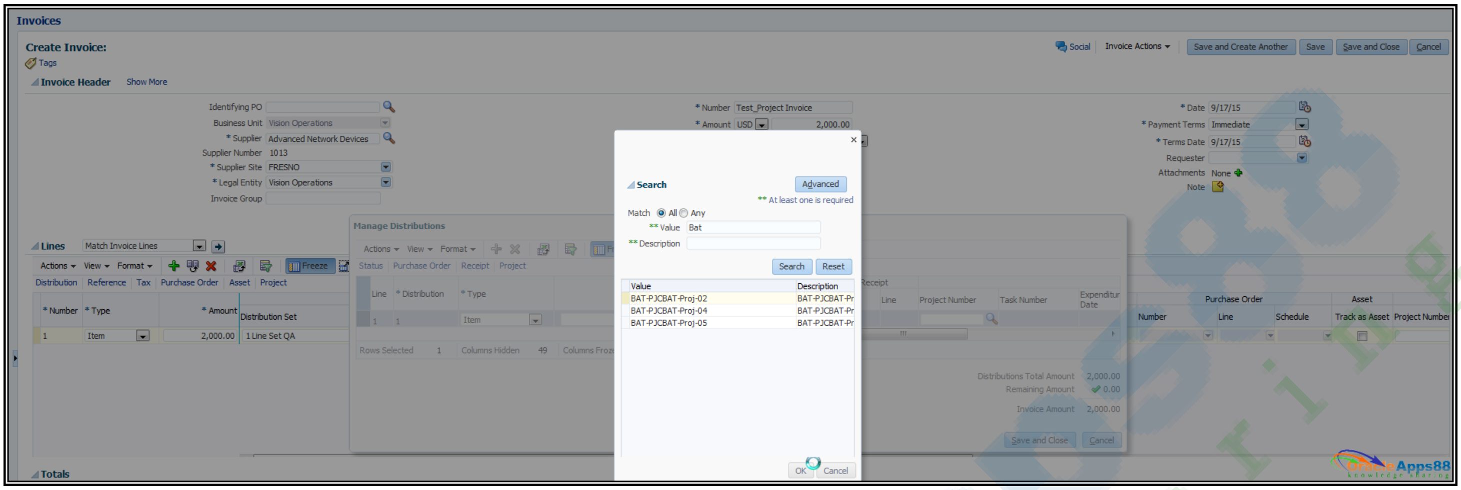


6) Define a rule with an IF condition using project attributes. In the THEN part section, select resource list builder and in the User field provide the DFF path like **InvoiceDistributions.attribute11** (In this example of the DFF we have used **attribute11** to capture project manager information).

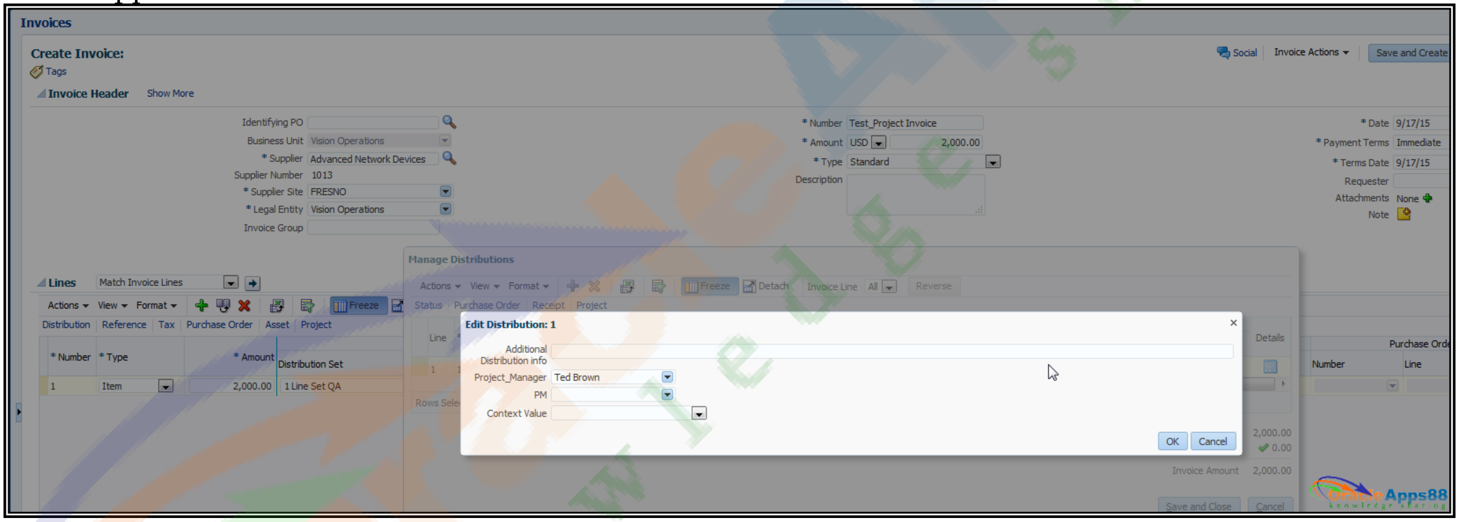



7) Create an invoice using the project attributes and select the DFF field from the invoice distribution and select the project manager name against each distribution line.

**Note:** This is a manual activity that the user needs to pick the respective project manager name from the user LOV in the DFF. The DFF field for project manager lists all the user names. We are not automatically populating the DFF value based on the project selected in the invoice distributions.




8) Select the project manager name in DFF. Save and Close the distributions and initiate invoice for approval.




9) Login with the user **Ted Brown** in BPM UI/ The notification is available in the BPM work list.

## Use Case 14: Configure an approval rule to route an approval notification to a cost center manager.

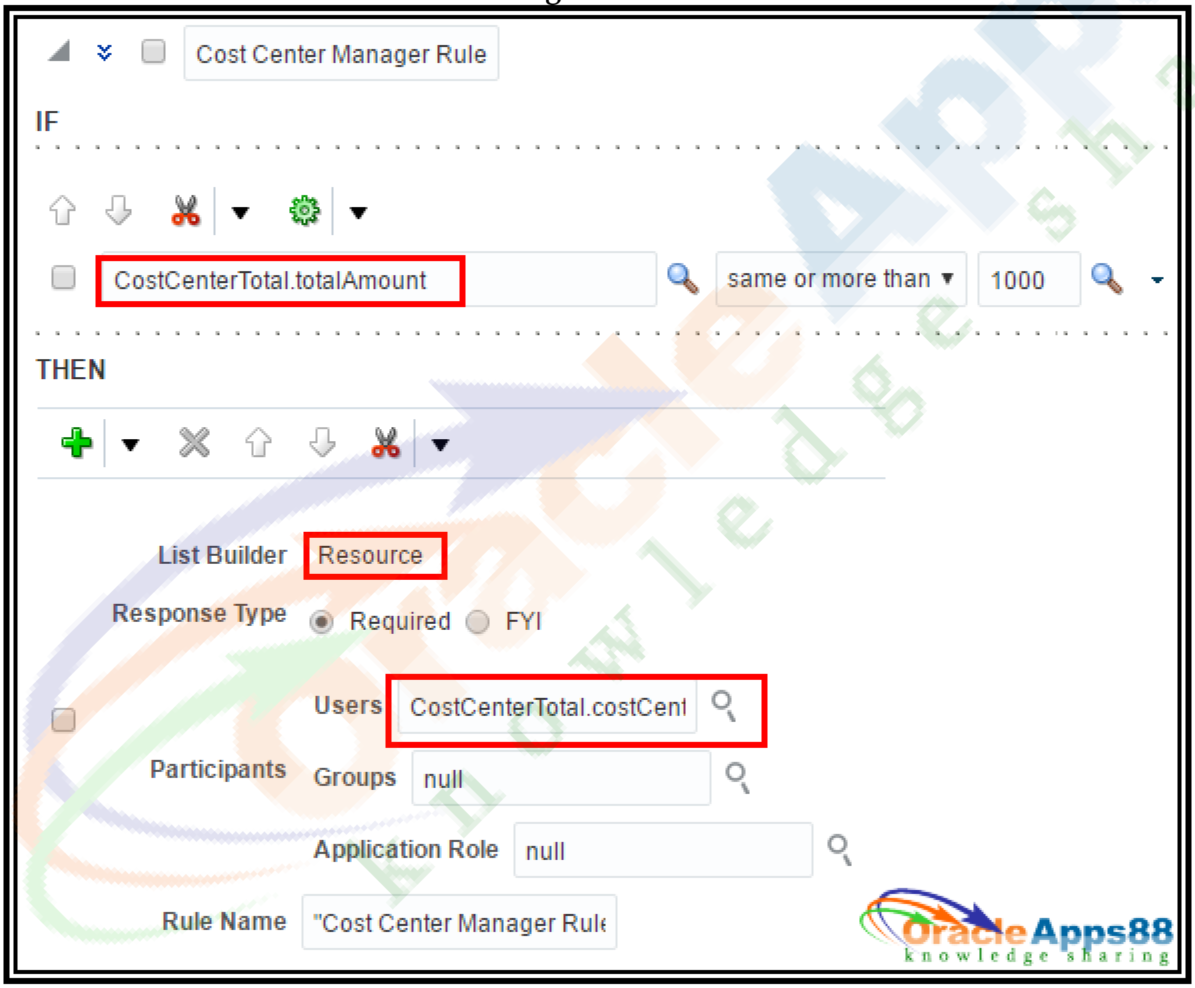
The business requirement wants the invoice to be routed to the cost center manager based on the expenditure that has been incurred for that cost center. The cost center is captured on the invoice lines or distributions as part of the account code combination.

**Solution:**
Setup the cost center manger in HCM for each cost center.
**Note:** Refer to the HCM on how to define cost center manager for a cost center.

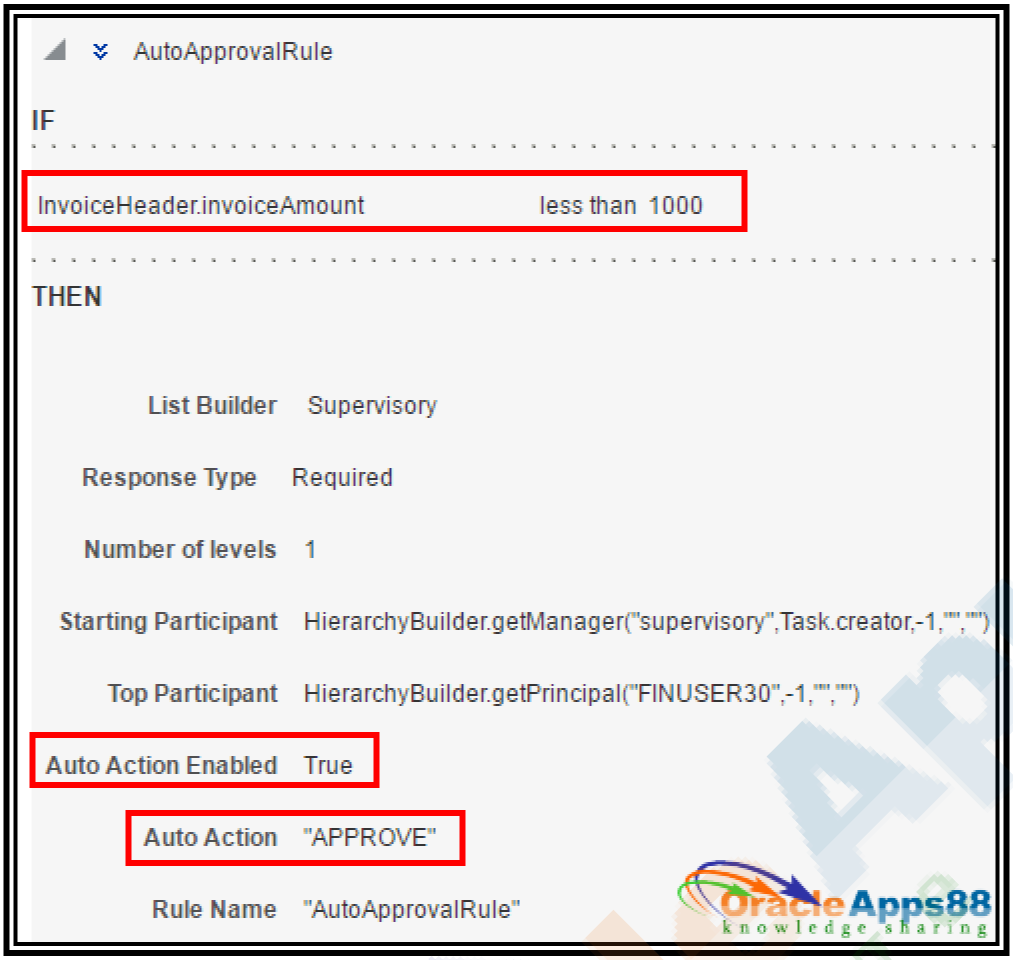
**Example:** If the cost center total amount is more than $1,000, then route the approval notification to the respective cost center manager.

**Steps:**

1) In the **IF** condition, Select the attribute **CostCenterTotal.costCenter**.
2) In the **THEN** section, Select list builder as **Resource** and enter the value as **CostCenterTotal.costCenterManagerName**.




If invoice amount is less than 1000 dollars then invoice needs to be auto approved.


AutoApprovalRule
IF
InvoiceHeader.invoiceAmount less than 1000
THEN
List Builder Supervisory
Response Type Required
Number of levels 1
Starting Participant HierarchyBuilder.getManager("supervisory",Task.creator,-1,"","")
Top Participant HierarchyBuilder.getPrincipal("FINUSER30",-1,"","")
Auto Action Enabled True
Auto Action "APPROVE"
Rule Name "AutoApprovalRule"
OracleApps88
knowledge sharing

## Use Case15: Configure an approval rule to route approval notifications to various approvers based on the cost center total limit.

The business wants approvals to be triggered based on the amount limits defined around the cost center. If an invoice has multiple distributions for the same cost center, then the limits have to be verified after summing up all the distributions for the same cost center.

**Solution:**
Rules Defined: For cost center 110, Approver A is authorized to approve if the total for cost center is less than $1000 and Approver B is authorized to approve if the total for cost center is above $1000.

Invoice 1: This invoice has following distributions. Approver B has to receive the approval notification as the sum of distribution exceeds $1000 (even though each distribution is less than $1000).

| Distribution | Distribution – Cost Center | Amount |
|---|---|---|
| 1 | 110 | $800 |
| 2 | 110 | $700 |
| 3 | 110 | $500 |
| **Distribution 110 – Total** | | **$2000** |

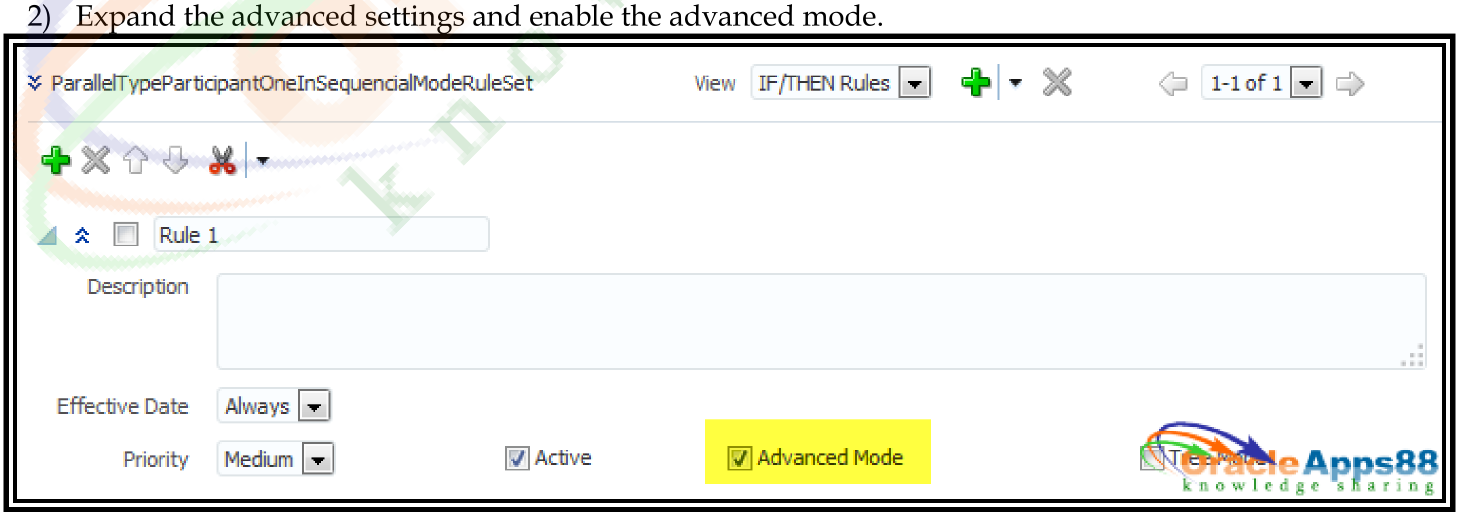
Invoice 2: This invoice has following distributions. Approver A has to receive the approval notification as the sum of distribution is less than $1000.

| Distribution | Distribution – Cost Center | Amount |
|---|---|---|
| 1 | 110 | $500 |
| 2 | 110 | $300 |
| **Distribution 110 – Total** | | **$800** |

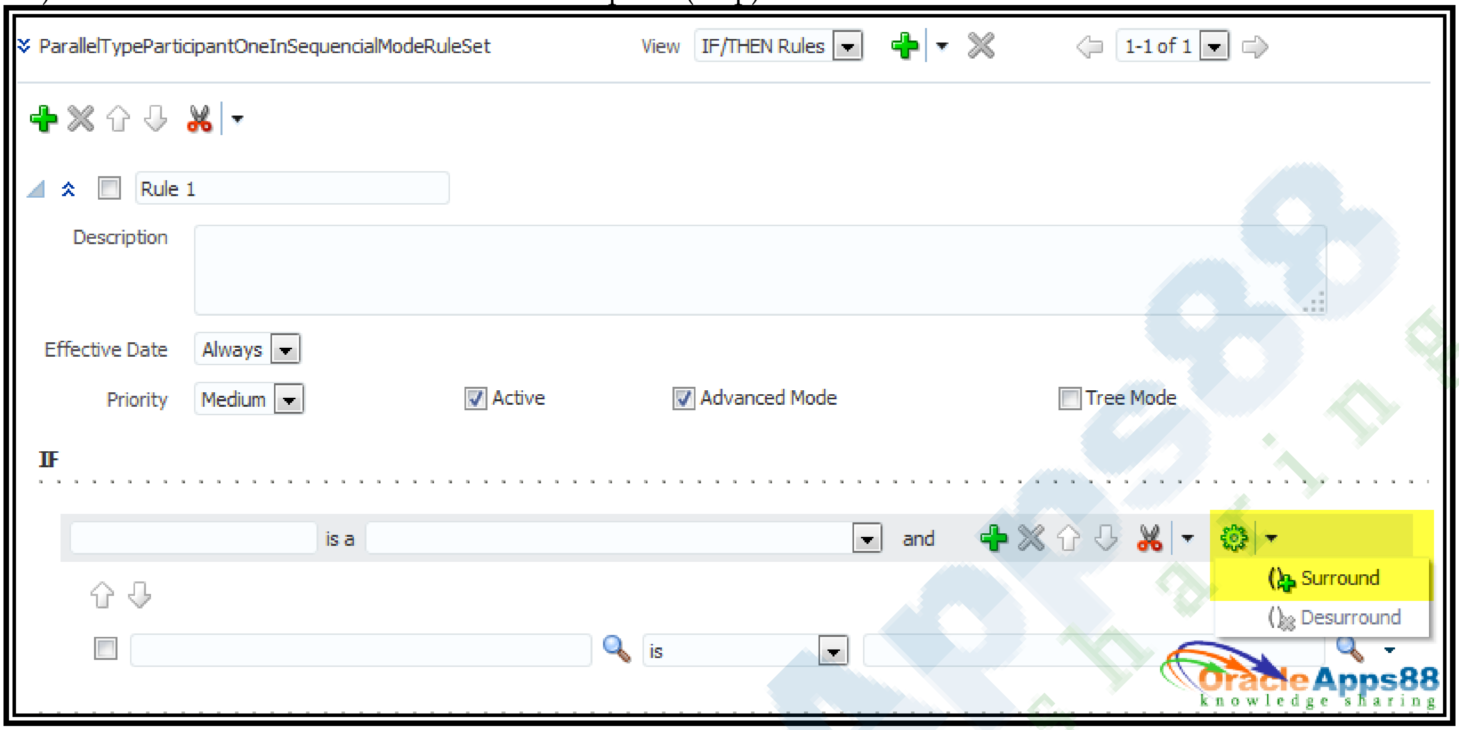
You need to leverage the aggregate functionality in approvals. In the given scenario this aggregate function helps to create a loop and sum the distribution amounts for a given cost center. Later this total amount needs to be checked against the approval limits.

**Steps to create the rules: (ADD periods after each number in the steps to create.)**

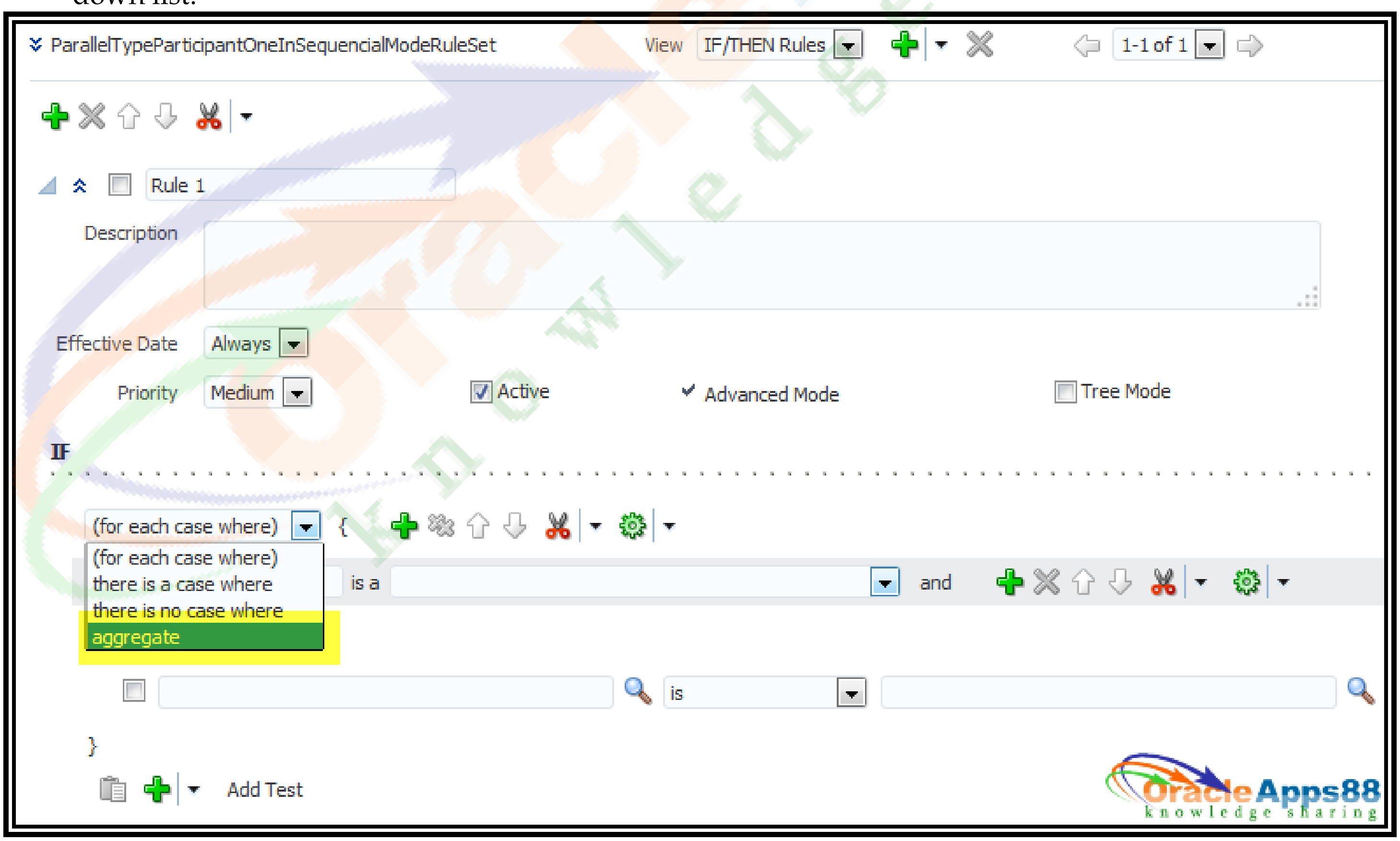
1) Create a new rule in the required participant type.
2) Expand the advanced settings and enable the advanced mode.



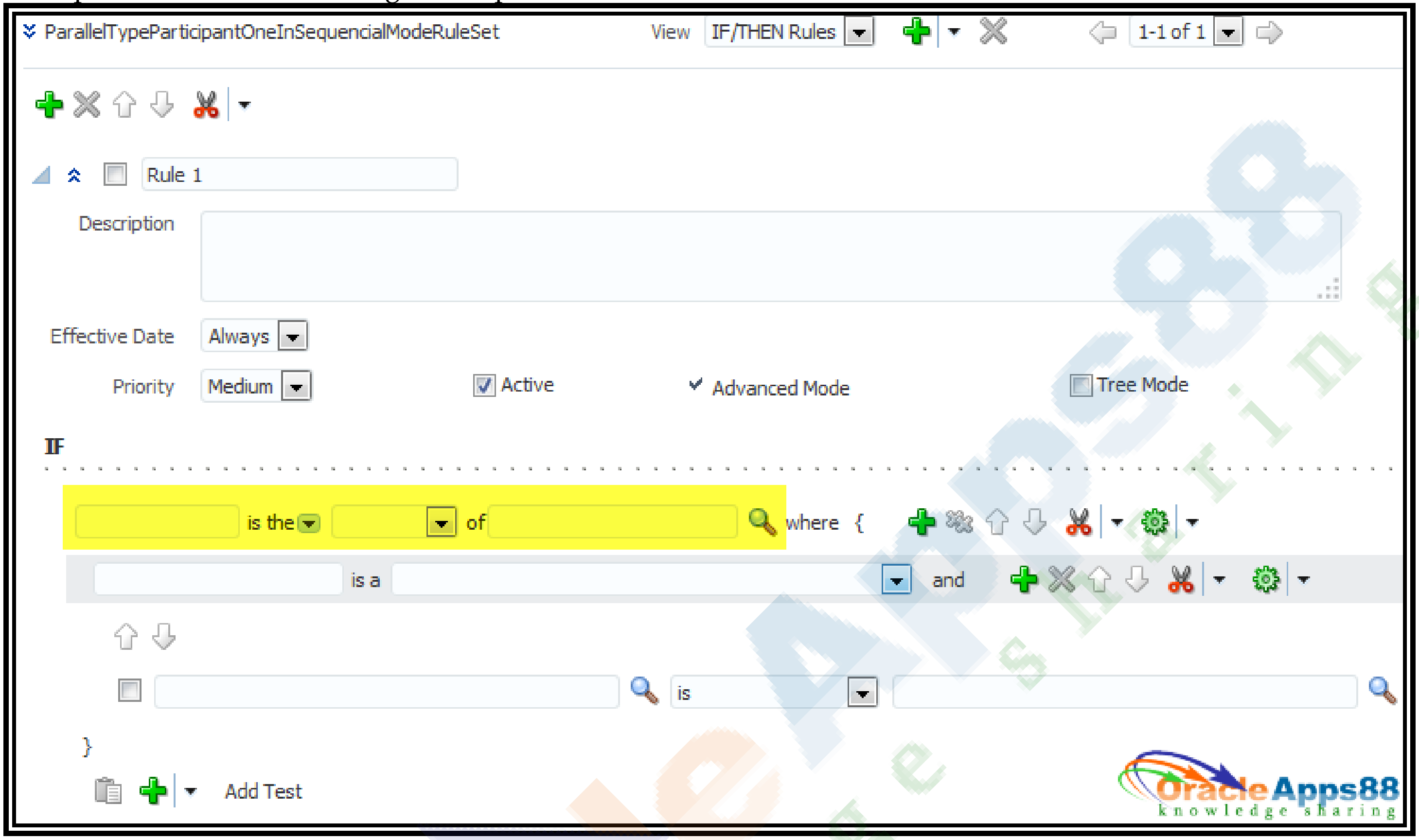
3) In the IF condition enable the surround option (loop). This is available at the end of the condition row.



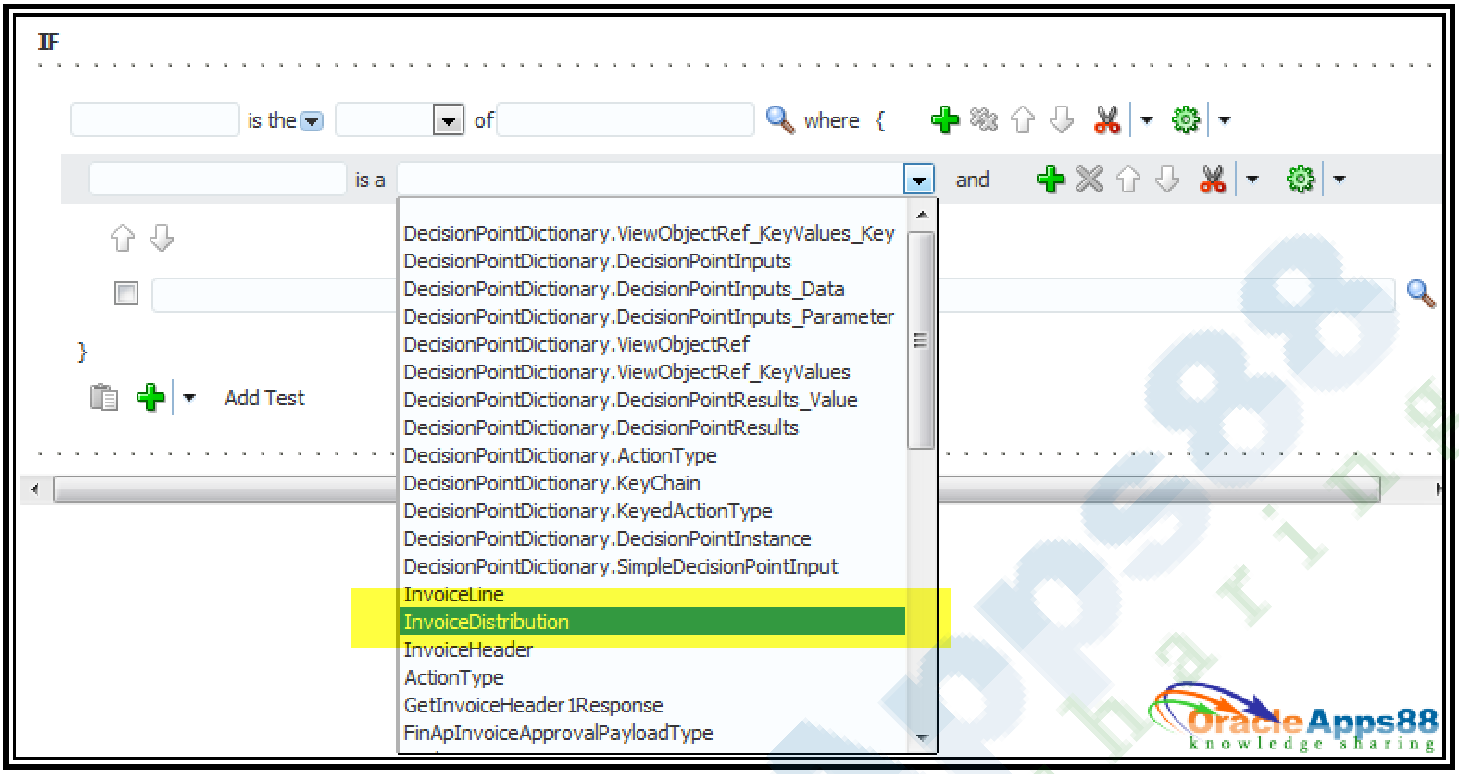

4) A new drop down for the type of surround function is visible. Select the aggregate function from the drop down list.



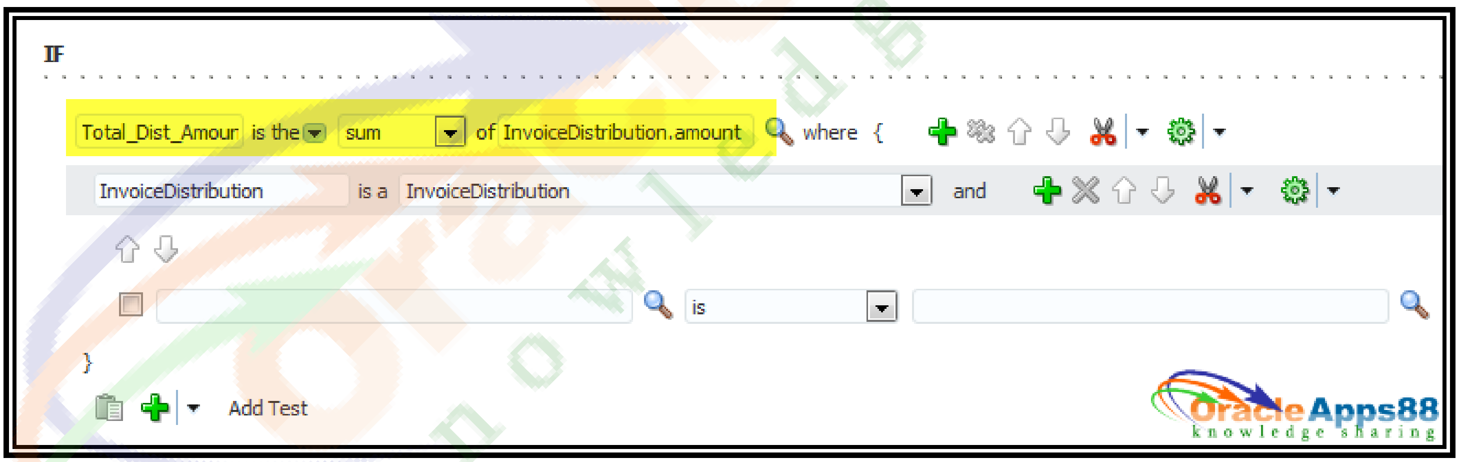
5) Once selected, the aggregate condition displays a new line. This line denotes what action needs to be performed while enacting the loop.



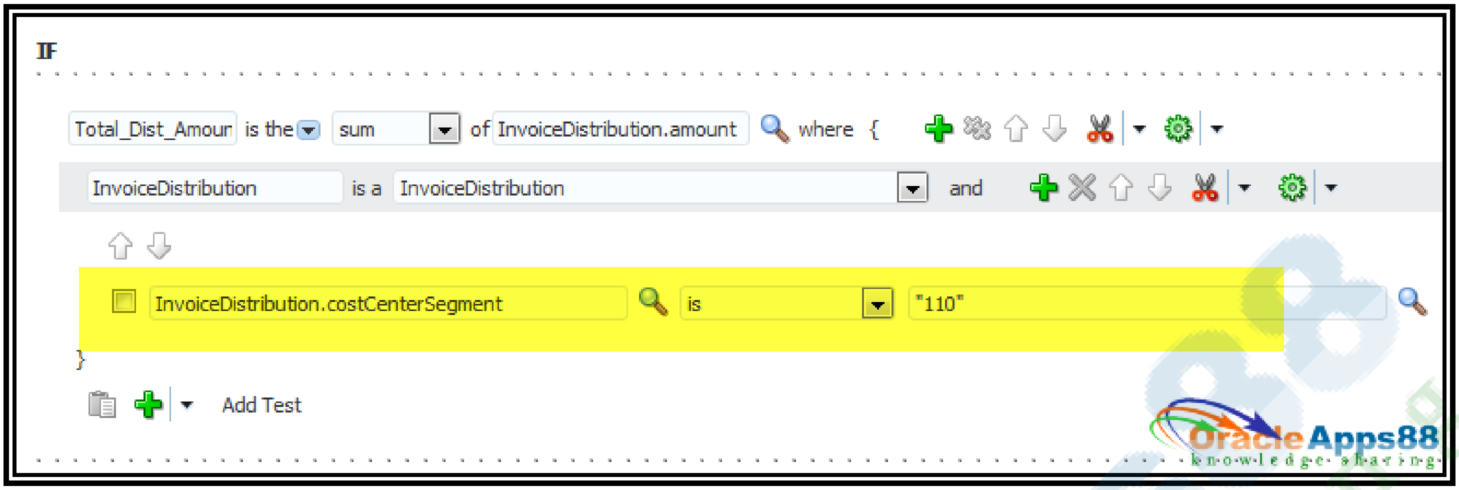

6) First, the conditions need to be defined in the loop. In the condition line, select the value InvoiceDistribution as shown in the screenshot.



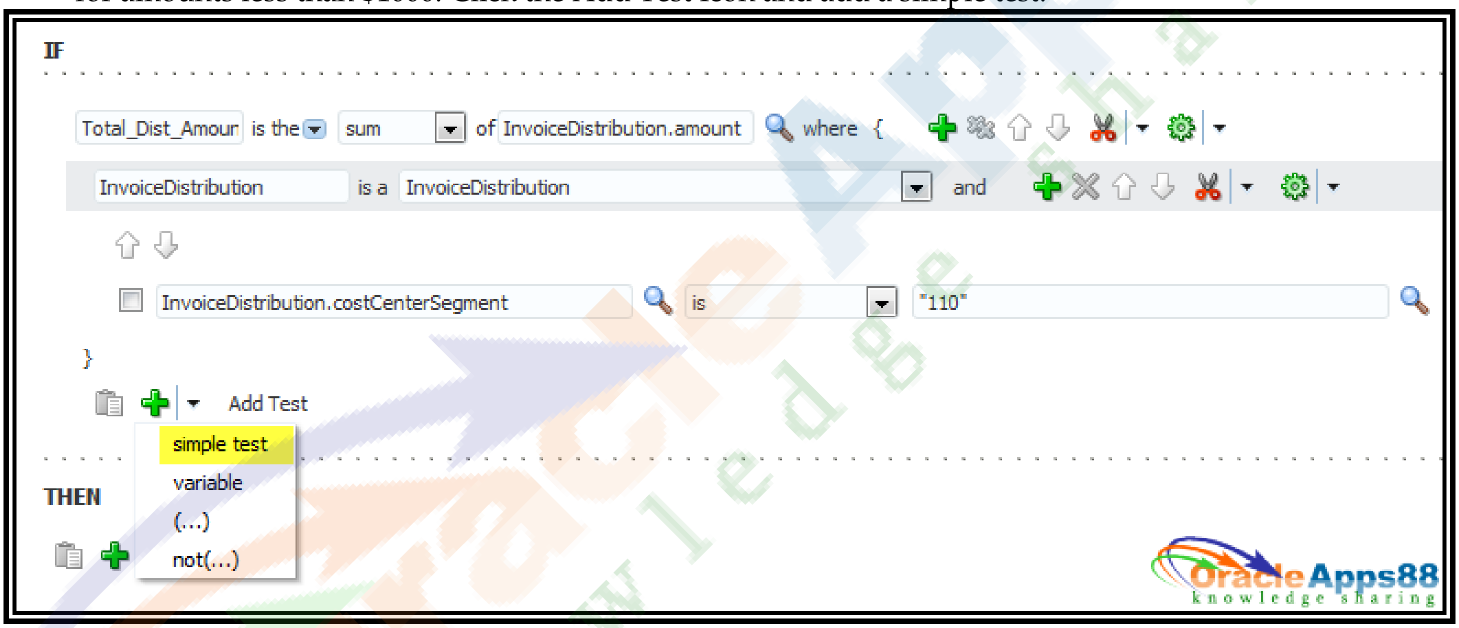

7) Fill the action to be done for the loop, to sum the entire distributions amount. Enter the action as shown in the screenshot. Here the Total_Dist_Amount is free text, Sum is the action, InvoiceDistribution.Amount is the value selected from dropdown menu.



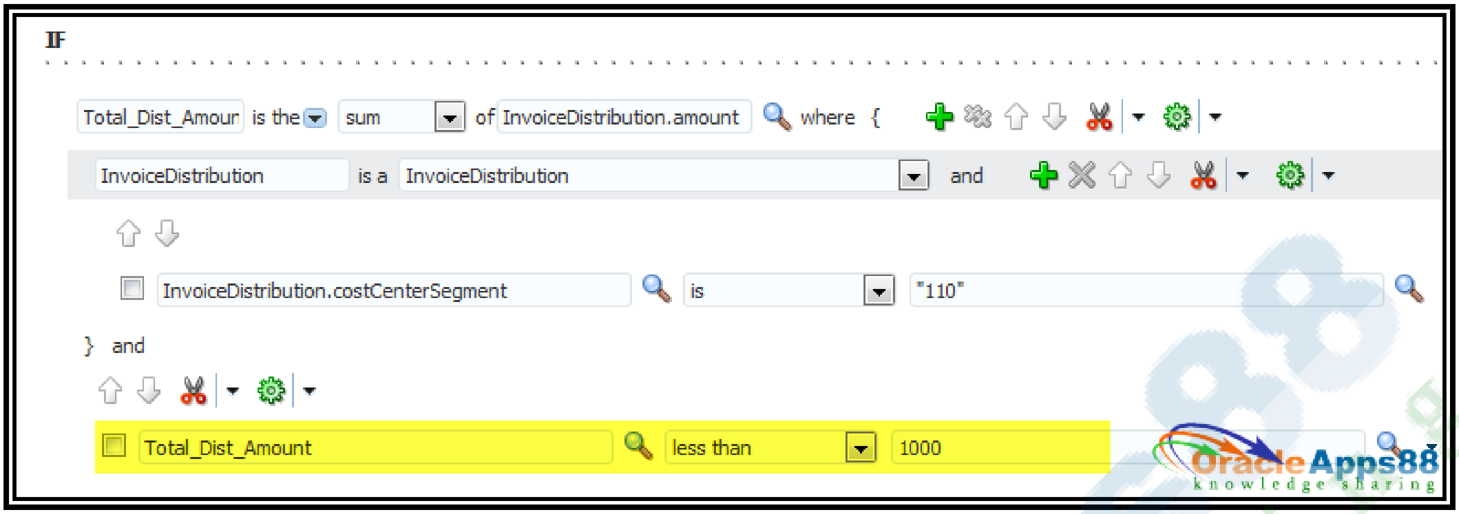

8) Add another condition to sum only the distributions that are part of a specific cost center. In this example, the cost segment value is 110. Write the condition as show in the image.



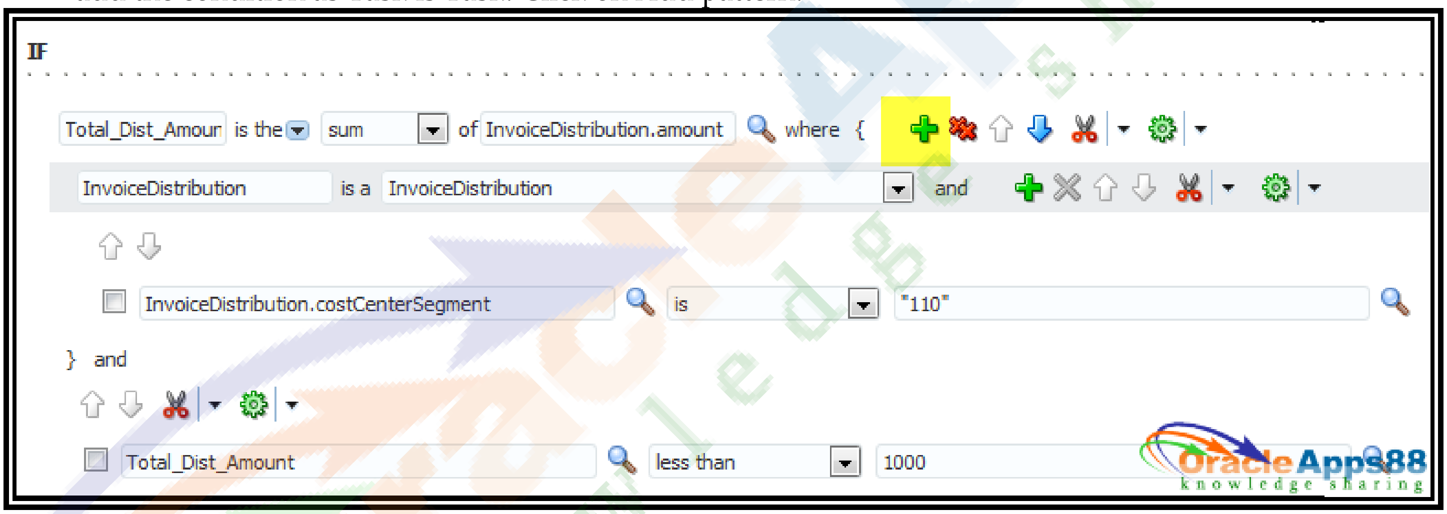

9) The loop definitions are configured. The application sums all distribution amounts whose cost center is 110. The total distribution amount now needs to be checked against the approval limit. The first check is for amounts less than $1000. Click the Add Test Icon and add a simple test.



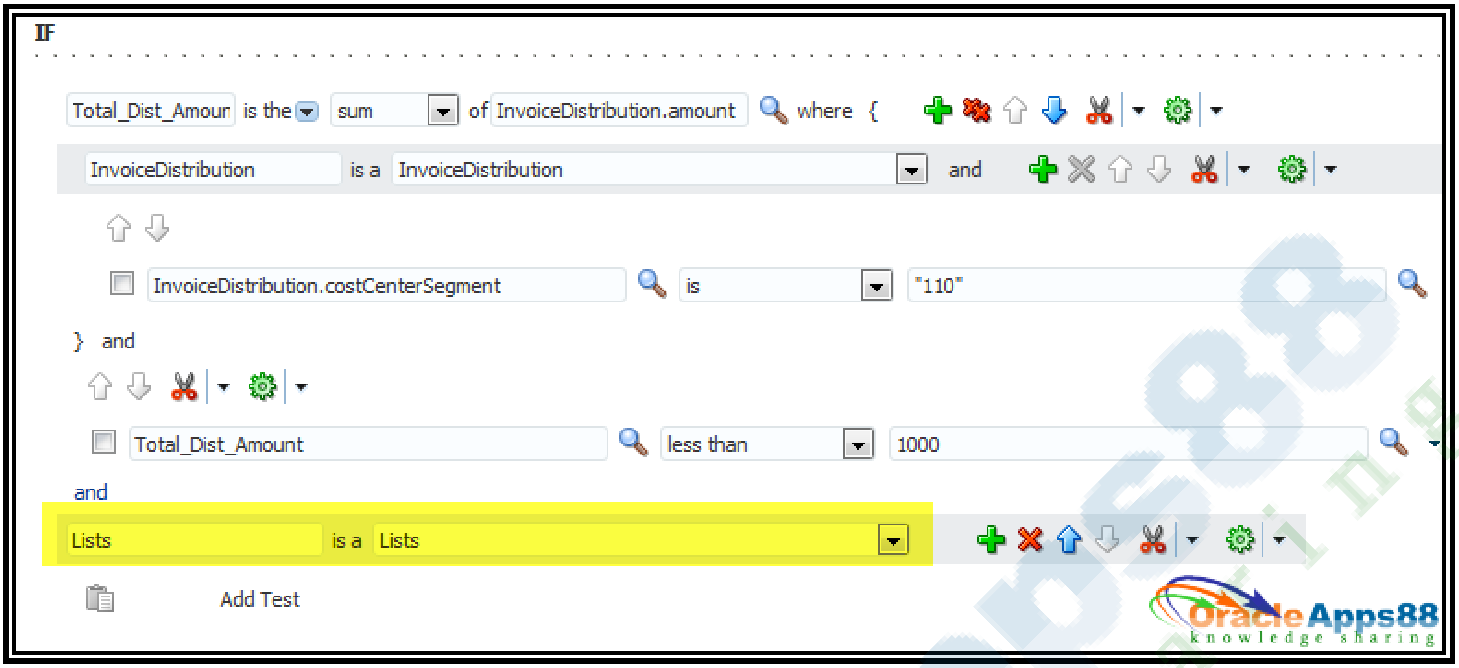

10) Add the condition as shown in the image.



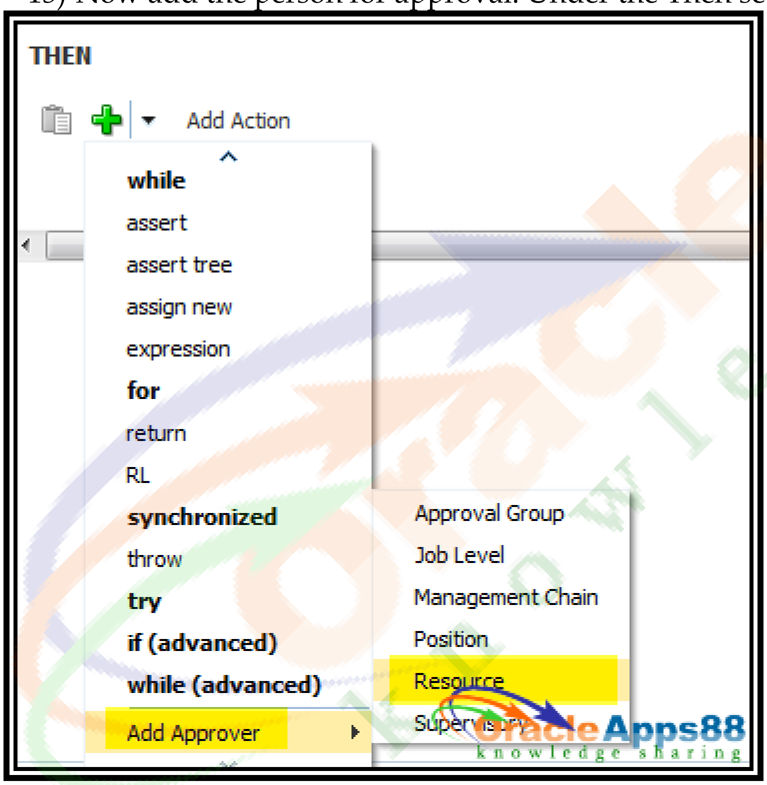

11) Now the condition definition is ready and the action result needs to be defined. Here you need to send the approval notification to user Person A (say user name is Finuser2). Before that we need to add one condition which is very specific to usage of the surround function. If the requirement is to send the notification to an approval group, add a condition as Lists is Lists and if the supervisor hierarchy is used, add the condition as Task is Task. Click on Add pattern.



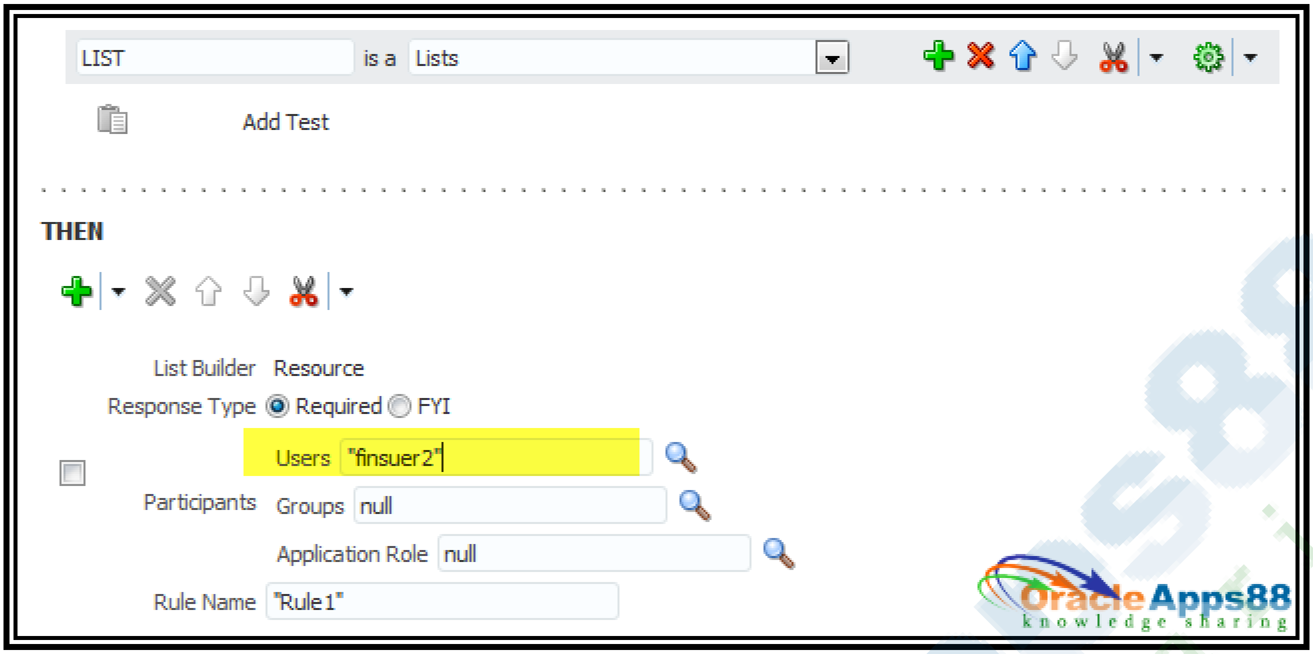

12) Add the condition as Lists is Lists. In this example, a specific user is used as the recipient.



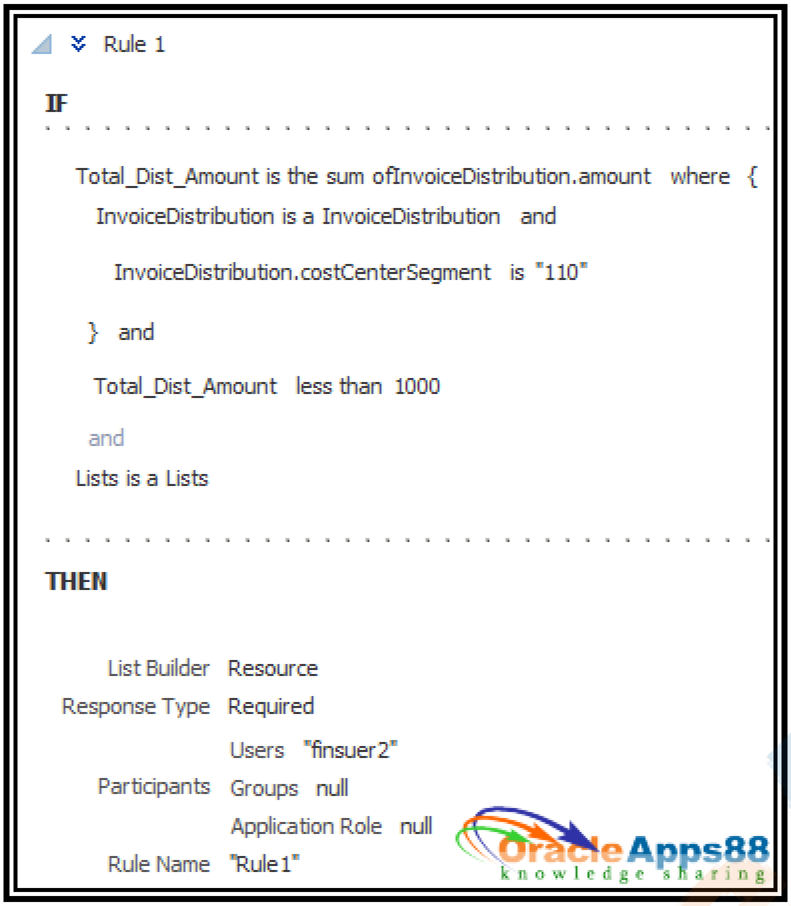

13) Now add the person for approval. Under the Then section select the action Add Approver-> Resource.




14) Add the user name as shown in the image.




15) The rule definition is now complete. Validate the rule and save it.
16) Now add the same rule by copying it and change the approval limit condition as Total_Dist_Amount more than 1000. And in the Then section, change the approver as person B (Say finuser3).
17) Validate the rule and save it. Commit the changes.
18) After saving the rule it will look like below:




**Note**: If you need multiple approval limits then you need to create similar rules for different amount limits.

### Usecase16: Configure approval rules using various participants. FONTS?

The business wants to define the approval policy as the following::

1. If invoices are created with the natural accounts related to an adjustment and suspense accounts (5310, 5320) then the invoice should be autorejected.

2. If the invoice is created with accounts other than the adjustment and suspense account and is related to Contract expenditure (Which is captured in DFF field at invoice header level) and Invoice amount is less than $25,000 dollars then the invoice needs to be approved by the Payables department head and Accounts Manager. These approvers are grouped under Approval group1 (AG1).

3. If invoice is created with accounts other than the adjustment and suspense account and is related to Contract expenditure (Which is captured in DFF field at invoice header level) and Invoice amount is more than $25,000 dollars and less than $100,000 dollars then invoice needs to be approved by the Finance Manager and Finance Director (Grouped under Approval group2: AG2). Once the AG2 approves the invoice then invoice should be approved by the Finance Executive Director and Finance VP (Grouped under Approval group3: AG3).

4. If invoice is created with accounts other than the adjustment and suspense account and is related to Contract expenditure (Which is captured in DFF field at invoice header level) and Invoice amount is more than $100,000 dollars then the invoice needs to be approved by the Finance SVP and Finance Controller (Grouped under Approval group4: AG4). Once invoice is approved by AG4 then invoice should be approved by the CFO and CEO (Grouped under Approval group5: AG5).

**Solution Approach:**

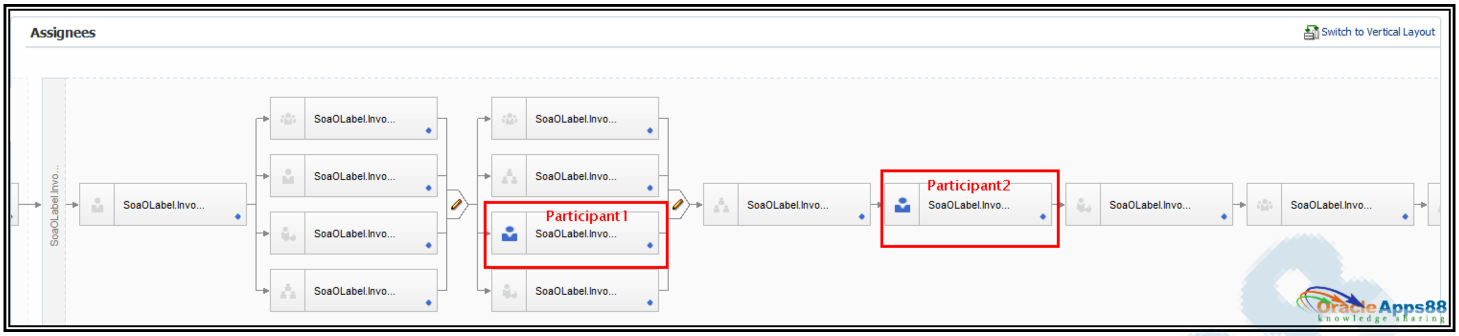
- Create five approval groups AG1, AG2, AG3, AG4, and AG5 with the required users.

- You need to choose two participants for your requirement:
  - Participant 1: SingleTypeParticipantInParallelModeRuleSet.
  - Participant 2: SingleTypeParticipantOneInSequencialModeRuleSet.

- Rules setup using Participant 1 **SingleTypeParticipantInParallelModeRuleSet**.
  - Create autoreject rule for requirement #1 – Link to the rule setup.
  - Create approval rule for requirement #2 – Link to the rule setup.
  - Create approval rule for requirement #3 – Link to the rule setup.
  - Create approval rule for requirement #4 – Link to the rule setup.
  - Create a catch all rule with **Autoapproved** for the invoices not meeting the rules created above- You need to create the rule. (We have not created the rule and depicted in the screenshot).

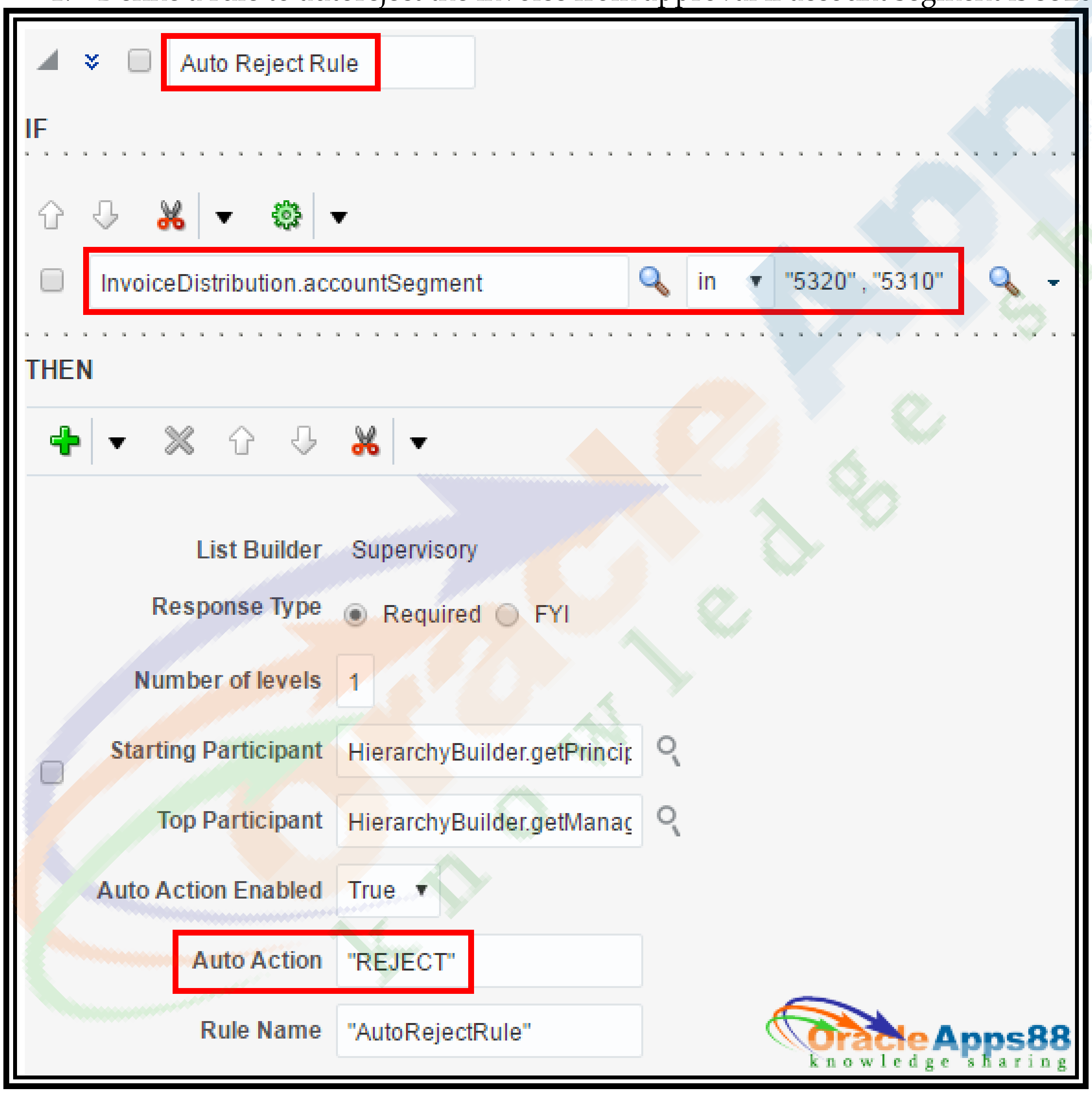
- Rules setup using Participant 2 **SingleTypeParticipantOneInSequencialModeRuleSet**
  - Create a rule for the requirement #3 – Link to the rule setup.
  - Create a rule for the requirement #4 – Link to the rule setup.
  - Create an ignore participant rule for requirement #1 - Link to the rule setup.
  - Create an ignore participant rule for requirement #2- Link to the rule setup.
    Note: You also need to add a condition for the invoices that do not meet the rules created above (not created the rule and depicted in the screenshot).

Use the following two single type participants to achieve the business requirement:

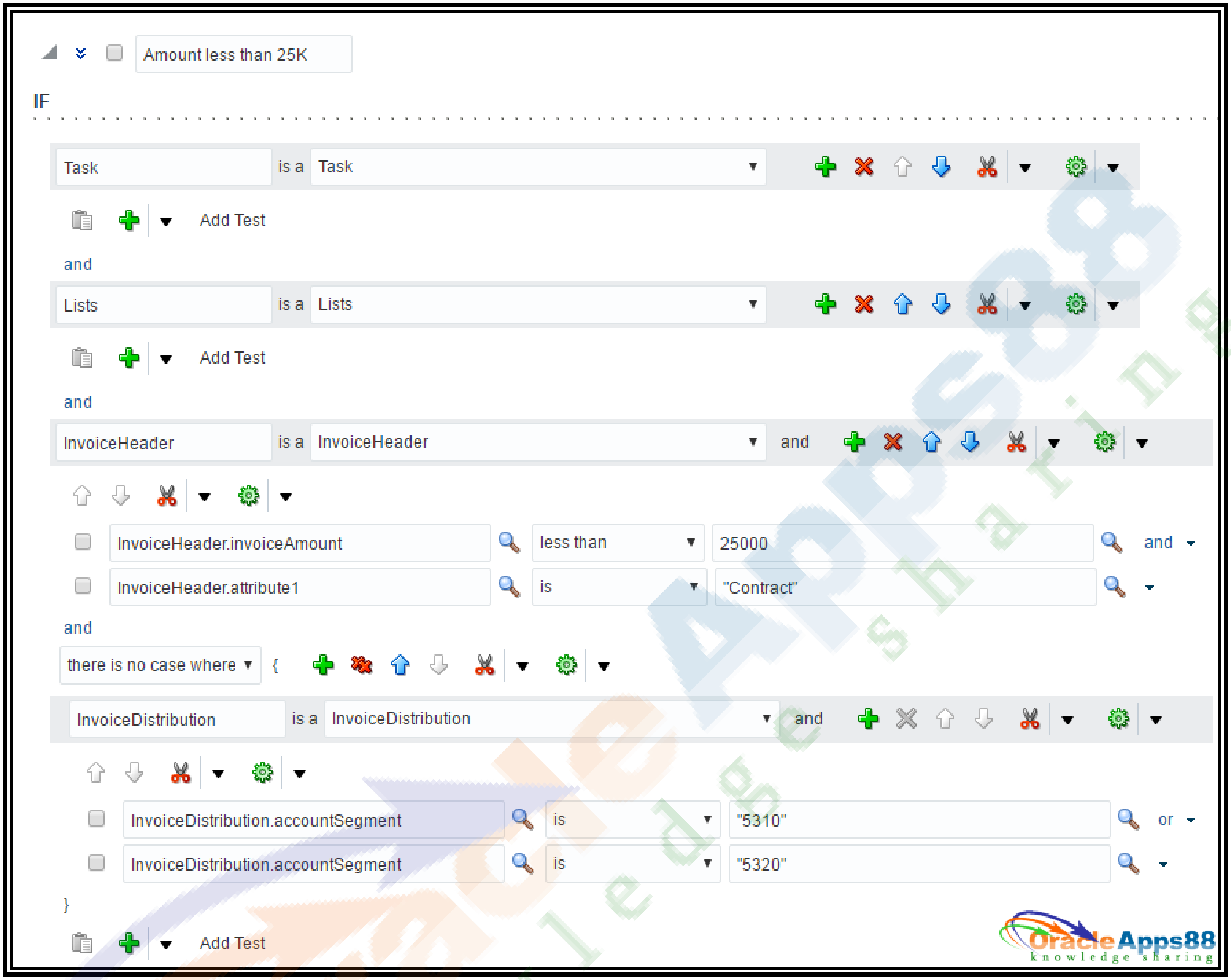


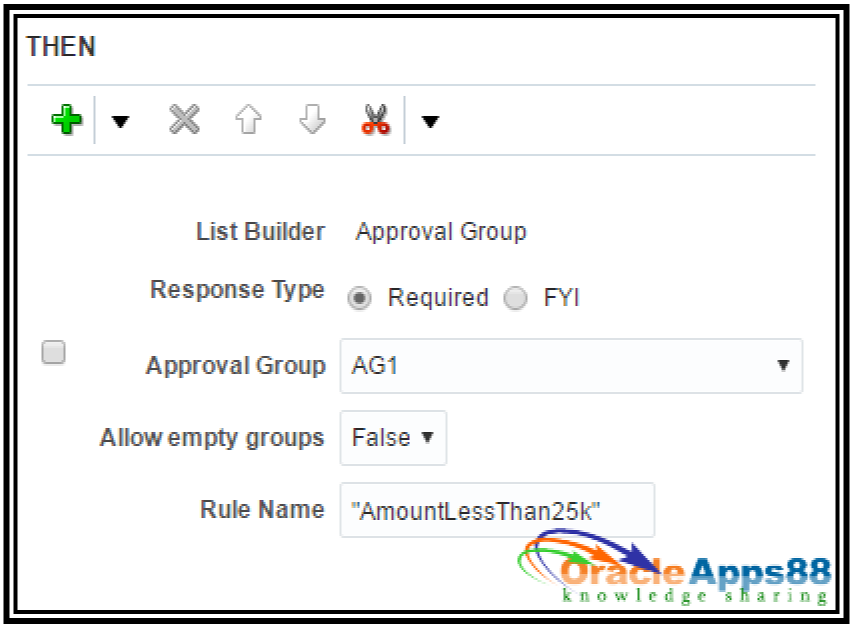

First select partcipant1 **SingleTypeParticipantInParallelModeRuleSet** to configure the following rules:

1. Define a rule to autoreject the invoice from approval if account segment is **5320** or **5310**.

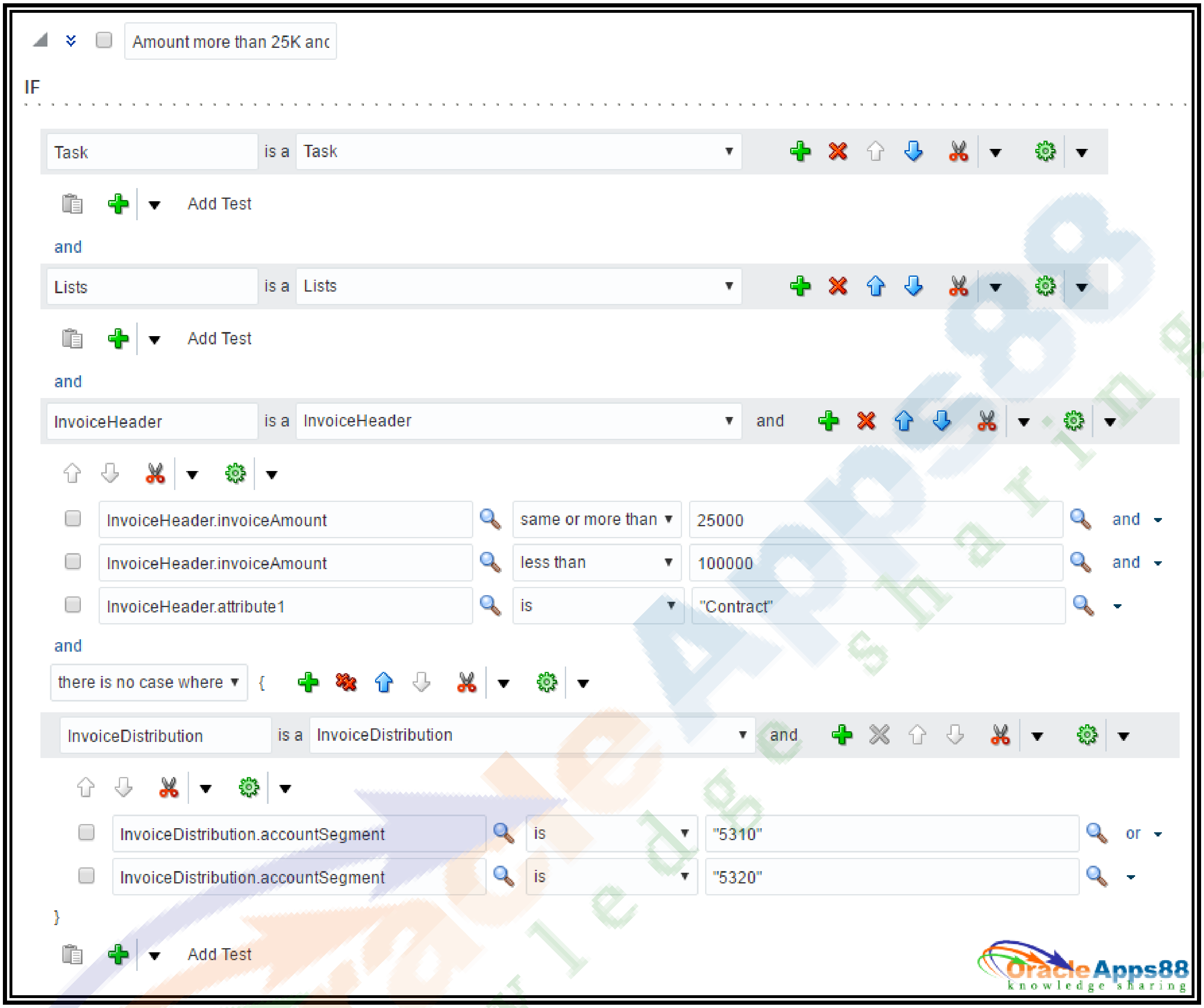


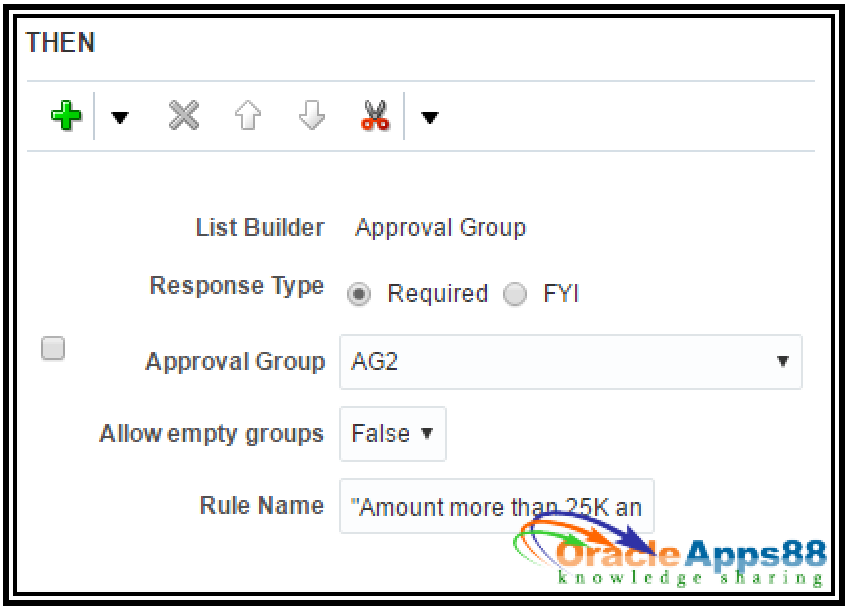

2. Define a rule with advanced options enabled to route the invoice to approval group: **AG1** if the account segment is not **5320** or **5310** and the invoice header DFF is **Contract** and the invoice amount is less than $25,000.


Amount less than 25K
IF
Task
is a
Task
Add Test
and
Lists
is a
Lists
Add Test
and
InvoiceHeader
is a
InvoiceHeader
and
InvoiceHeader.invoiceAmount
less than
25000
and
InvoiceHeader.attribute1
is
"Contract"
and
there is no case where
{
InvoiceDistribution
is a
InvoiceDistribution
and
InvoiceDistribution.accountSegment
is
"5310"
or
InvoiceDistribution.accountSegment
is
"5320"
}
Add Test
OracleApps88
knowledge sharing

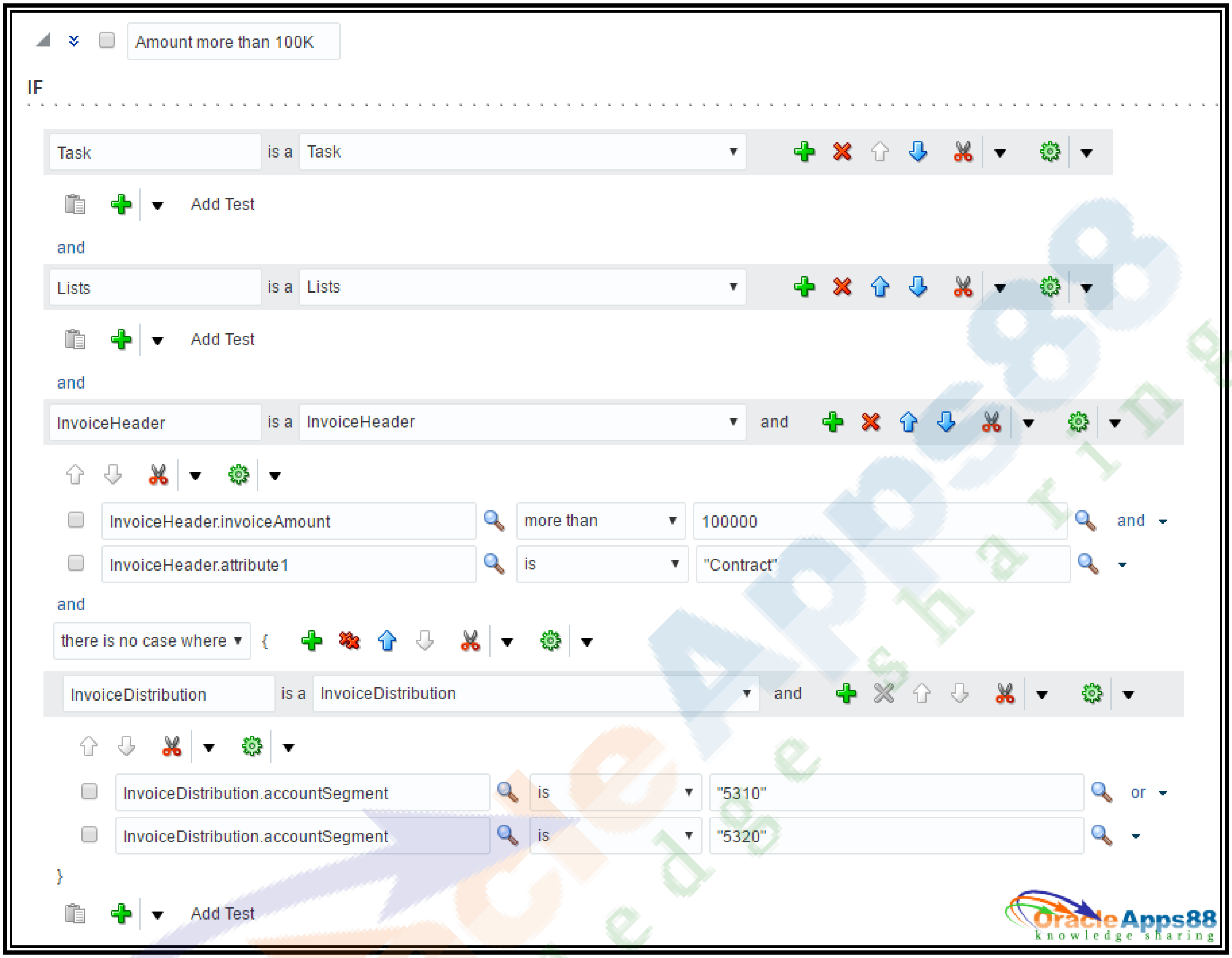


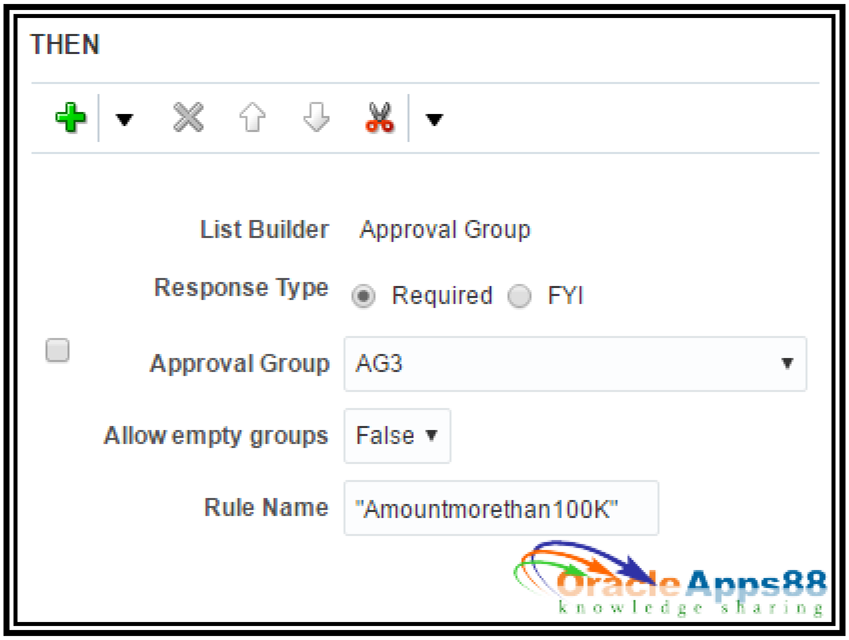

3. Define a rule with advanced options enabled to route the invoice to approval group to **AG2** if the account segment is not **5320** or **5310** and the invoice header DFF is **Contract** and the invoice amount is more than $25,000 and less than $100,000.


Amount more than 25K anc
IF
Task
is a
Task
Add Test
and
Lists
is a
Lists
Add Test
and
InvoiceHeader
is a
InvoiceHeader
and
InvoiceHeader.invoiceAmount
same or more than
25000
and
InvoiceHeader.invoiceAmount
less than
100000
and
InvoiceHeader.attribute1
is
"Contract"
and
there is no case where
{
InvoiceDistribution
is a
InvoiceDistribution
and
InvoiceDistribution.accountSegment
is
"5310"
or
InvoiceDistribution.accountSegment
is
"5320"
}
Add Test



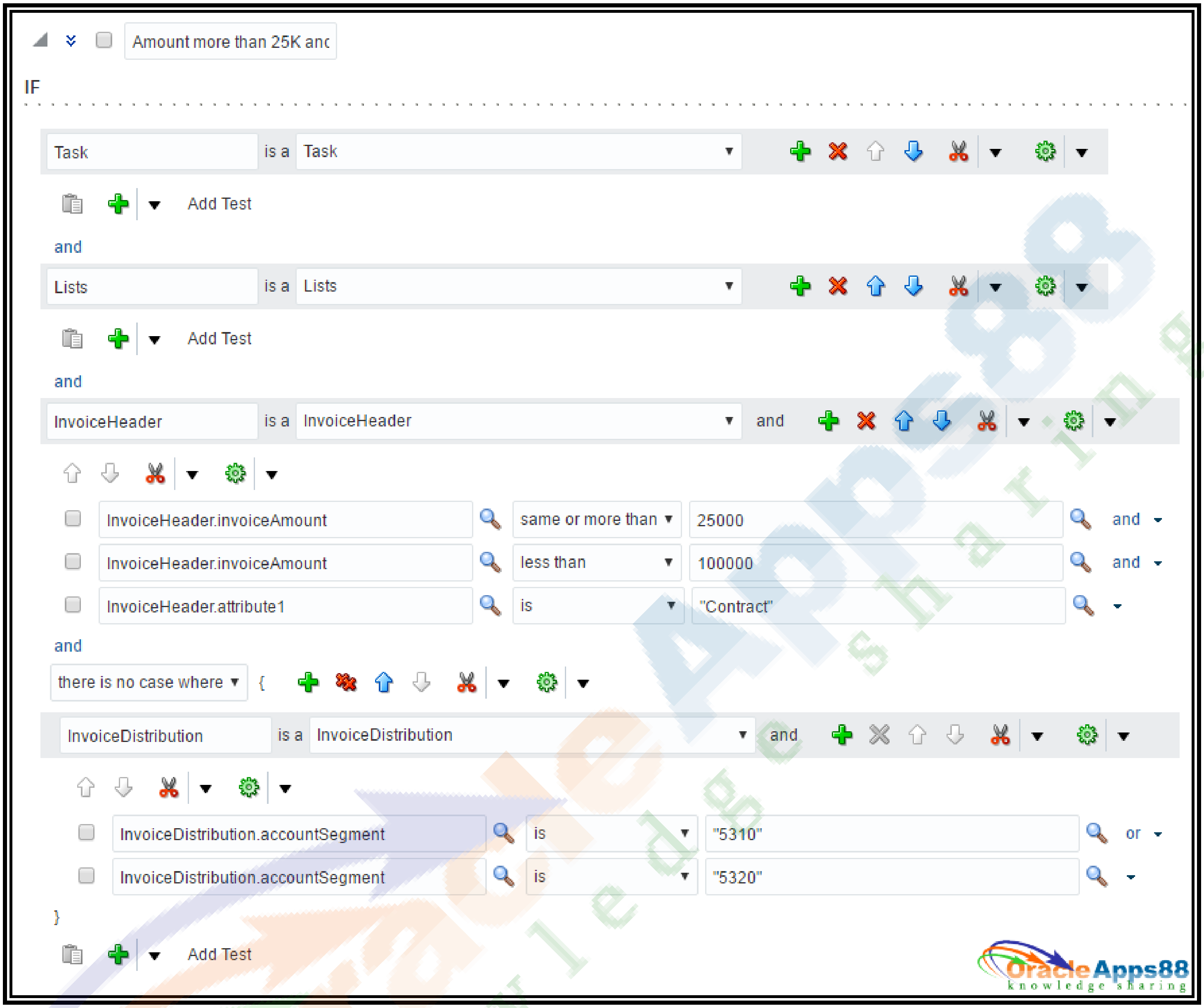

4. Define a rule with advanced options enabled to route the invoice to approval group: **AG3** if the account segment is not **5320** or **5310** and the invoice header DFF is **Contract** and the invoice amount is more than $100,000.

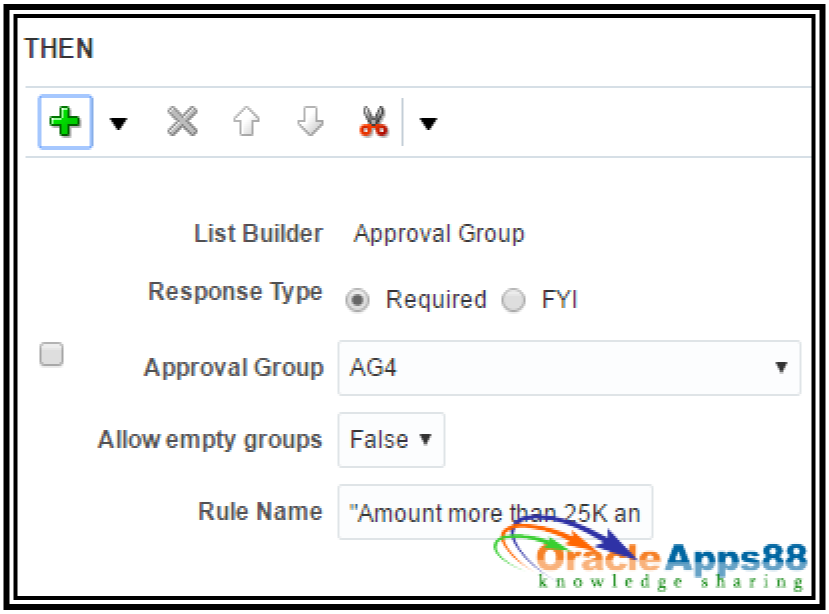

Amount more than 100K
IF
Task is a Task
Add Test
and
Lists is a Lists
Add Test
and
InvoiceHeader is a InvoiceHeader and
InvoiceHeader.invoiceAmount more than 100000 and
InvoiceHeader.attribute1 is "Contract"
and
there is no case where {
InvoiceDistribution is a InvoiceDistribution and
InvoiceDistribution.accountSegment is "5310" or
InvoiceDistribution.accountSegment is "5320"
}
Add Test



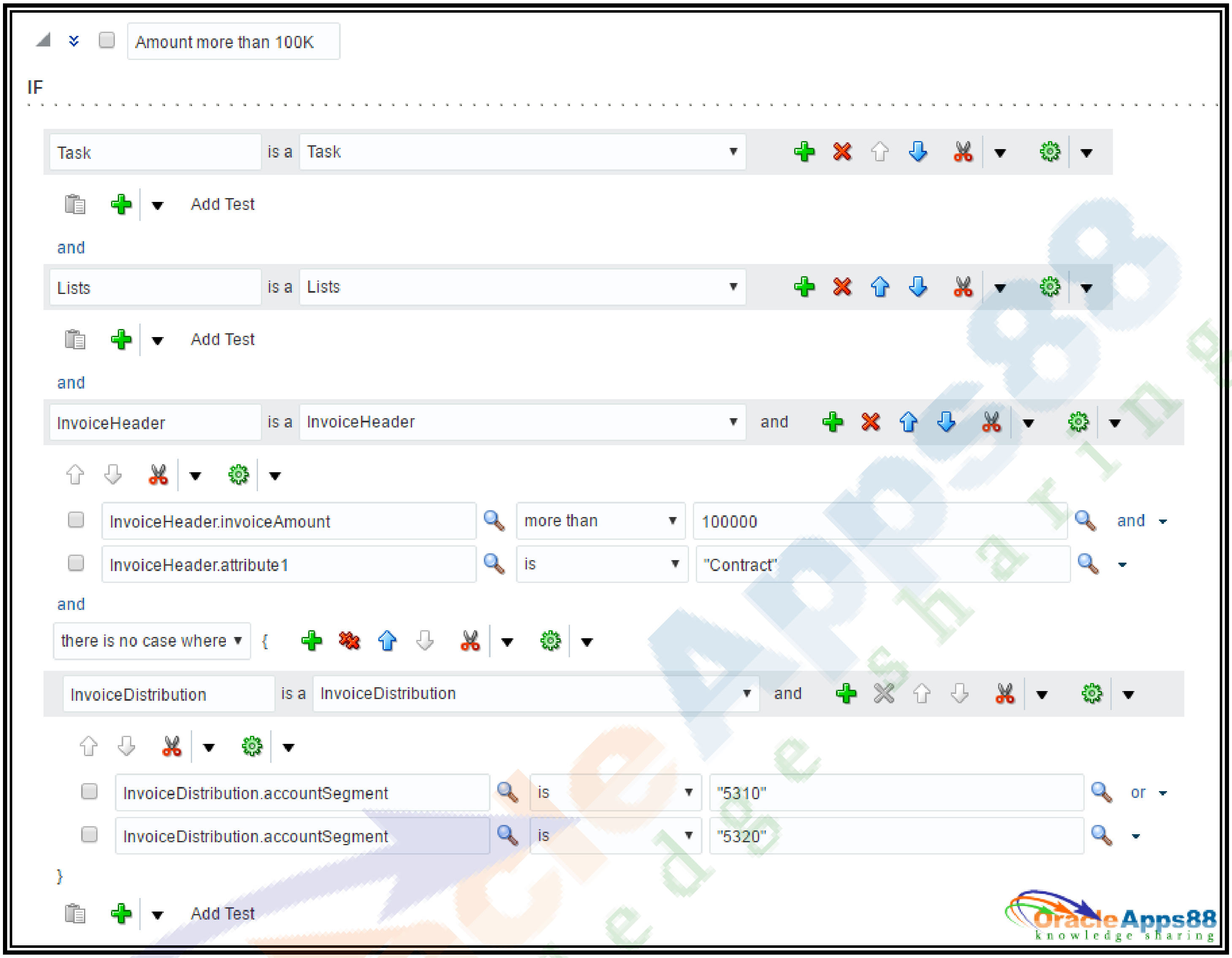

Now use Participant2 **SingleTypeParticipantOneInSequencialModeRuleSet** to configure the approval rules below:

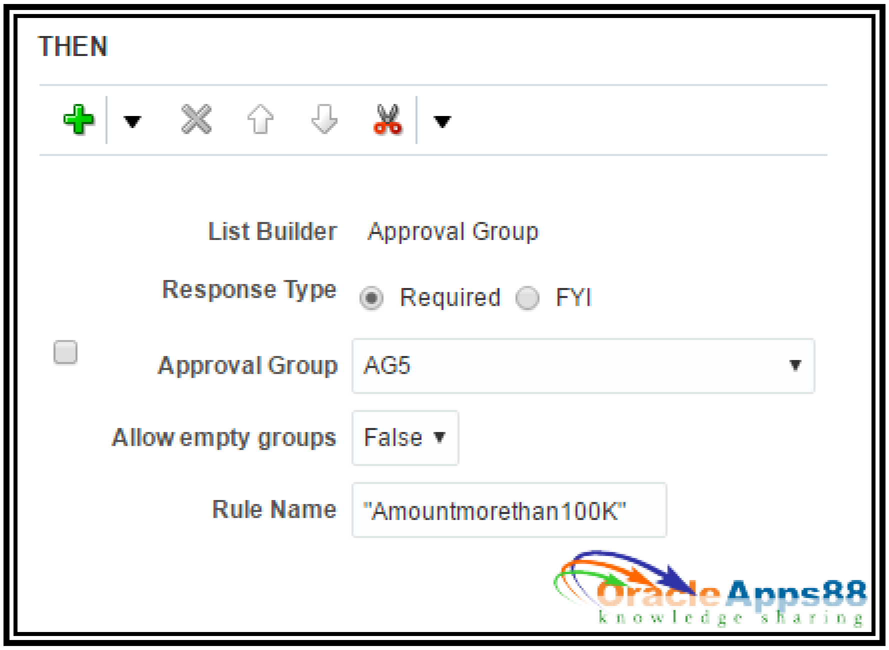
5. Define a rule with advanced options enabled to route the invoice to the approval group: **AG4** if the account segment is not **5320** or **5310** and the invoice header DFF is **Contract** and the invoice amount is more than $25,000 and less than $100,000.


Amount more than 25K anc
IF
Task is a Task
Add Test
and
Lists is a Lists
Add Test
and
InvoiceHeader is a InvoiceHeader and
InvoiceHeader.invoiceAmount same or more than 25000 and
InvoiceHeader.invoiceAmount less than 100000 and
InvoiceHeader.attribute1 is "Contract"
and
there is no case where {
InvoiceDistribution is a InvoiceDistribution and
InvoiceDistribution.accountSegment is "5310" or
InvoiceDistribution.accountSegment is "5320"
}
Add Test
OracleApps88
knowledge sharing

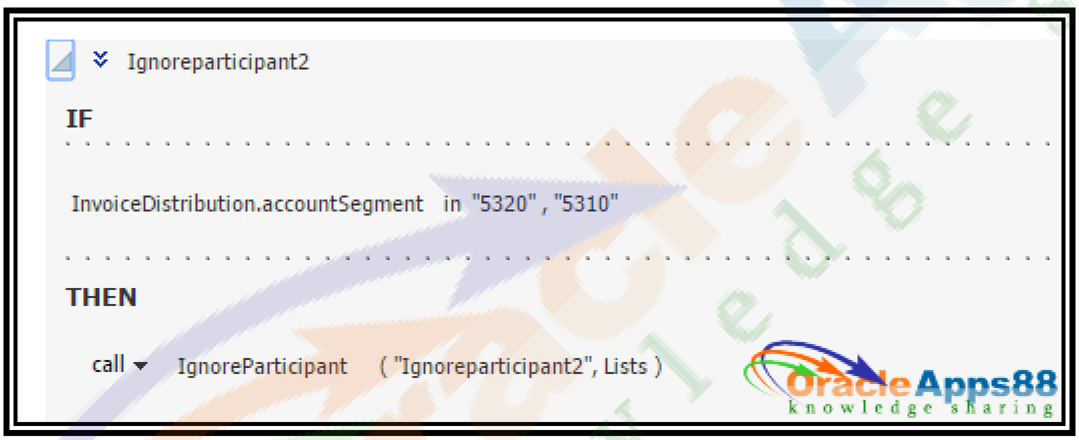



6. Define a rule with advanced options enabled to route the invoice to the approval group: **AG5** if the account segment is not **5320** or **5310** and the invoice header DFF is **Contract** and the invoice amount is more than $100,000.

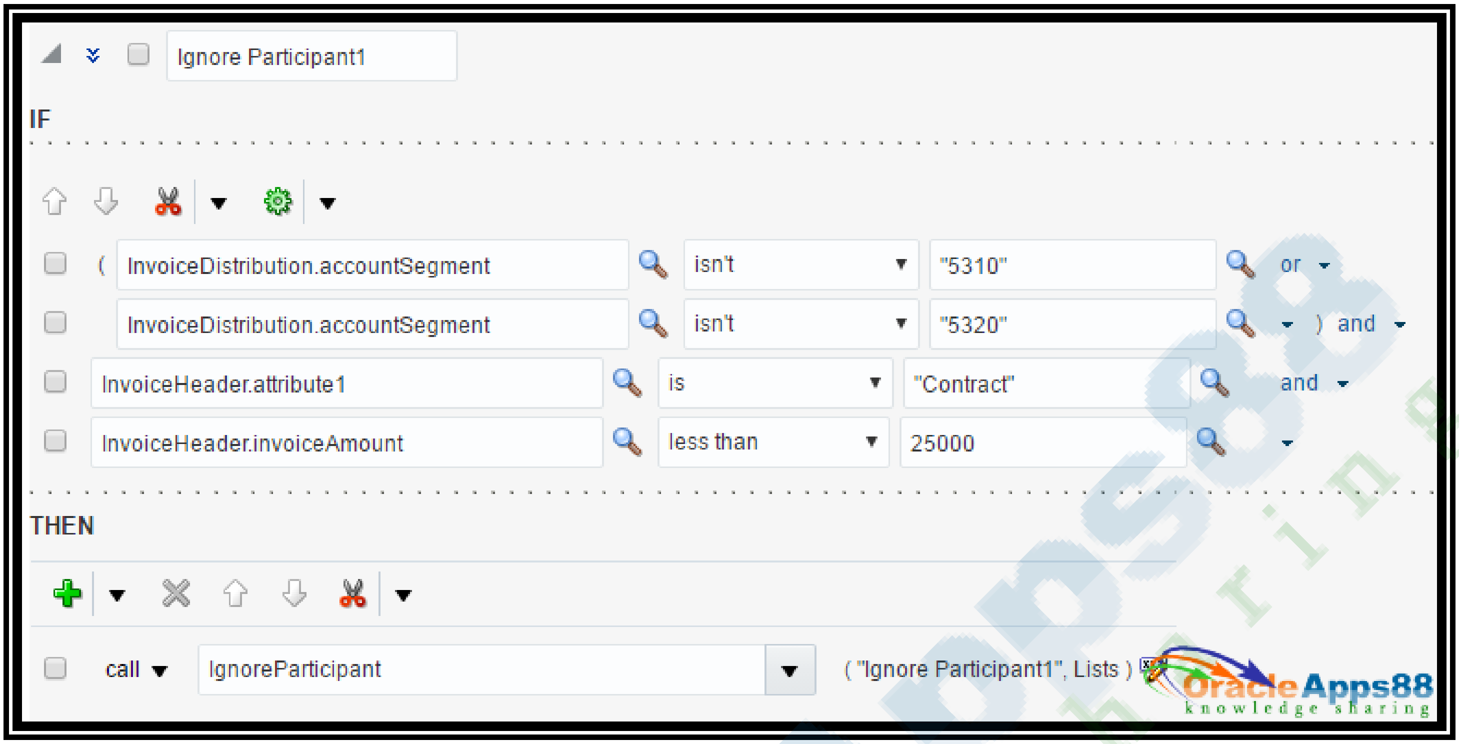

Amount more than 100K
IF
Task is a Task
Add Test
and
Lists is a Lists
Add Test
and
InvoiceHeader is a InvoiceHeader and
InvoiceHeader.invoiceAmount more than 100000 and
InvoiceHeader.attribute1 is "Contract"
and
there is no case where {
InvoiceDistribution is a InvoiceDistribution and
InvoiceDistribution.accountSegment is "5310" or
InvoiceDistribution.accountSegment is "5320"
}
Add Test
OracleApps88 knowledge sharing




7. Define a rule to ignore the participant if the account segment is in **5320**, or **5310**, and the DFF value is not entered.



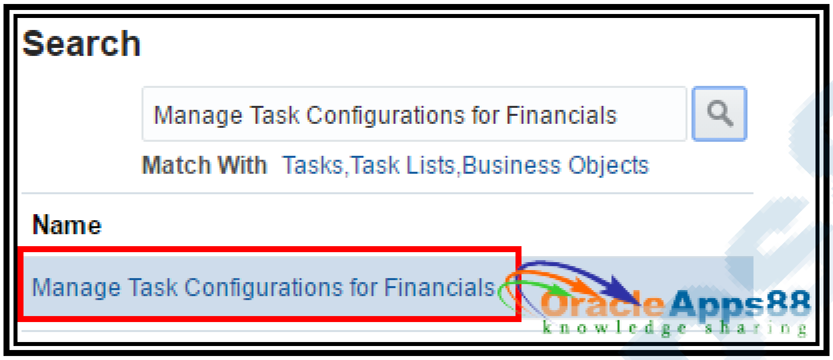
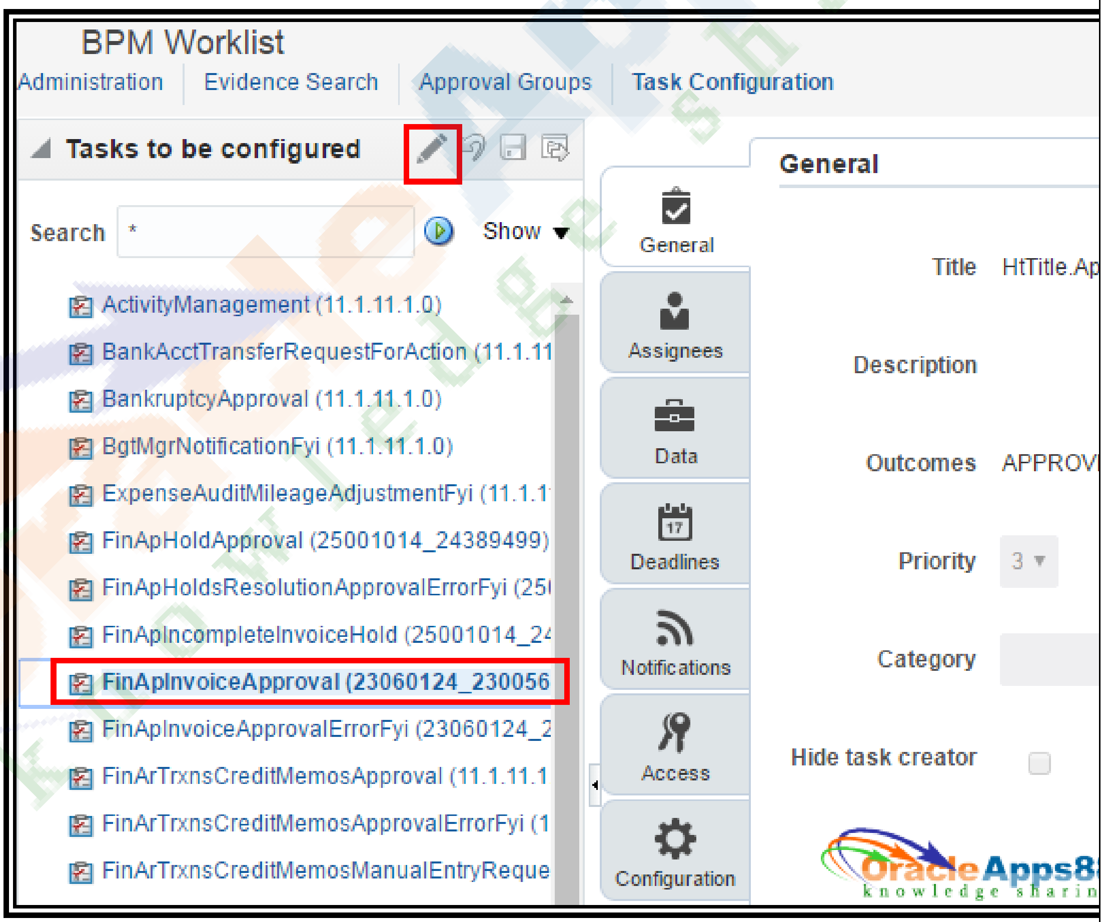

8. Define a rule to ignore the participant if the account segment is not **5320** or **5310** and the invoice header DFF is **Contract** and the invoice amount is less than $25,000.

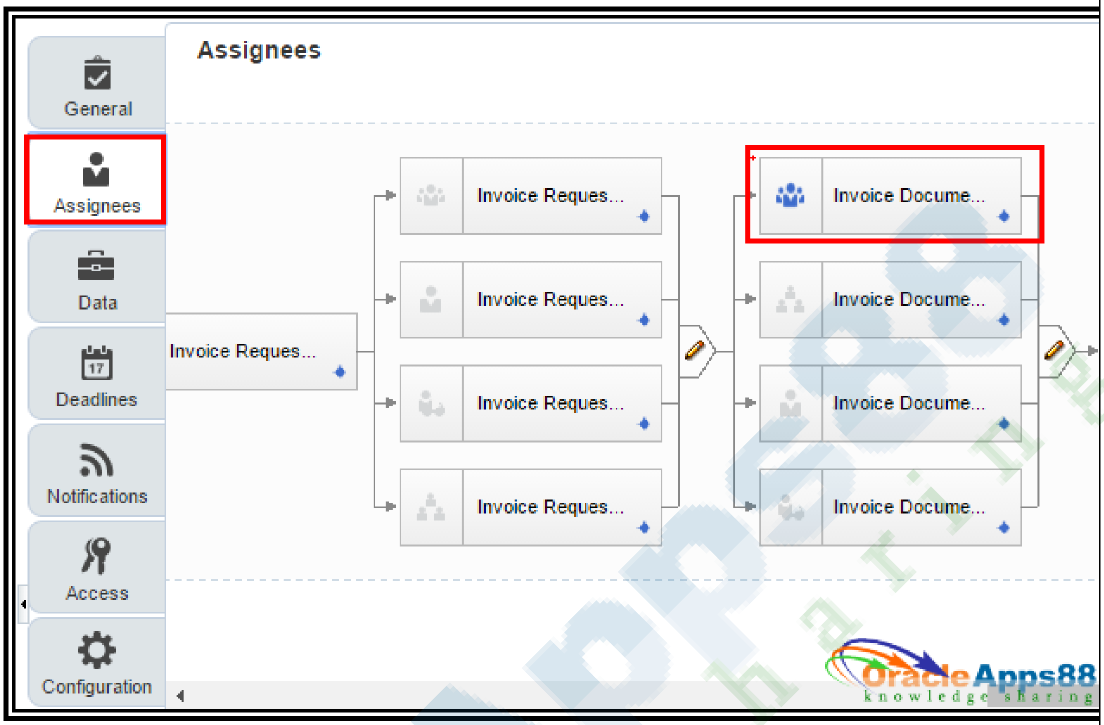

Ignore Participant1
IF
( InvoiceDistribution.accountSegment isn't "5310" or
InvoiceDistribution.accountSegment isn't "5320" ) and
InvoiceHeader.attribute1 is "Contract" and
InvoiceHeader.invoiceAmount less than 25000
THEN
call IgnoreParticipant ( "Ignore Participant1", Lists )

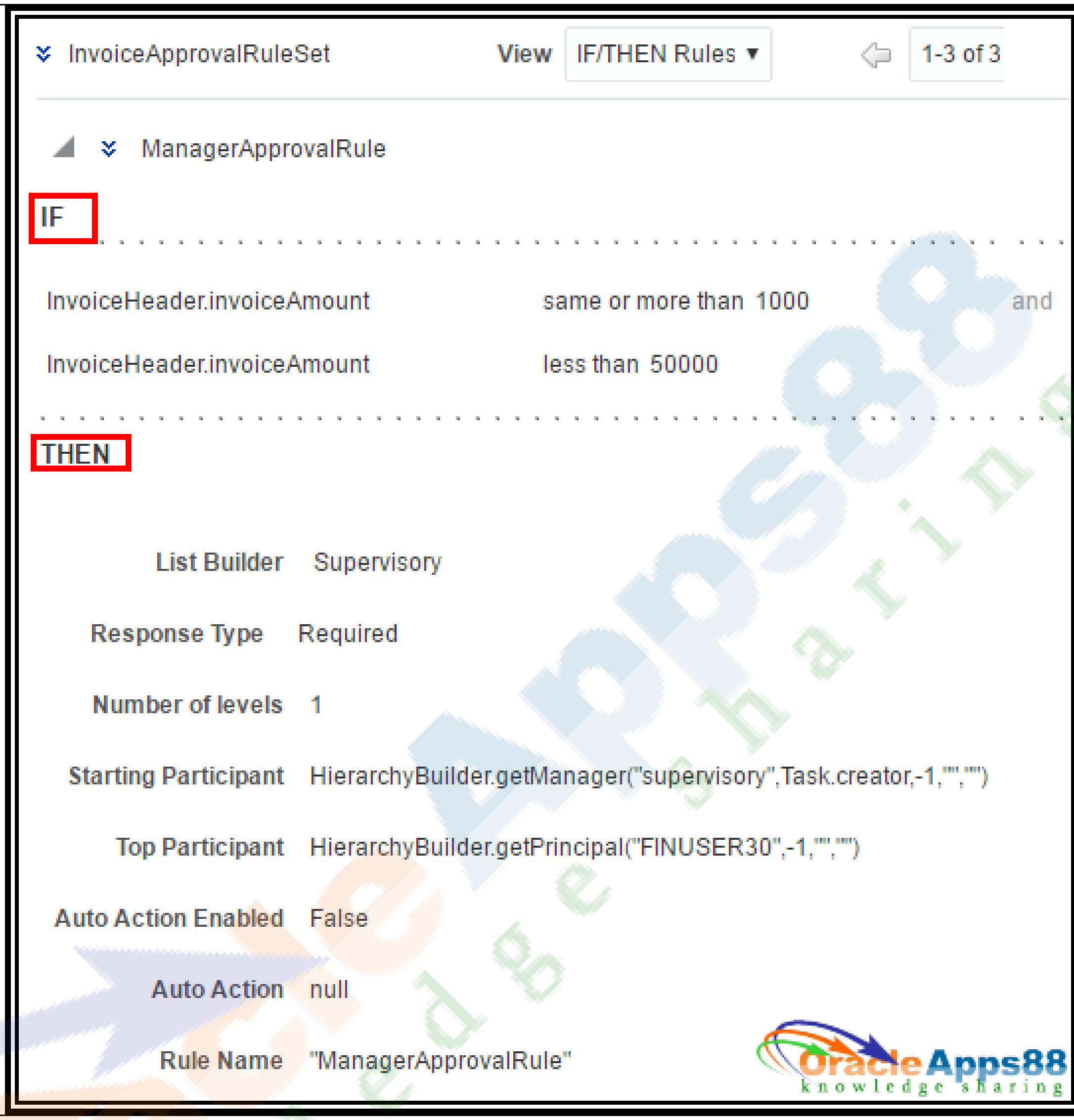
## Appendix: Navigation to approval rules UI and approval groups

This section explains on how to navigate to Business Process Management User Interface to configure approval rules and approval group.

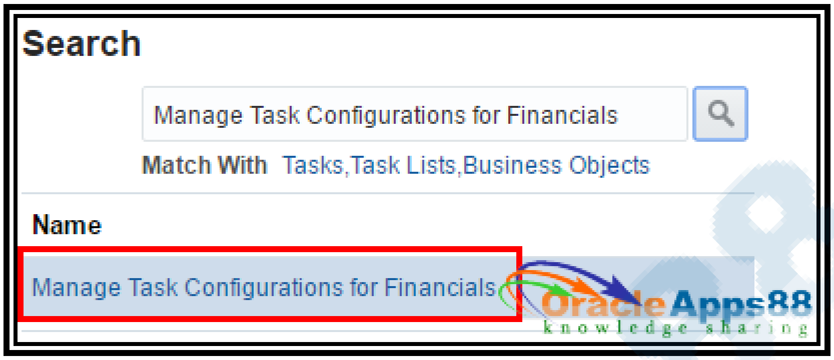
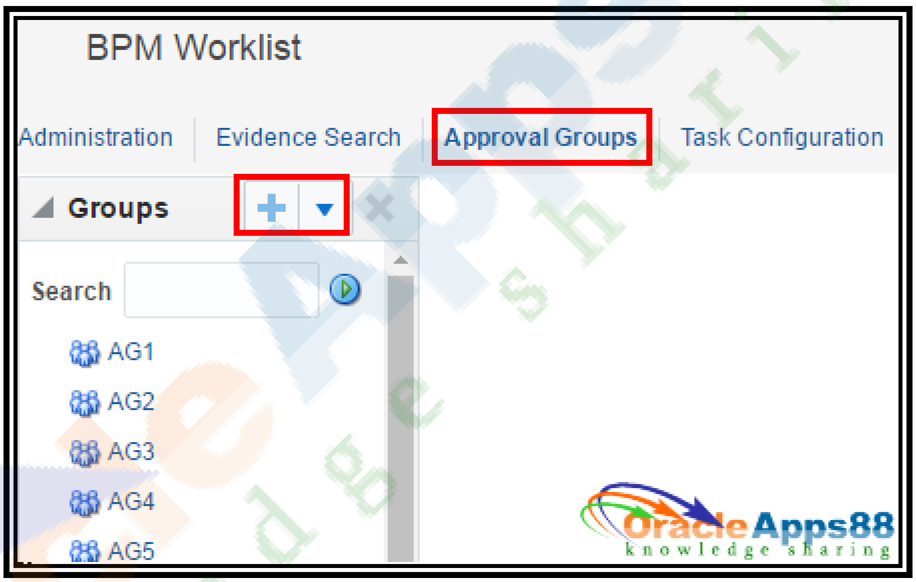
**Navigation to configure invoice approval rules UI:**

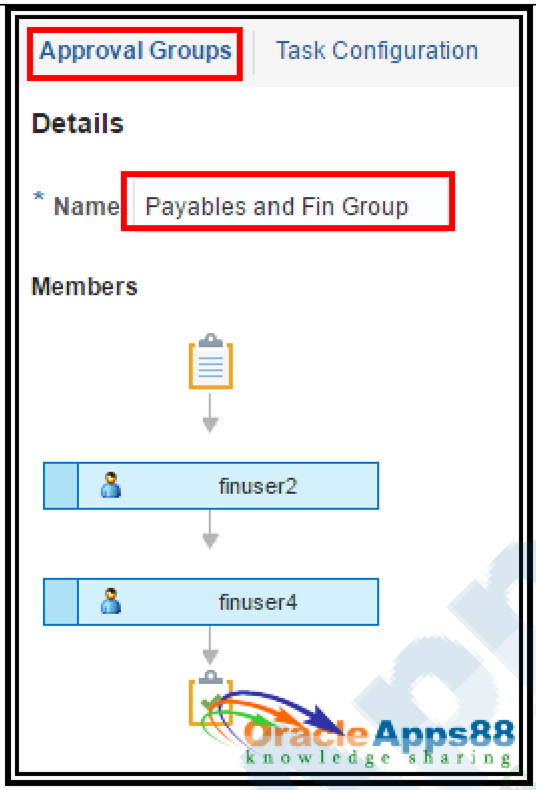
<table>
<tr>
<td>1. Navigate to Setup and Maintenance UI and search for the task Manage Task Configuration for Financials and click on the task.</td>
<td>
</td>
</tr>
<tr>
<td>2. Select FinAPInvoiceApproval task and click on edit icon</td>
<td>
</td>
</tr>
</table>

| | |
|---|---|
| 3.Click on select Assignees tab and select appropriate participant |  |
| 4.Create an approval rule with IF and THEN conditions | |


InvoiceApprovalRuleSet
View IF/THEN Rules
1-3 of 3
ManagerApprovalRule
IF
InvoiceHeader.invoiceAmount same or more than 1000 and
InvoiceHeader.invoiceAmount less than 50000
THEN
List Builder Supervisory
Response Type Required
Number of levels 1
Starting Participant HierarchyBuilder.getManager("supervisory",Task.creator,-1,"","")
Top Participant HierarchyBuilder.getPrincipal("FINUSER30",-1,"","")
Auto Action Enabled False
Auto Action null
Rule Name "ManagerApprovalRule"

**Navigation to configure approval groups UI:**

| | |
|---|---|
| 1.Navigate to Setup and Maintenance UI and search for the task **Manage Task Configuration for Financials** and click on the task. |  |
| 2.Click on + Icon to create approval group |  |
| 3.Provide name for an approval group and add approvers to the group | |


Approval Groups
Task Configuration
Details
* Name
Payables and Fin Group
Members
finuser2
finuser4
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knowledge sharing

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