

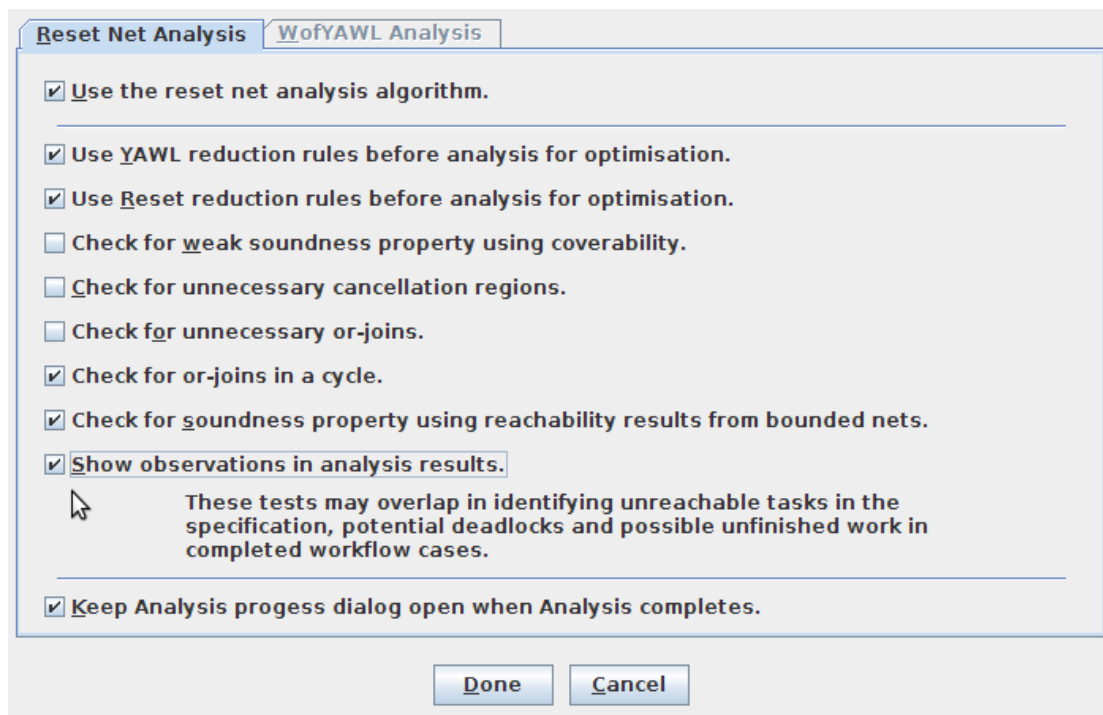
Computer Lab Exercises: YAWL Data

DO THIS IN GROUPS OF TWO OR MORE

Class 18

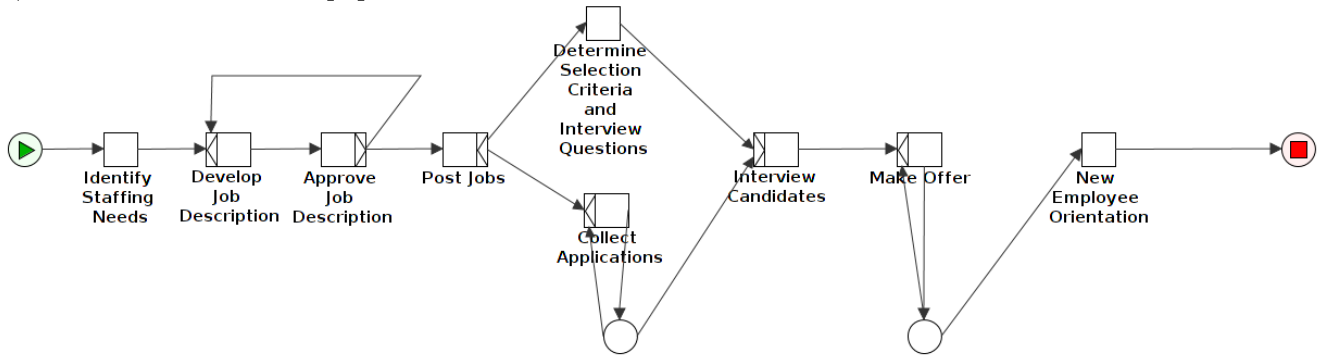
Exercise 1 (Editor Configuration):

- Start the YAWL editor
- Configure the YAWL editor. See the handout “Configuring YAWL”. You will need to configure (or at least check it) every time you use the YAWL editor!.
- Make sure the YAWL editor shows two green checkmarks at the bottom left.
- In the “Tools” menu, choose “Configure Specification Analysis ...”. In the following dialog box, tick the box that says “Show observations in analysis results”

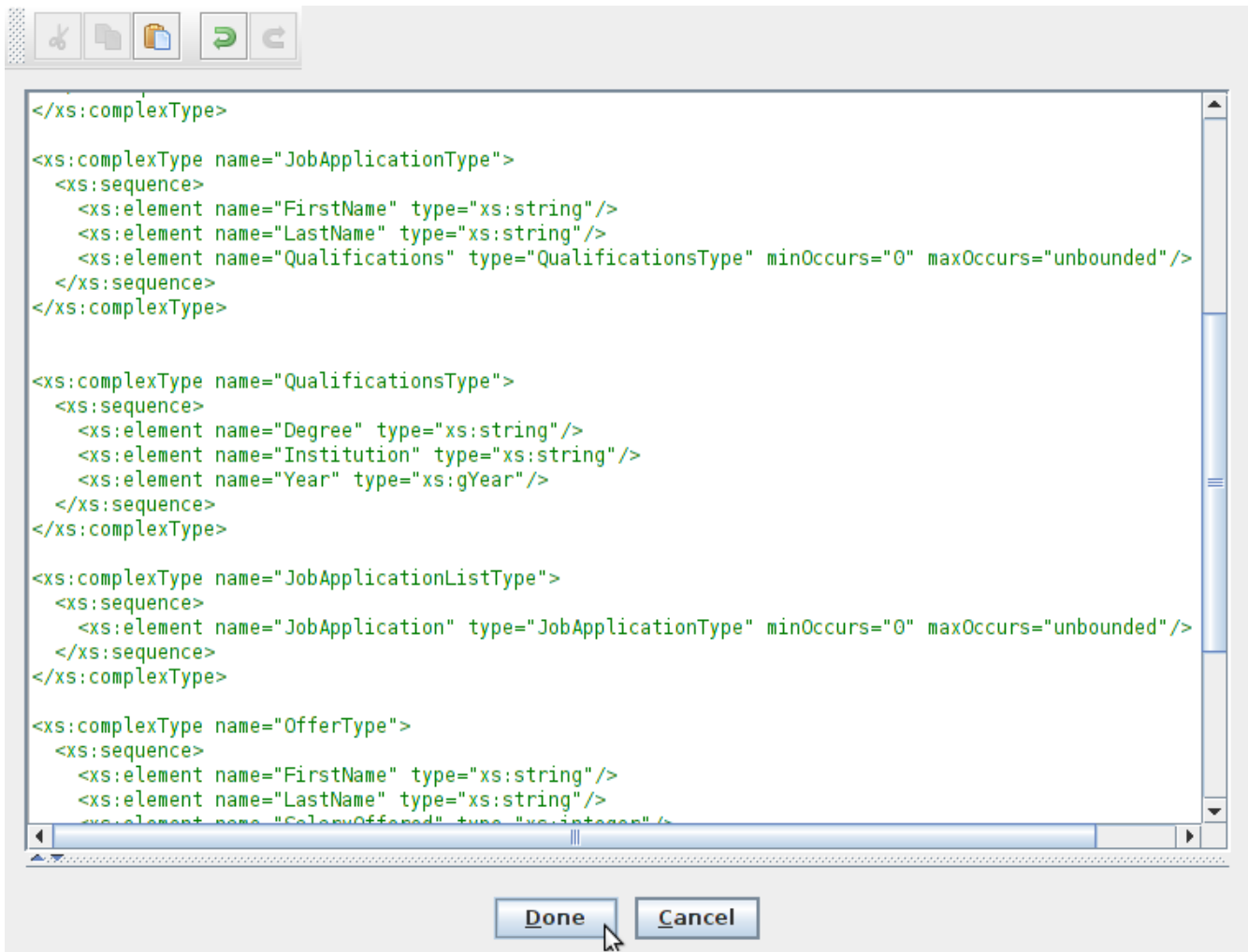


Exercise 2 (Datatypes):

- Download the YAWL process “busi2710lab_recruitment_short.zip” from the course web site.
 - There are two files in this zip file: Move or copy both to your Desktop!
- Open the YAWL process file with the YAWL editor



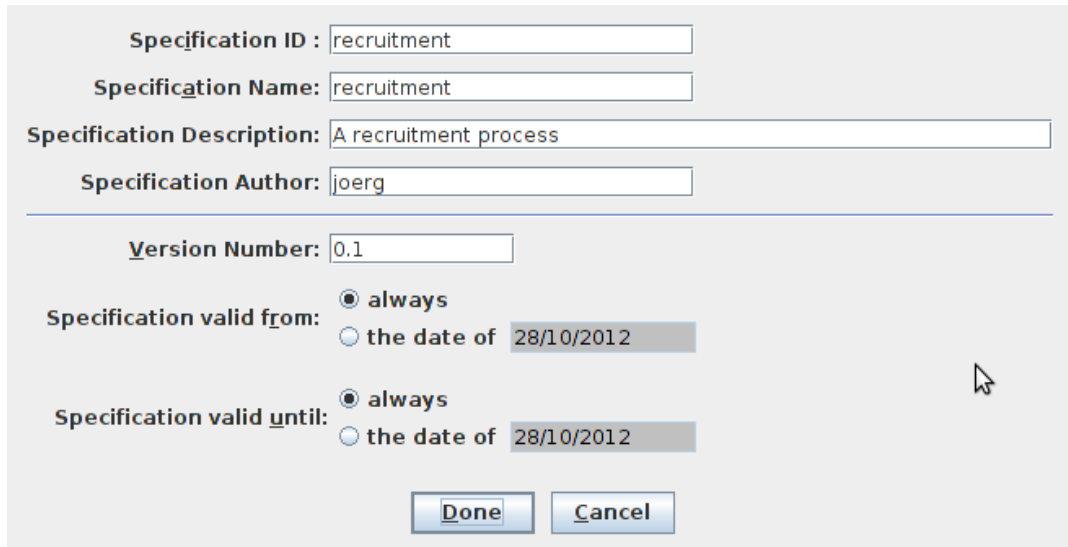
- Open the file “datatypes.txt” in Notepad, select the entire content and copy it to the clipboard (CTRL-C)
- In the YAWL editor, select “Specification” -> “Update Data Type Definitions ...”. In the following dialog box, remove all existing contents and paste the datatypes.txt document (CTRL-V)



- Make sure the text is in green then click “Done”.

- Select “Specification” -> “Update Specification Properties”.

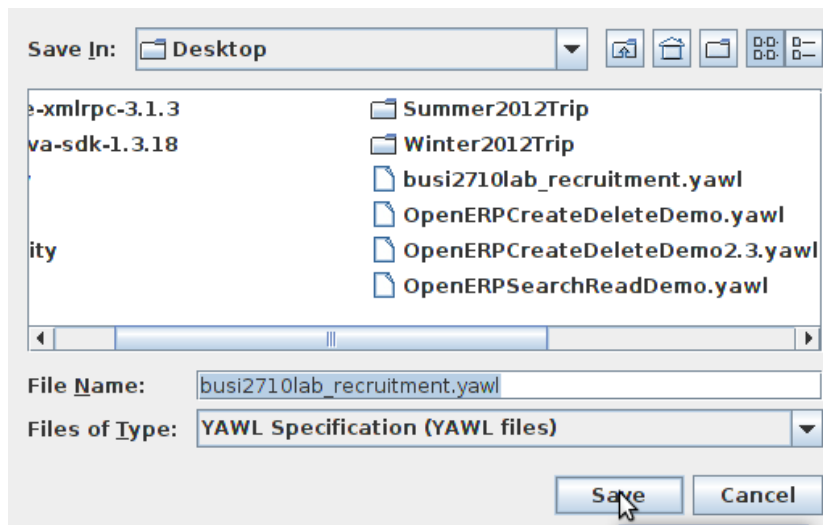
In the following dialog box, change the specification ID to make it unique, e.g. by prefixing it with your initials, or the last digits of your students id. For example, change it to 1234recruitment. Change the specification name in the same way. You may also want to indicate your name or other identification in the specification description.



The dialog box contains the following fields and options:

- Specification ID :** recruitment
- Specification Name:** recruitment
- Specification Description:** A recruitment process
- Specification Author:** joerg
- Version Number:** 0.1
- Specification valid from:**
 - ☒ always
 - ☐ the date of 28/10/2012
- Specification valid until:**
 - ☒ always
 - ☐ the date of 28/10/2012
- Buttons:** Done, Cancel

- Select “Specification” -> “Save SpecificationAs ...”. Save your file using a new and unique name. *Save your file on the Desktop!!*



The dialog box shows the following details:

- Save In:** Desktop
- File List:**
 - Summer2012Trip
 - Winter2012Trip
 - busi2710lab_recruitment.yawl
 - OpenERPCreateDeleteDemo.yawl
 - OpenERPCreateDeleteDemo2.3.yawl
 - OpenERPSearchReadDemo.yawl
- File Name:** busi2710lab_recruitment.yawl
- Files of Type:** YAWL Specification (YAWL files)
- Buttons:** Save, Cancel

Exercise 3 (Net-level Data):

In this exercise, you will define the data that you need to keep track of as you execute the process. This data is defined at the net level. Since we have no composite tasks, all net-level data usage is considered local to the net, in that it is not passed on to or from unfolded nets.

- Select “Net” -> “Update Net Detail”

Net Decomposition Label:

Net Decomposition Variables

Name	Type	Usage
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Buttons: , , , ,

- Create the variables needed for the recruitment process. You should create the following variables with the corresponding data types. For the variable “Approved” enter “false” as initial value.

Net Decomposition Label:

Net Decomposition Variables

Name	Type	Usage
JobDescription	JobDescriptionType	Local
JobCriteria	JobCriteriaType	Local
JobApplications	JobApplicationListType	Local
Offers	OfferListType	Local
Approved	boolean	Local
PostedDate	date	Local

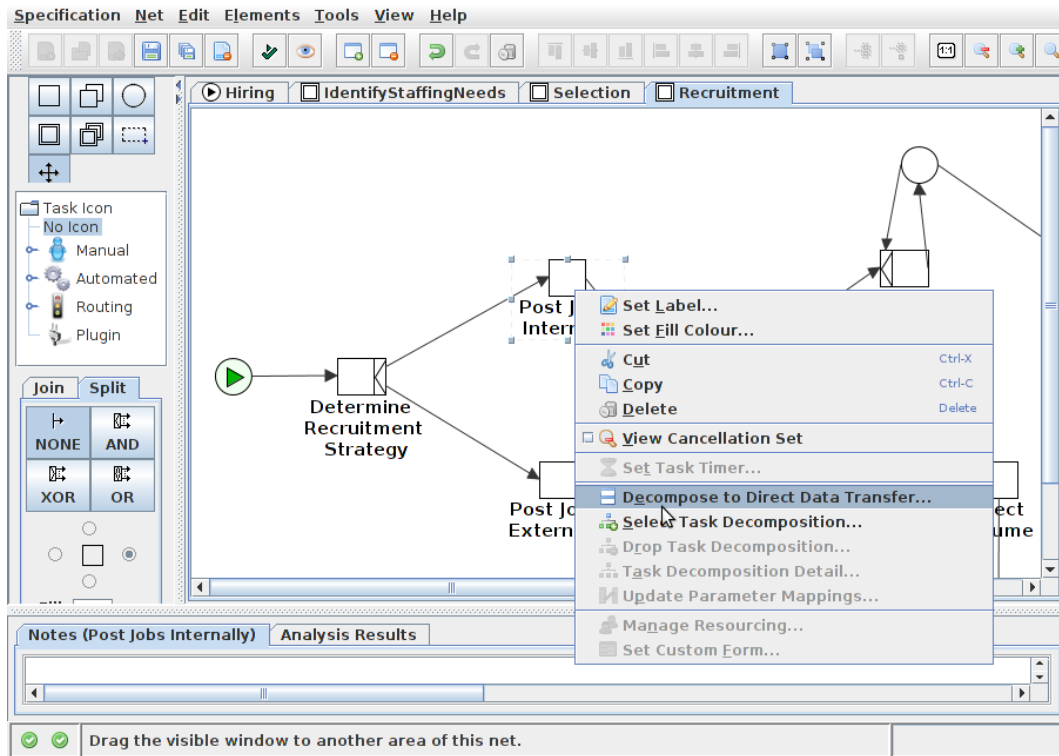
Buttons: , , , ,

- Click “Done” and save your YAWL specification.

Exercise 4 (Task Decompositions):

In this exercise, we define the data that each task in the process needs, either as input or output from the task or both. This is done in the “task decompositions”. We will use the simplest method to create task decompositions, by using “direct data transfer” where we only need to specify input and output variables and are not concerned with more complex data transformations.

- For all tasks in the process, right-click on the task and select “Decompose to Direct Data Transfer ...”



- In the following dialog box, select the appropriate input and output variables:

Select a number of net variables to be used as input to this task. Do the same for output. The selected net variables will have type-compatible task variables of the same name created for them, and mappings that will enact a direct data copy between the newly created task variables and the specified selected net variables.

Decomposition name:

Net Variables for Input		
<input type="checkbox"/>	Name	Type
<input type="checkbox"/>	JobDescription	JobDescriptionType
<input type="checkbox"/>	JobCriteria	JobCriteriaType
<input type="checkbox"/>	JobApplications	JobApplicationListType
<input type="checkbox"/>	Offers	OfferListType
<input type="checkbox"/>	Approved	boolean
<input type="checkbox"/>	PostedDate	date

Net Variables for Output		
<input type="checkbox"/>	Name	Type
<input type="checkbox"/>	JobDescription	JobDescriptionType
<input type="checkbox"/>	JobCriteria	JobCriteriaType
<input type="checkbox"/>	JobApplications	JobApplicationListType
<input type="checkbox"/>	Offers	OfferListType
<input type="checkbox"/>	Approved	boolean
<input type="checkbox"/>	PostedDate	date

When a variable is input, it means their values will be shown to the user when the task is executed (i.e. the task receives their values as input). When a variable is output, it means their values can be entered by the user when the task is executed (i.e. the task outputs their new/changed values to the process).

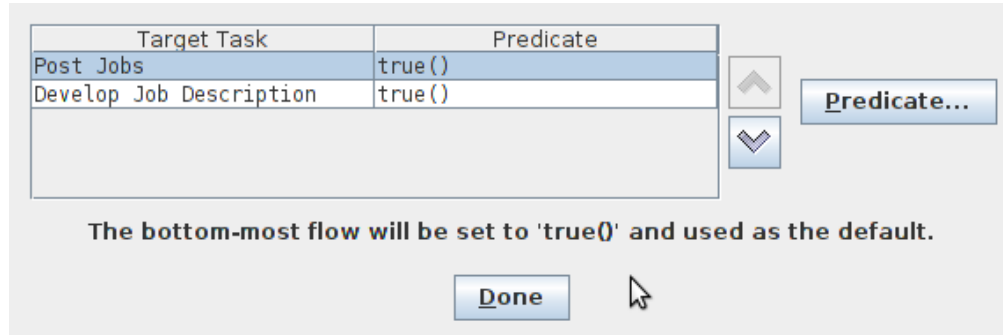
The following table shows some sensible assignment of input/output variables for each task in the process. You can use others if you want to.

Task	Inputs	Outputs
Identify Staffing Needs		JobDescription
Develop Job Description	JobDescription	JobDescription
Approve Job Description	JobDescription	Approved
Post Jobs	JobDescription	PostedDate
Determine Selection Criteria ...	JobDescription	JobCriteria
Collect Applications	JobApplications	JobApplications
Interview Candidates	JobDescription JobCriteria JobApplications	
Make Offer	JobApplications Offers	Offers
New Employee Orientation	Offers	

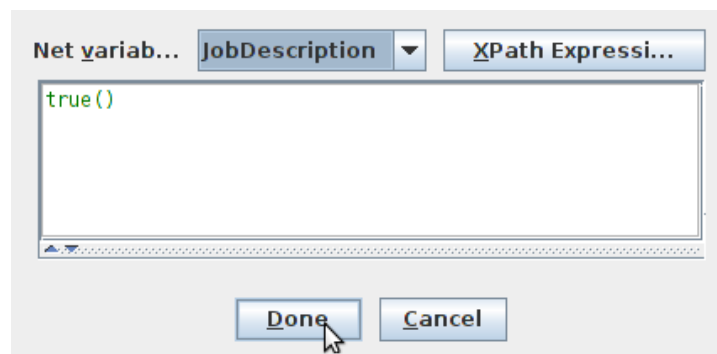
Exercise 5 (Flow Details):

We can now use the data in the process to control which direction the process takes. The task “Approve Job Description” has an XOR split. This means, at runtime the workflow engine must decide which branch of the process to execute. We specify this based on the value of the “Approved” variable:

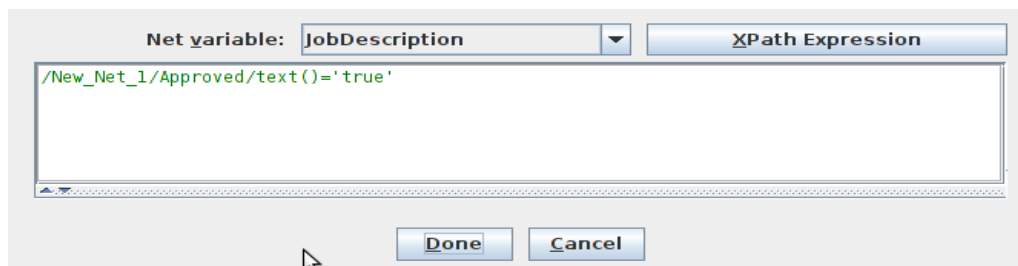
- Right-click on the task “Approve Job Description” and select “Update Flow Detail ...”



- In the dialog box, select the top target task and click “Predicate ...”



- In the dialog box, select the net variable “Approved”
- Remove all content in the text box, then click the button “Xpath Expression”
- Add “='true'” behind the text to complete the condition. The text should show be as in the following figure and should show in green. Press “Done” when done.

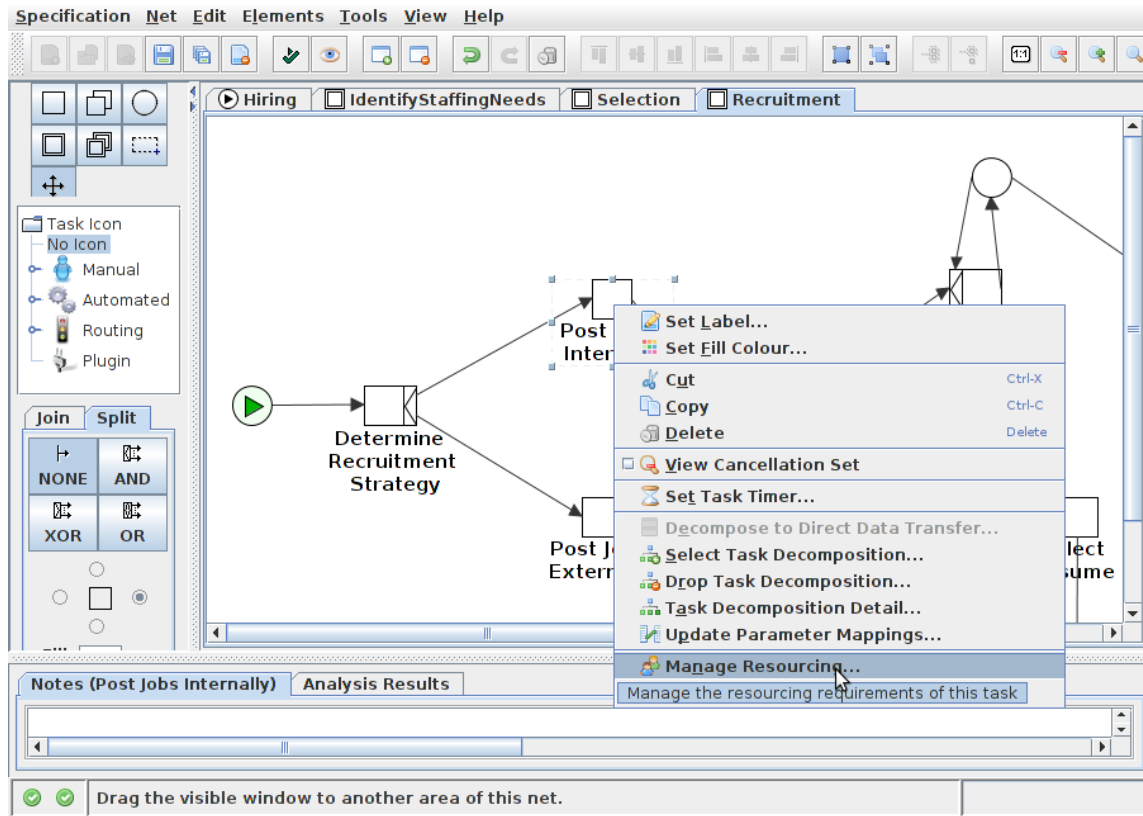


- Press “Done” in the earlier dialog box and save your YAWL specification.

Exercise 6 (Resourcing):

You are now ready to assign resources to each task in the YAWL editor. Only atomic (non-composite) tasks can be assigned resources. Make sure you assign resources for all labeled atomic tasks.

- Right-click on the task again and select “Manage Resourcing...”



- In the following dialogs, enter resource information that appears sensible. You have seen these dialogs in class and they should be familiar to you.

IMPORTANT: For the tasks “Collect Applications”, “Interview Candidates”, “Make Offer” and “New Employee Orientation”, do **NOT** automatically (by system) allocate and start. You should only offer these automatically, allocation and start should be done by the user.

These are tasks that are involved in a deferred branching pattern, i.e. a branching that is decided by the user. When you execute the process in the following exercise 7, understand the behavior of these branching points!!

- Once you are done, save the process specification. Make sure you save it on your desktop!!

Exercise 7 (Executing the Process):

You are now ready to load the resourced process specification to the YAWL server and execute the process.

- Using a web browser, log into the YAWL resource service here:

<http://ec2-107-21-186-243.compute-1.amazonaws.com:8080/resourceService/>

Log in using your own user name and password.

- Select the “Cases” tab.
- Select “Browse ...” to select a YAWL process specification file to upload. Select the file you have just saved on your computer.
- Select “Upload File”. If all goes well, the process specification with your specification ID will appear in the list of specifications.



- Select your process specification in the list.
- Click the “Launch Case” button. You should now see a new case (process instance) in the list at the bottom. Notice the case number. This is how you can identify which task belongs to which process instance.

Depending on how you assigned resources, tasks are automatically offered, allocated or started to/for various participants. Log in as those participants and check the “Work Queues” tab.

- To accept an offered task, select a task from the “Offered” queue and select “Accept Offer” or “Accept & Start”.
- To start an allocated task, select a task from the “Allocated” queue and select “Start”.
- To complete a started task, select a task from the “Started” queue and select “Complete” (At this point, we have not modelled process data/information, so not much can be done here. We will revisit this during the next lab)

Tasks to which the resource service could not automatically assign resources (because you either selected manual offer/assignment or the initial distribution set is empty) are in the “Admin Queues”, and need to be manually offered or assigned to human resources.