

C BPMN Process Modeling - PRACTICE

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1. DONE README

- This file is a practice file for BPMN process models
- You'll learn:
 1. to create a BPMN process model from pseudocode
 2. to save a process model as image or XML file
 3. to display an image file inline in Emacs Org-mode
 4. to compress file into an archive file
- Time: approx. 30-60 min.
- When you're done with a section move the cursor on the section heading and type S-<right> (or SHIFT+<right-arrow>).

2. DONE Identify yourself

- replace the placeholder [yourName] in the header of this file by your name and save the file (C-x C-s).

3. DONE Battle problem - learn to use bpmn.io

Objective: learn to create, debug and save a process model.

1. Open bpmn.io and "TRY" the free model editor.
2. Create a simple BPMN diagram based on the pseudocode below for the 'battle' problem. The BPMN model should look like [this figure](#).

Pseudocode:

```
if health is less than 100
  Drink health potion
else
  Resume battle
end if
```

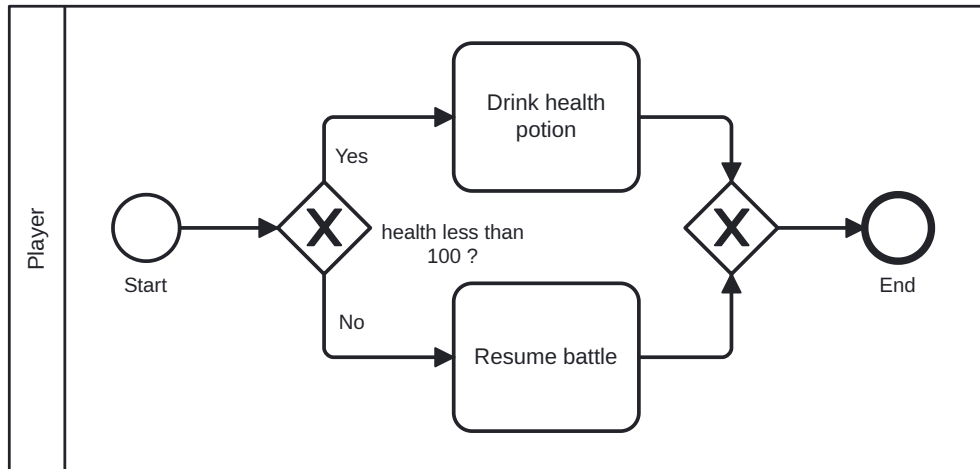
3. Save the model as a vector graphics file (.svg) and as a XML file (.bpmn). The SVG file can be viewed, the XML file can be loaded by a process model editor like bpmn.io.
4. Check that the files are where you think they are using one of these ways:
 - Open a Dired buffer in Emacs (C-x d - refresh with g)

- Open a Shell inside Emacs (M-x shell) and check with `ls -l`
 - Open a Windows CMD line terminal and check with `DIR`
5. Add the SVG file as an **inline image** below: add metadata followed by a link to the file address.

- Metadata: attribute + image width in pixels and image caption

```
#+ATTR_HTML: :width 500px
#+CAPTION: [describe process model]
```

- File address: enclose the path to the file in double square brackets: `[[path/to/file.svg]]`



4. **DONE** Gold withdrawal problem 1

1. Create a *model* based on the following pseudocode:

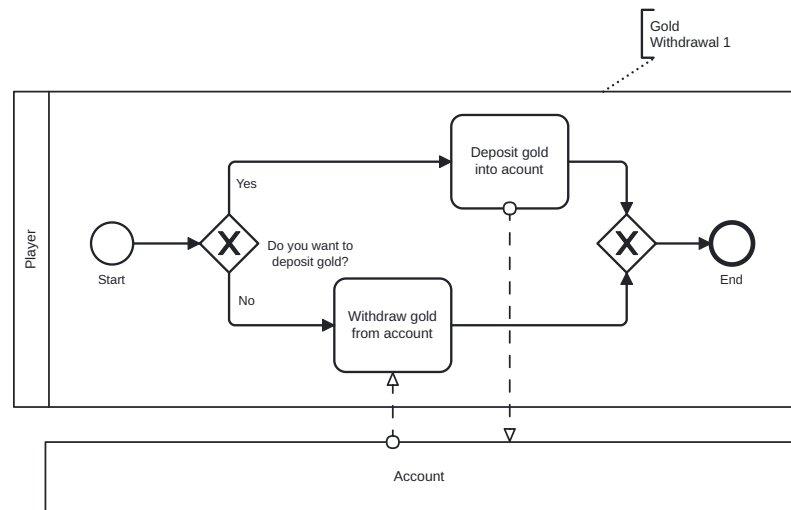
```
if action == deposit
    Deposit gold into account
else
    Withdraw gold from account
end if
```

2. Save the BPMN model as `gold.bpmn` on your PC.
3. Save the SVG file as `gold.svg` on your PC.
4. Add the SVG file as an **inline image** below: add metadata followed by a link to the file address.

- Metadata: attribute + image width in pixels and image caption

```
#+ATTR_HTML: :width 500px
#+CAPTION: BPMN model of pseudocode
```

- File address: enclose the path to the file in double square brackets: `[[path/to/file.svg]]`



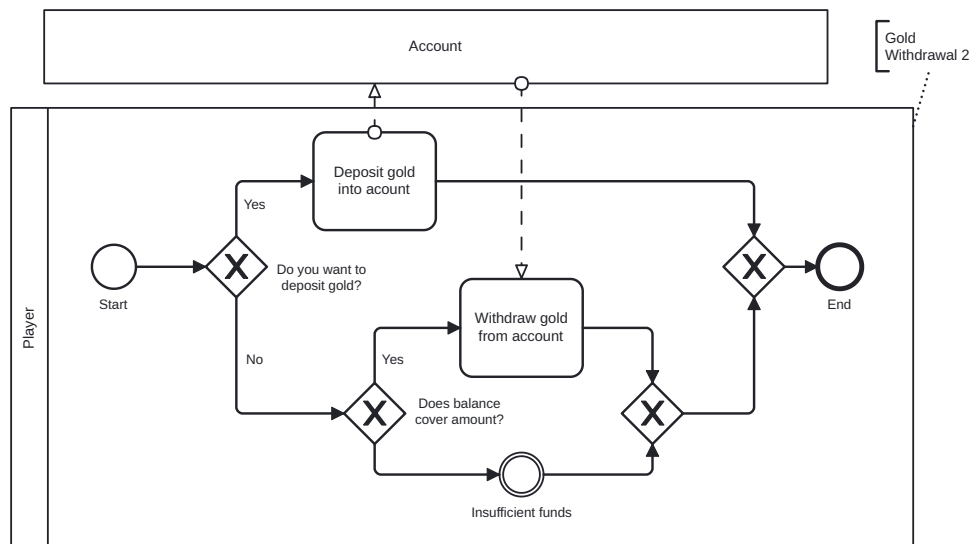
5. **DONE** Gold withdrawal problem 2

Create a model based on the following pseudocode:

```

if action == deposit
  Deposit gold into account
else
  if balance < amount requested
    Insufficient funds
  else
    Withdraw gold from account
  end if
end if
  
```

1. Save the BPMN model as gold2.bpmn on your PC.
2. Save the SVG file as gold2.svg on your PC.
3. Add the SVG file as an **inline image** below.



6. **DONE** Gold withdrawal problem 3

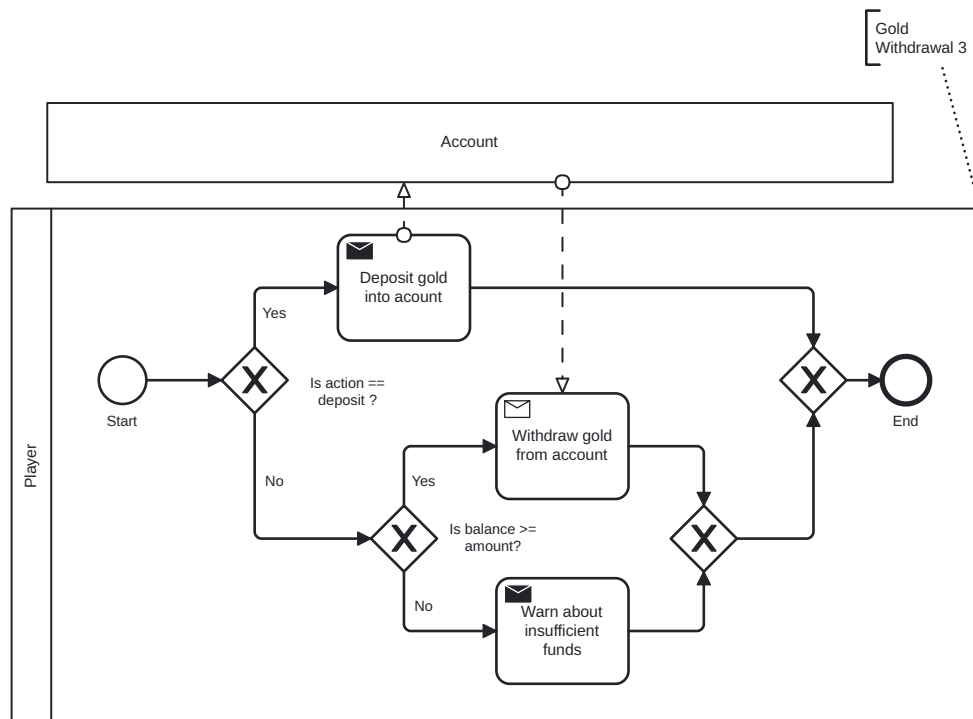
What changes if you use the pseudocode below instead? Make the changes.

```

if action == deposit
  Deposit gold into account
else
  if balance >= amount requested
    Withdraw gold from account
  else
    Insufficient funds
  end if
end if

```

1. Save the BPMN model as `gold3.bpmn` on your PC.
2. Save the SVG file as `gold3.svg` on your PC.
3. Add the SVG file as an **inline image** below.



7. Submit your results to Canvas

- Submit a ZIP file including the Org-mode file and all SVG and XML files to Canvas.
- To create a ZIP archive in Windows, you can use the `tar` command or the `zip` command. We'll check in class which ones exist and run a drill.
- Whatever the command to compress or zip is, the syntax is:

```
[compress-command] [zip-file] [list of files]
```

For example, the following command will compress the file `bpmn.org` and the files `bpmn.svg` and `bpmn.bpmn` and create an archive file `bpmn.zip`:

```
tar -cf bpmn.zip bpmn.org bpmn.svg bpmn.bpmn
```

- In Linux (or on the Emacs eshell), the `file` command will tell you the type of the file. So `file bpmn.zip` should return:

```
bpmn.zip: POSIX tar archive (GNU)
```

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[Validate](#)