



Automated Builds

Introduction

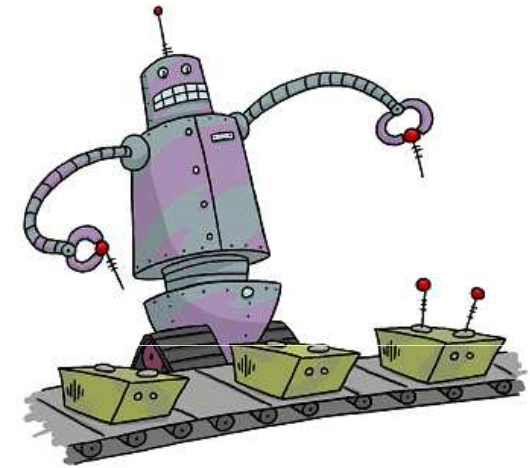


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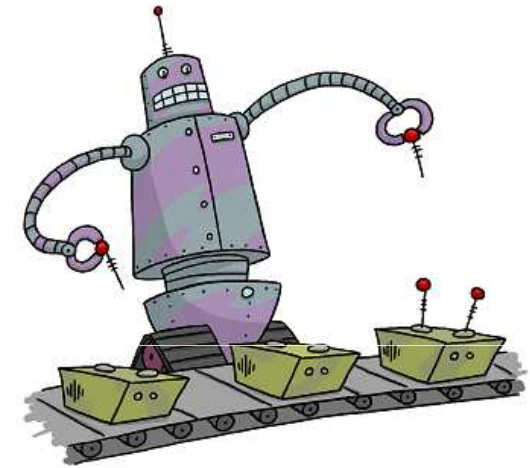
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A typical working day



A typical working day

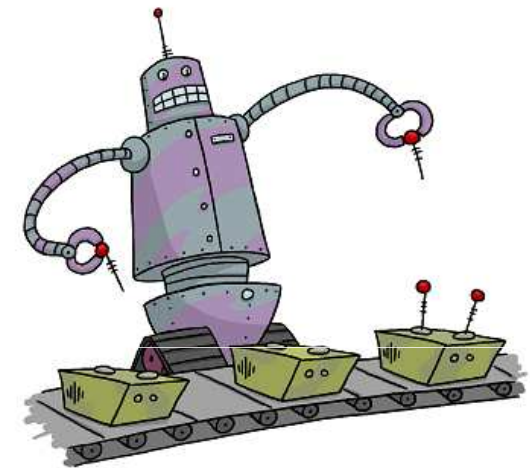
Re-draw
Figure 8



A typical working day

Re-draw
Figure 8

Recalculate
data

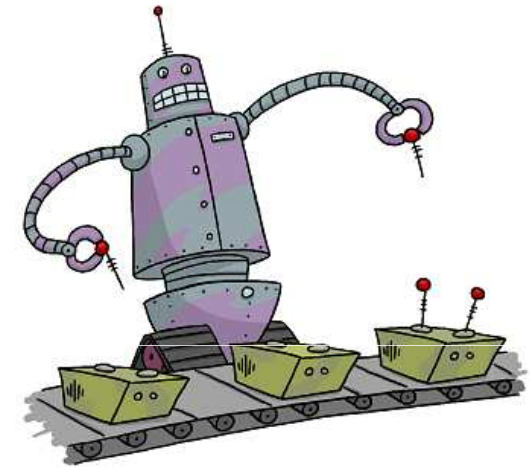


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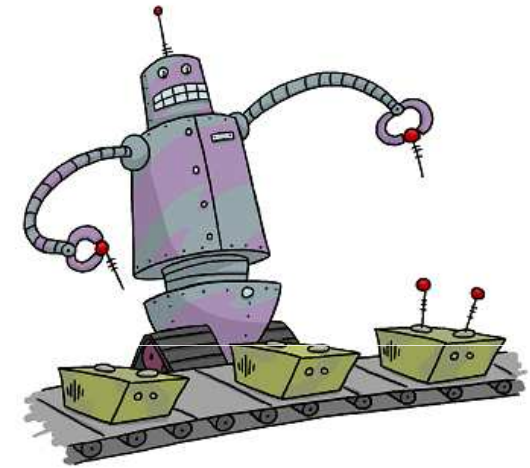
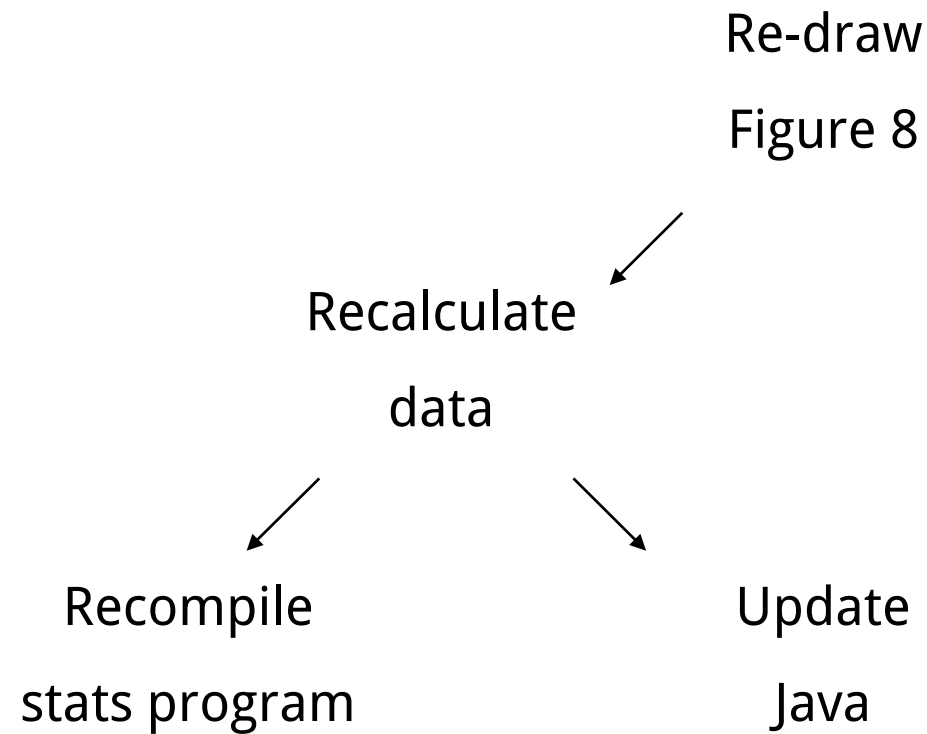
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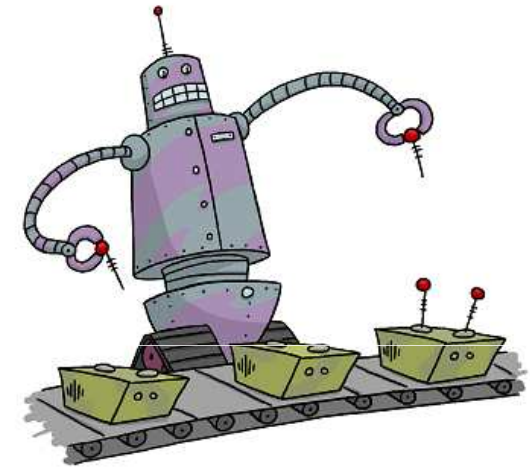
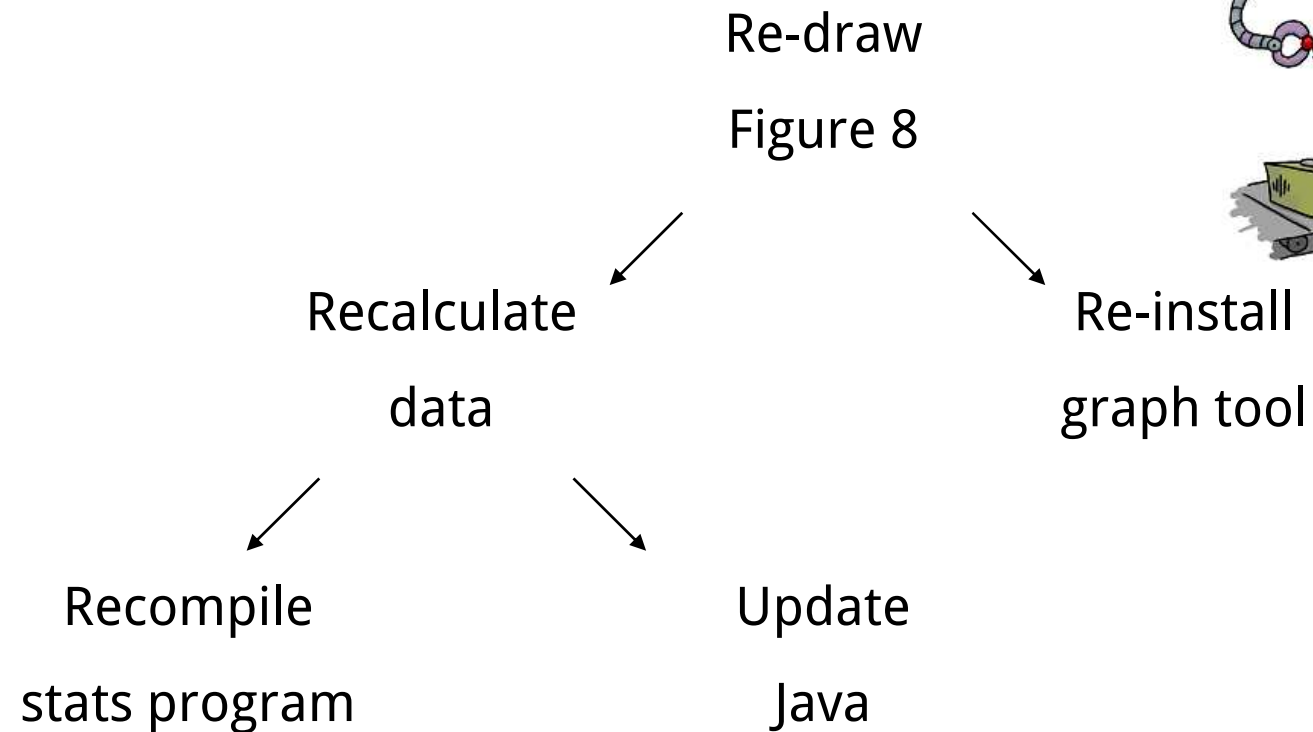
Recompile
stats program



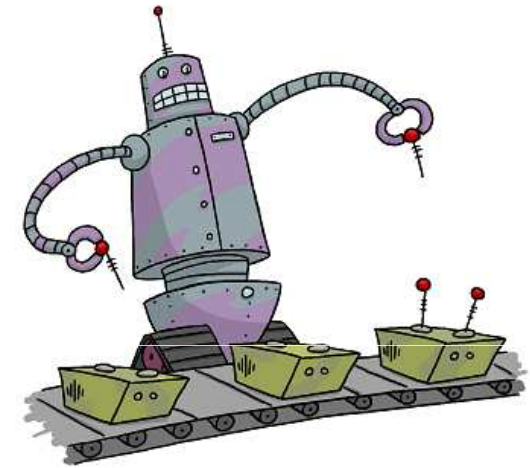
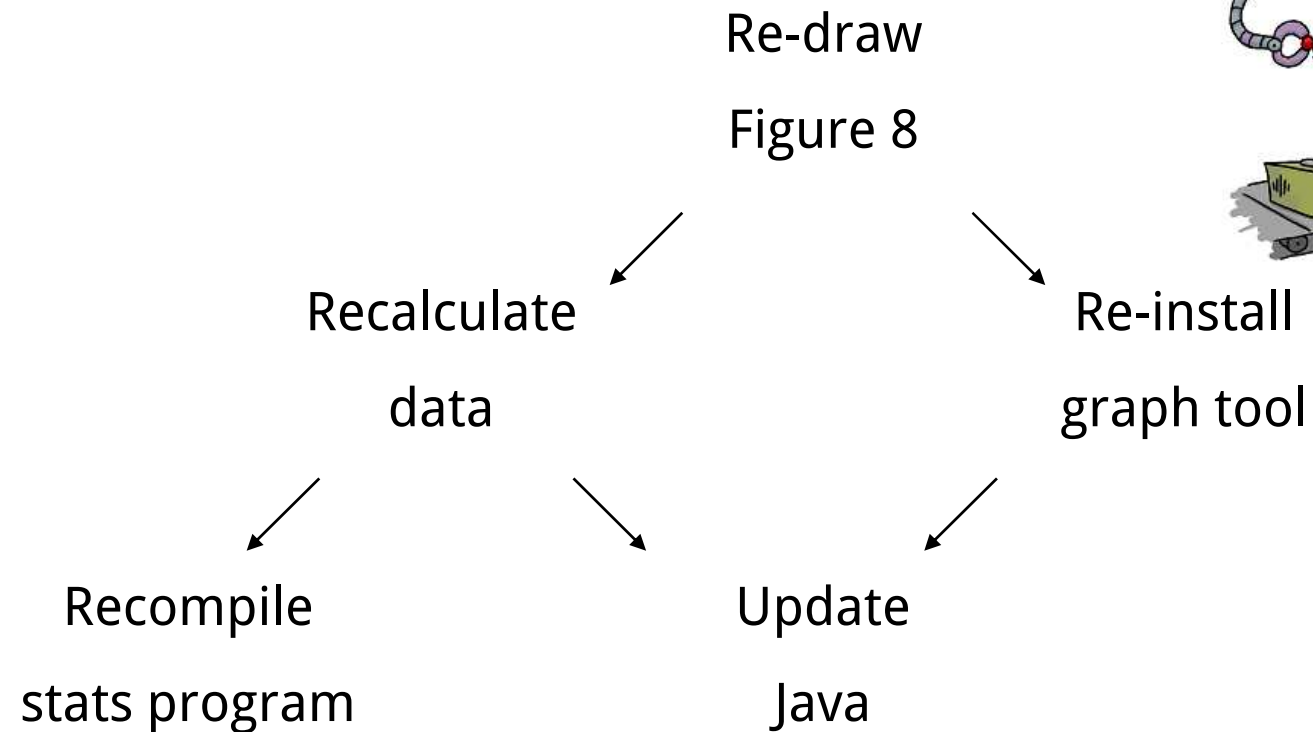
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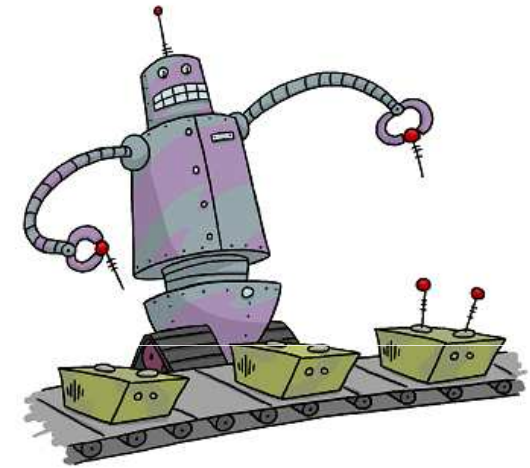
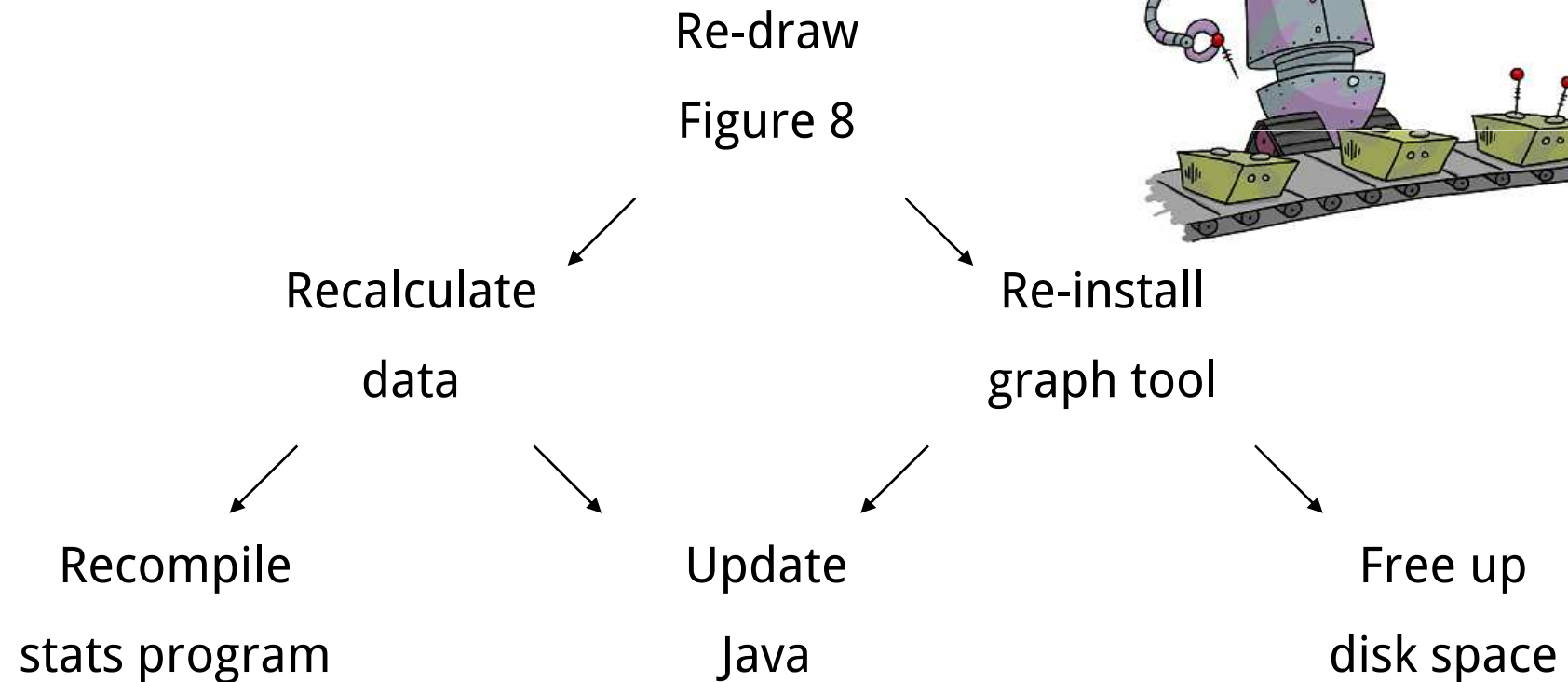
A typical working day



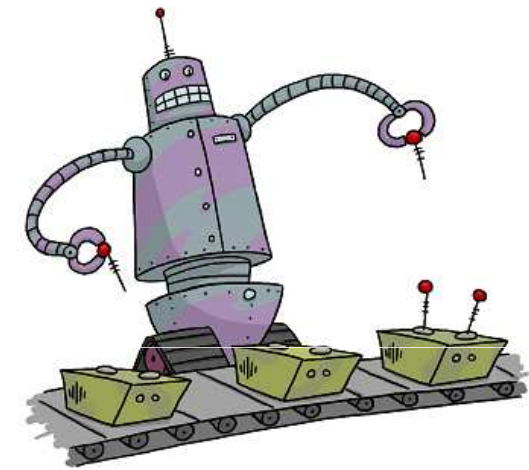
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Re-draw
Figure 8

Recalculate
data

Re-install
graph tool

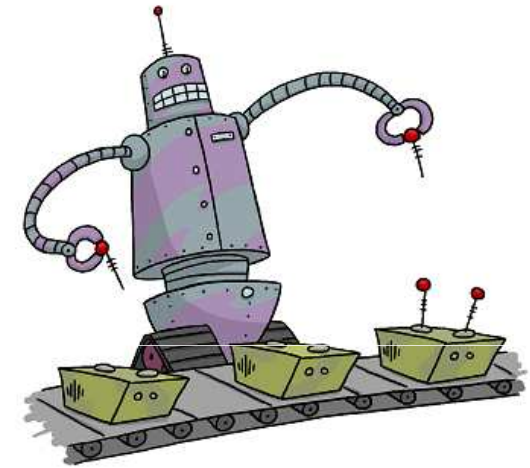
Recompile
stats program

Update
Java

Free up
disk space



A typical working day



Re-draw
Figure 8

Recalculate
data

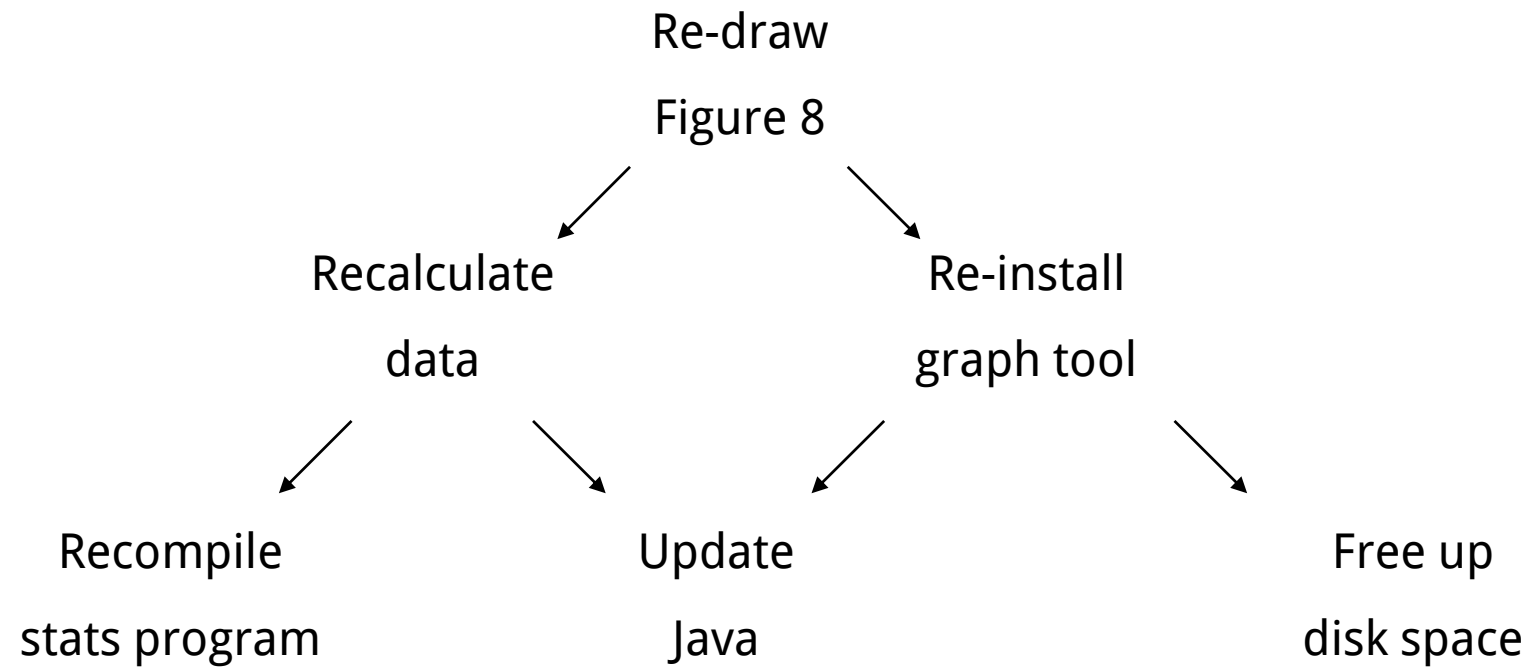
Re-install
graph tool

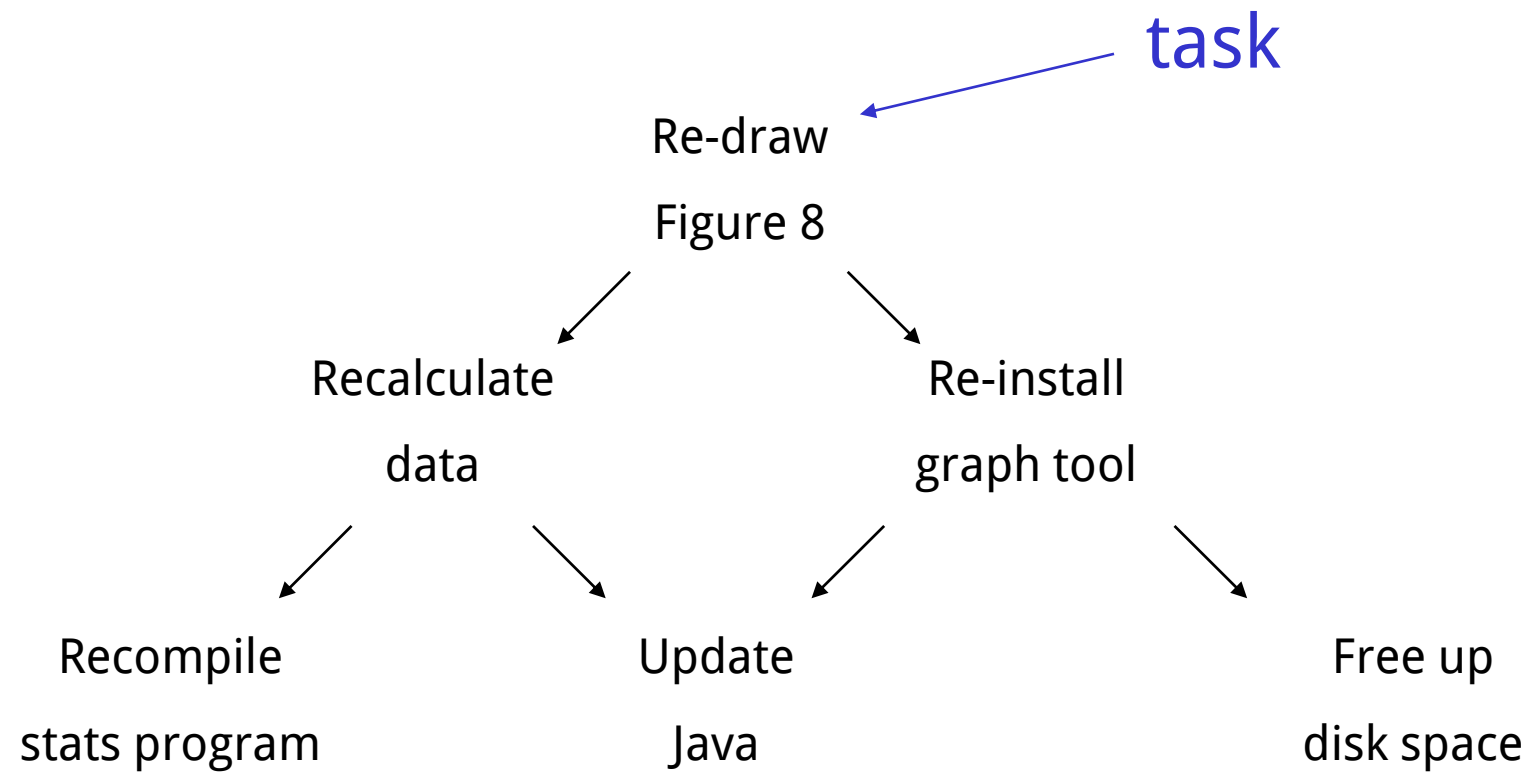
Recompile
stats program

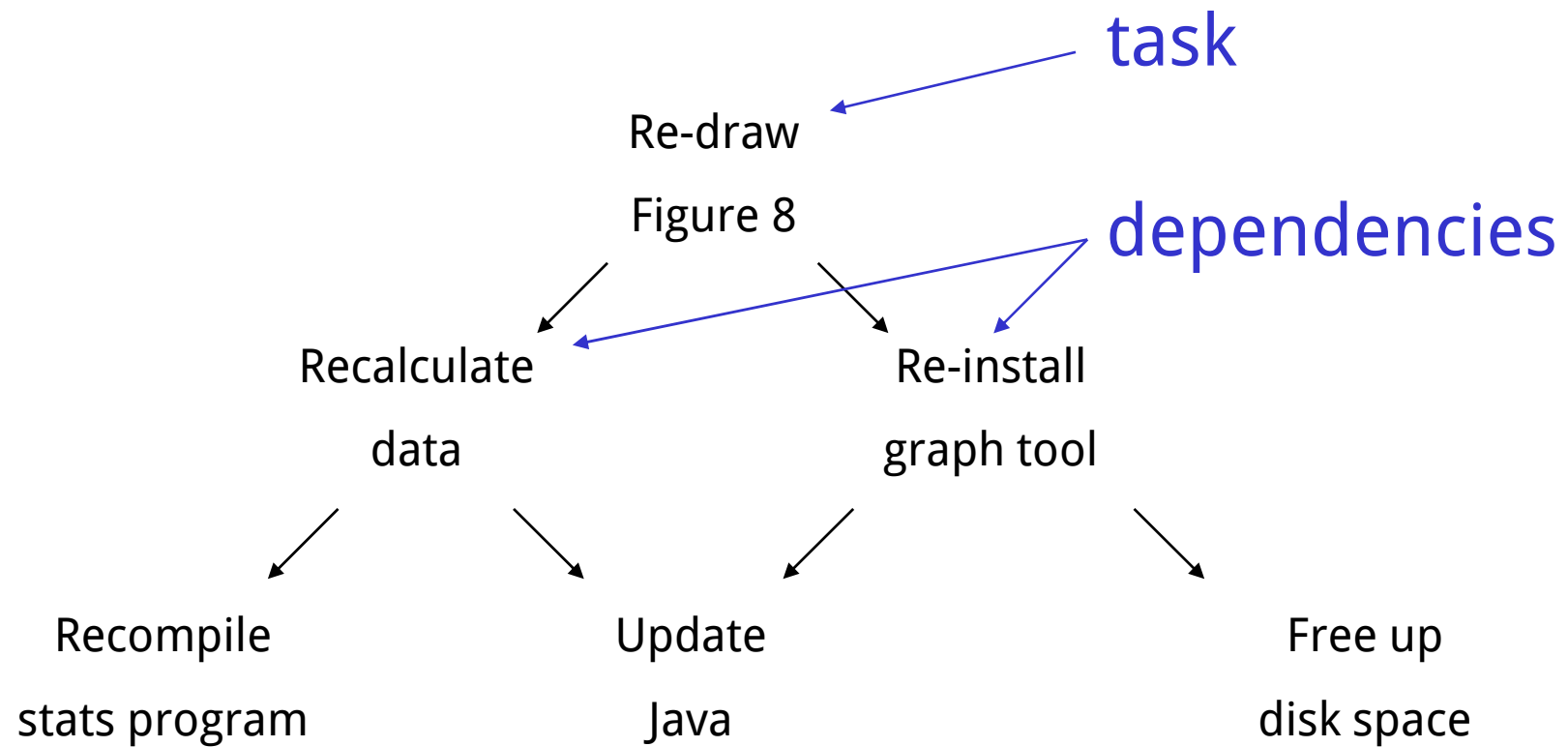
Update
Java

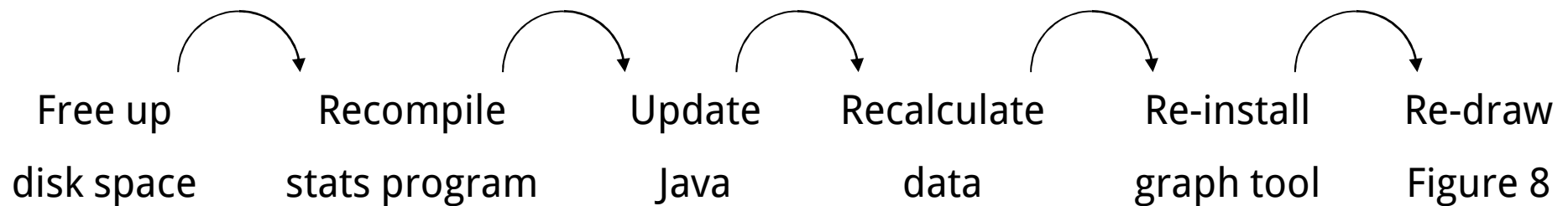
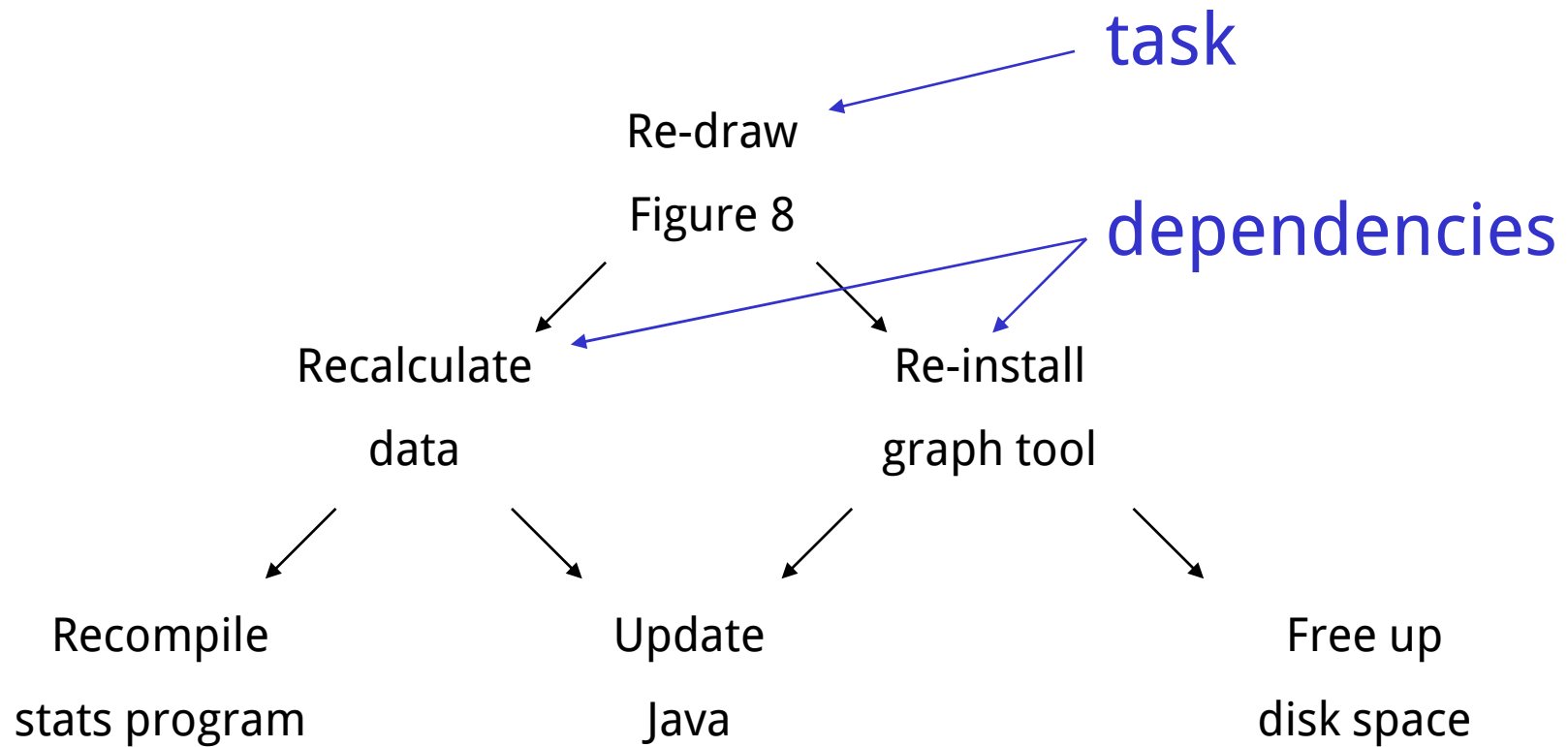
Free up
disk space

...shave the yak...









This pattern arises frequently

This pattern arises frequently

New data collected?
Recalculate statistics



This pattern arises frequently

New data collected?
Recalculate statistics



Source files changed?
Recompile program



This pattern arises frequently

New data collected?
Recalculate statistics



Source files changed?
Recompile program



New content written?
Update web site



Hard or impossible to keep track of:

Hard or impossible to keep track of:

- what depends on what

Hard or impossible to keep track of:

- what depends on what
- what's up-to-date and what isn't

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Describe dependencies in a *build file*

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Describe dependencies in a *build file*

Along with commands used to update things

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So use a *build manager* to automate the process

Describe dependencies in a *build file*

Along with commands used to update things

Build manager does the rest

Most widely used build manager is Make

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Note: "most widely used", not "most popular"

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A very cryptic little language, without a debugger...

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Has grown into a little programming language

A very cryptic little language, without a debugger...

...that requires an understanding of the Unix shell

GNU Make is fast, free, and
well-documented



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And many other tools know how to work with it

GNU Make is fast, free, and
well-documented



And many other tools know how to work with it

Look at basics and a few advanced features

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Companion lecture explores SCons



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Java users should look at Ant





created by

Greg Wilson

August 2010



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