Make it clearer

Michael Colaresi

Recipe

- Title of the recipe

  - Example: potato and carrot curry

- Ingredients

  - Example: curry powder, onion, potatoes, carrots, etc

- Steps

 - Example: brown onions, then add curry powder, etc

Multiple sets of steps

- Recipes can depend on each other

  - Recipe for making cardamon rice

  - Recipe for making curry paste

  - Recipe for roasting carrots

- Combine these

- Curry ingredients are cardamon rice, curry paste, and roasted carrots

- Cardamon rice ingredients are cardamon, water, salt, and jasmine rice

- Curry paste ingredients are onions and curry

- Roasted carrots ingredients are carrots, pepper, and olive oil

See this as a graph for inputs and outputs with multiple layers
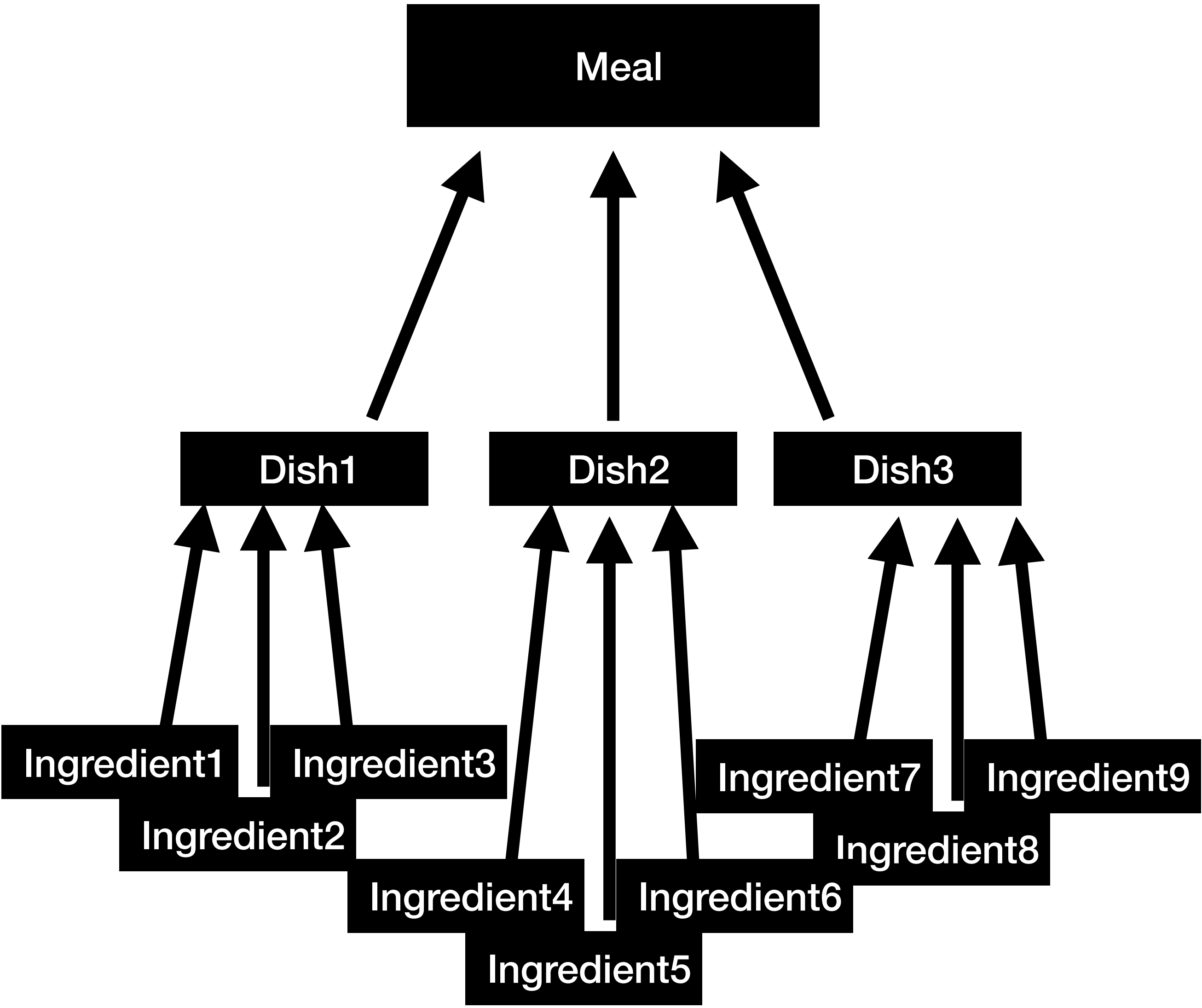
Makefile

- target

  - Example: researchPaper.html

- dependencies

  - Example: introduction.md, graph.pdf, etc

- Steps/processes

  - Example: convert graph.pdf graph.png;
    pandoc introduction.md -f markdown -t html
    -o researchPaper.html

Anatomy of a makefile

```
#! /usr/bin/env make

specialTarget: target1 dependency2 …
        Step1 to make special target
        Step2 to make special target
        Etc


target1: dependency3 …
        Step1 to make target1
        Step2 to make target1
```

Anatomy of a makefile

```
#! /usr/bin/env make

specialTarget: target1 dependency2 …
          Step1 to make special target
          Step2 to make special target
          Etc


target1: dependency3 …
          Step1 to make target1
          Step2 to make target1
```

Anatomy of a makefile

```
#! /usr/bin/env make

specialTarget: target1 dependency2 …
        Step1 to make special target
        Step2 to make special target
        Etc

target1: dependency3 …
        Step1 to make target1
        Step2 to make target1
```

Anatomy of a makefile

```
#! /usr/bin/env make


specialTarget: target1 dependency2 …
        Step1 to make special target
        Step2 to make special target
        Etc


target1: dependency3 …
        Step1 to make target1
        Step2 to make target1
```

Anatomy of a makefile

```
#! /usr/bin/env make

specialTarget: target1 dependency2 …
        Step1 to make special target
        Step2 to make special target
        Etc

target1: dependency3 …
        Step1 to make target1
        Step2 to make target1
```

Anatomy of a makefile

```make
#! /usr/bin/env make

specialTarget: target1 dependency2
        Step1 to make special target
        Step2 to make special target
        Etc

target1: dependency3 …
        Step1 to make target1
        Step2 to make target1
```

Anatomy of a makefile

```
#! /usr/bin/env make

specialTarget: target1 dependency2 …
        Step1 to make special target
        Step2 to make special target
        Etc

target1: dependency3 …
        Step1 to make target1
        Step2 to make target1
```

Anatomy of a makefile

```
#! /usr/bin/env make

specialTarget: target1 dependency2 …
          Step1 to make special target
          Step2 to make special target
          Etc

target1: dependency3 …
          Step1 to make target1
          Step2 to make target1
```
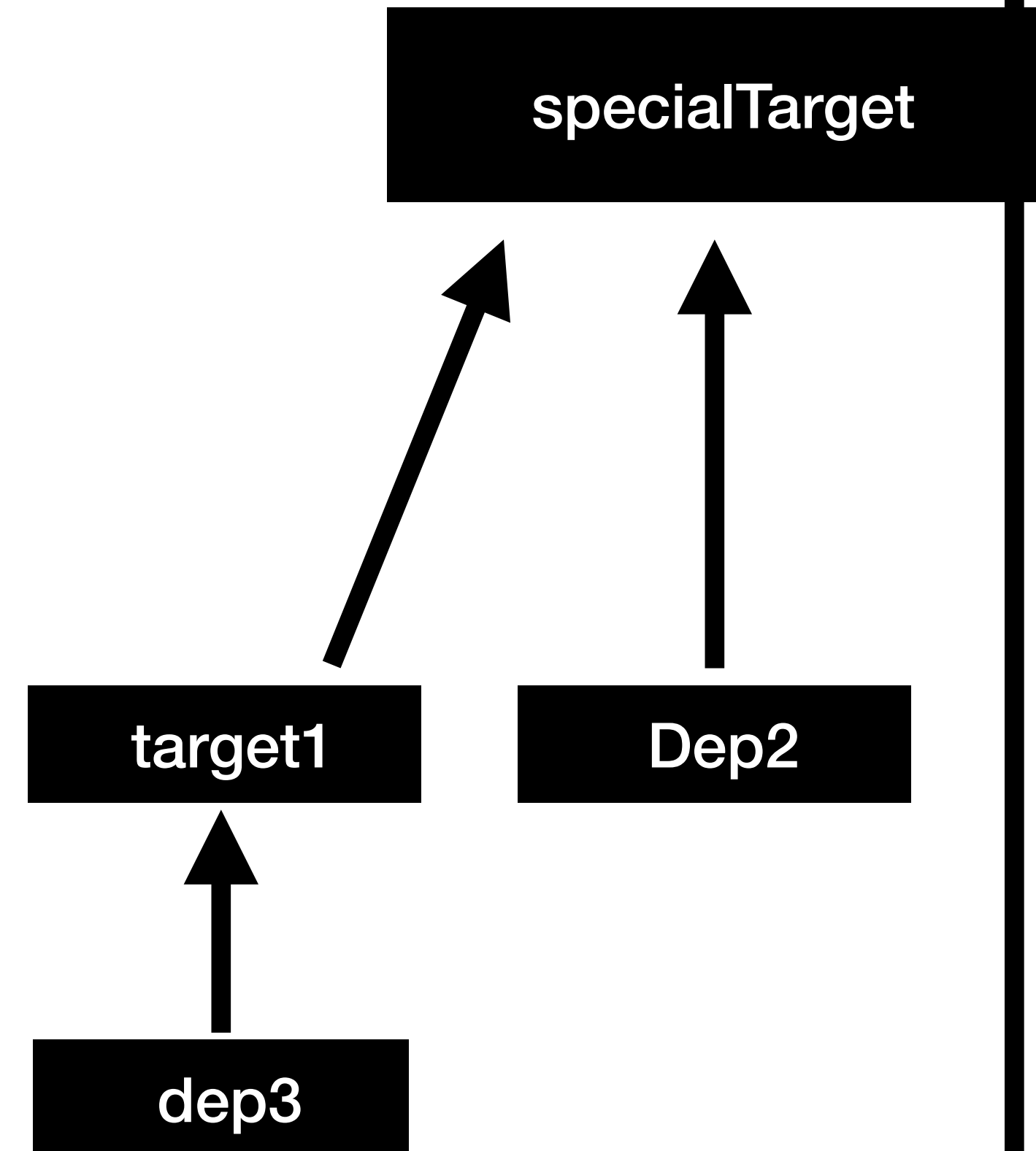
Anatomy of a makefile

#! /usr/bin/env make

specialTarget: target1 dependency2 …
      Step1 to make special target
      Step2 to make special target
      Etc

target1: dependency3 …
      Step1 to make target1
      Step2 to make target1

specialTarget

target1   Dep2

dep3

Anatomy of a makefile

```
#! /usr/bin/env make

specialTarget: target1 dependency2 …
        Step1 to make special target
        Step2 to make special target
        Etc


target1: dependency3 …
        Step1 to make target1
        Step2 to make target1


.PHONY: clean
clean:
        rm target1
```
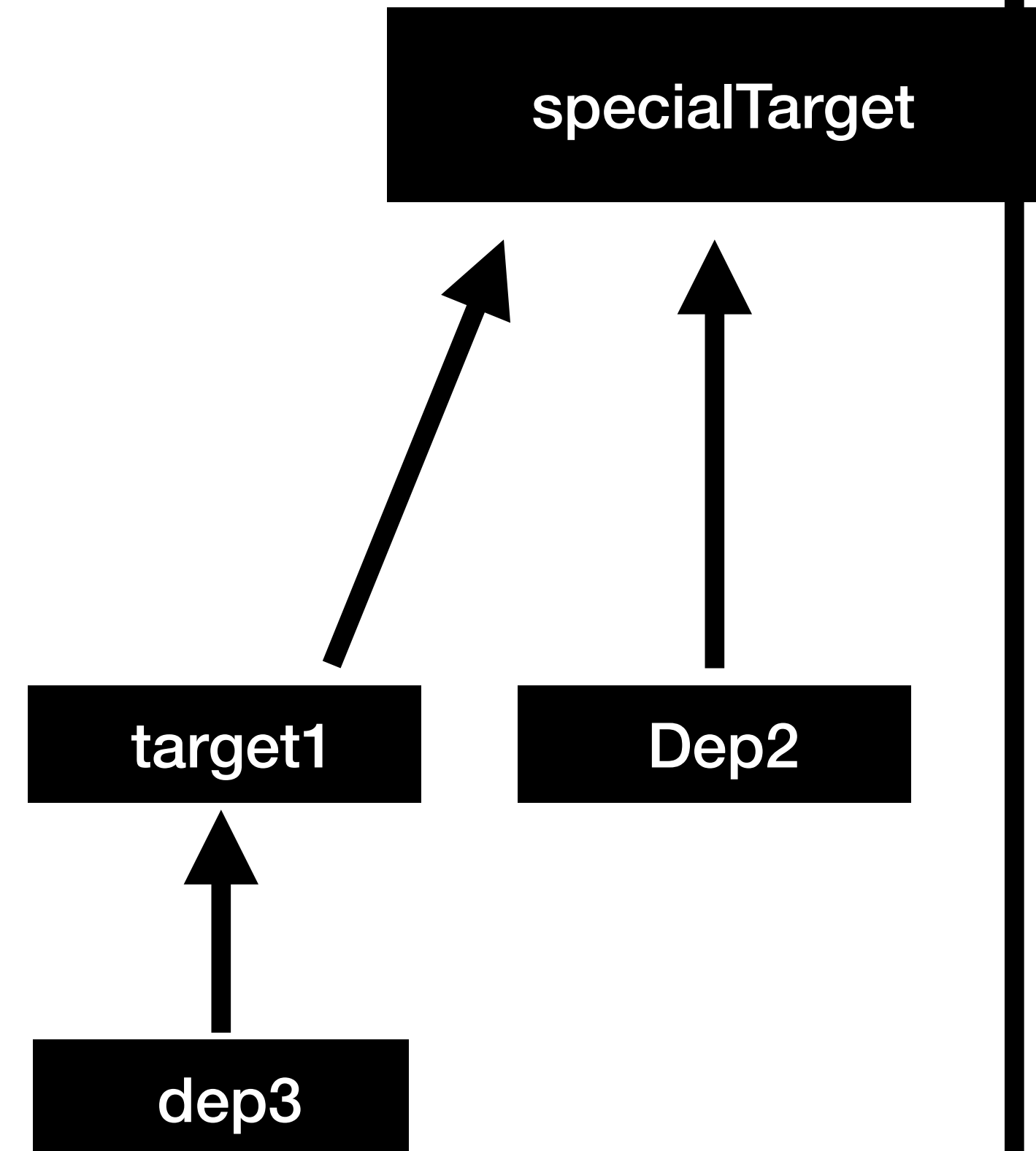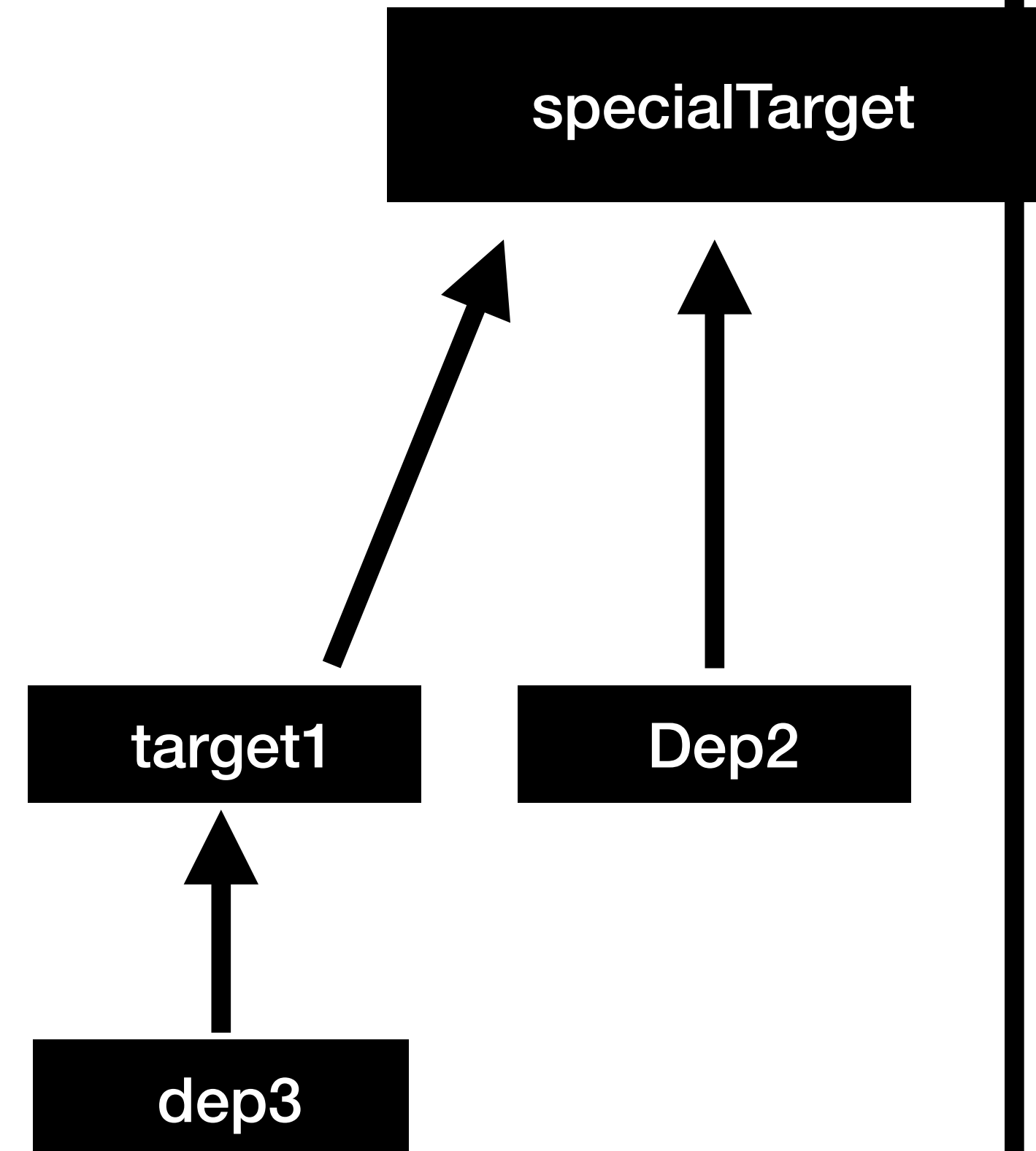
Anatomy of a makefile

```
#! /usr/bin/env make

specialTarget: target1 dependency2 …
        Step1 to make special target
        Step2 to make special target
        Etc


target1: dependency3 …
        Step1 to make target1
        Step2 to make target1


.PHONY: clean
clean:
        rm target1
```

Anatomy of a makefile

#! /usr/bin/env make

specialTarget: target1 dependency2 …
        Step1 to make special target
        Step2 to make special target
        Etc

target1: dependency3 …
        Step1 to make target1
        Step2 to make target1

.PHONY: clean
clean:
        rm target1

Anatomy of a makefile

```make
#! /usr/bin/env make

specialTarget: target1 dependency2 …
        Step1 to make special target
        Step2 to make special target
        Etc


target1: dependency3 …
        Step1 to make target1
        Step2 to make target1


.PHONY: clean
clean:
        rm target1
```

```
> make
```

Anatomy of a makefile

```
#! /usr/bin/env make

specialTarget: target1 dependency2 …
        Step1 to make special target
        Step2 to make special target
        Etc


target1: dependency3 …
        Step1 to make target1
        Step2 to make target1


.PHONY: clean
clean:
        rm target1
```

```
> make
```

Anatomy of a makefile

> make clean

```
#! /usr/bin/env make

specialTarget: target1 dependency2 …
        Step1 to make special target
        Step2 to make special target
        Etc

target1: dependency3 …
        Step1 to make target1
        Step2 to make target1

.PHONY: clean
clean:
        rm target1
```

Anatomy of a makefile

```
#! /usr/bin/env make

specialTarget: target1 dependency2 …
        Step1 to make special target
        Step2 to make special target
        Etc


target1: dependency3 …
        Step1 to make target1
        Step2 to make target1



PHONY: clean
clean:
        rm target1
```

Anatomy of a makefile

```
#! /usr/bin/env make

specialTarget: target1 dependency2 …
        Step1 to make special target
        Step2 to make special target
        Etc


target1: dependency3 …
        Step1 to make target1
        Step2 to make target1


.PHONY: clean
clean:
        rm target1
```

Anatomy of a makefile

```make
#! /usr/bin/env make

specialTarget: target1 dependency2 …
        Step1 to make special target
        Step2 to make special target
        Etc


target1: dependency3 …
        Step1 to make target1
        Step2 to make target1


.PHONY: clean
clean:
        rm target1
```

```
> make clean
```