Gulp Streaming build tasks

CONCEPTS

A task is an async function in gulpfile.js; export it to make it runnable from the command line.

src() glob in, files out
↓ pipe
Plugins transform in memory
↓ pipe
dest() write to disk

Files travel as Vinyl objects (path plus contents); plugins take and return them.

A task must signal completion: return a stream, promise or child process, take a done callback, or be async. Otherwise gulp reports it never finished.

INSTALL

npm install --save-dev gulp
Add gulp to the project

npm install --global gulp-cli
Install the gulp command globally

npx gulp *<task>*
Run the local CLI without a global install

gulp --version
Print CLI and local gulp versions

gulp --help
Show all CLI flags

RUN

gulp
Run the default task

gulp *<task>*
Run one exported task

gulp *<task1>* *<task2>*
Run several tasks in parallel

gulp --series *<task1>* *<task2>*
Run CLI tasks one after another

gulp --continue *<task>*
Keep going after a task fails

gulp -f *<path>* *<task>*
Use another gulpfile and set cwd to it

RUN (cont.)

gulp --silent *<task>*
Suppress gulp logging

INSPECT TASKS

gulp --tasks
Print the task tree (also -T)

gulp --tasks-simple
Plain list of task names

DEFINE TASKS

exports.<*name*> **=** <*fn*>
Make a task runnable from the CLI

exports.default = <*fn*>
Task run by plain gulp

gulp.task('<*name*>', <*fn*>**)**
Register a task by string name

gulp.series(<*a*>, <*b*>**)**
Run tasks in order

gulp.parallel(<*a*>, <*b*>**)**
Run tasks concurrently

async function <*name*>**() { }**
Task using async/await

function <*name*>**(cb) { cb() }**
Task using a done callback

cb(err)
Fail a callback task

gulp.series(<*a*>,
gulp.parallel(<*b*>, <*c*>**))**
Nest compositions freely

FILES AND STREAMS

gulp.src('<*glob*>'**)**
Read files matching a glob

gulp.src(['<*glob*>', '!
<*glob*>'**])**
Include and exclude globs

gulp.dest('<*dir*>'**)**
Write files to a directory

.pipe(<*transform*>**)**
Pass the stream through a plugin

gulp.src('<*glob*>', **{ base:**
'<*dir*>' **})**
Keep folder structure from a base

gulp.src('<*glob*>',
{ encoding: false })
Read as binary (images, fonts)

FILES AND STREAMS (cont.)

gulp.src('<*glob*>',
{ allowEmpty: true })
No error when a glob matches nothing

gulp.src('<*glob*>',
{ sourcemaps: true })
Load and track sourcemaps

gulp.dest('<*dir*>',
{ sourcemaps: '.' })
Write external sourcemap files

gulp.src('<*glob*>', **{ since:**
gulp.lastRun('<*task*>'**) })**
Only files changed since the last run

Glob patterns

Pattern	Matches
`*`	Any name within one directory
`**`	Any depth of directories
`!<glob>`	Exclude matches
`{a,b}`	Either alternative

WATCH

gulp.watch('<*glob*>', <*task*>**)**
Run a task when files change

gulp.watch('<*glob*>',
gulp.series(<*a*>, <*b*>**))**
Watch and run a composition

gulp.watch('<*glob*>'**).on(**
'change', <*fn*>**)**
React to a single event

gulp.watch('<*glob*>',
{ ignoreInitial: false },
<*task*>**)**
Also run once at startup

gulp.watch('<*glob*>', **{ delay:**
500 }, <*task*>**)**
Debounce changes (ms)

RECIPES

Minimal gulpfile.js

```
const { src, dest, series,
parallel } = require('gulp');

function copy() {
  return src('src/**/*').pipe(
dest('dist'));
}

exports.build = series(copy);
exports.default = exports.build;
```