

Quick Build System with Gulp

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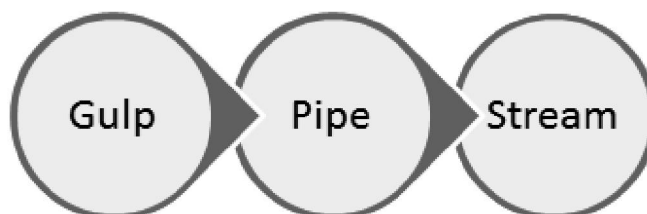
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Introducing Gulp System



Gulp is new build system is capable of automate minification, file copy, watching file changes and rerun tasks. Gulp is built on top of the NodeJS and is available as open source. In this chapter, we will learn to getting started with Gulp system.

*You can find the Gulp source code in the following link:-
<https://github.com/gulpjs/gulp/>*

Gulp Installation


To install Gulp we need to have NPM installed in the machine. Considering NPM is installed in the machine let's continue with the example. We have created a directory named **HelloWorldApp** for this demo. Let's initialize **package.json** file using **npm init** command. The following screenshot shows the terminal with initialization of **package.json** file.

```
Terminal
+ J:\HelloWorldApp>npm init
x This utility will walk you through creating a package.json file
.
It only covers the most common items, and tries to guess sane d
efaults.

See `npm help json` for definitive documentation on these field
s
and exactly what they do.

Use `npm install <pkg> --save` afterwards to install a package
and
```

Gulp can be installed as local development dependencies using **npm install gulp --save-dev** command. The following screenshot shows the terminal with the installation of Gulp build system.



```
Terminal
+ J:\HelloWorldApp>npm install gulp --save-dev
x npm WARN package.json HelloWorldApp@0.0.1 No repository field.
npm WARN package.json HelloWorldApp@0.0.1 No README data
npm WARN engine get-stdin@5.0.0: wanted: {"node": ">=0.12.0"} (current: {"node": "0.10.30", "npm": "1.4.21"})
gulp@3.9.0 node_modules\gulp
├─ pretty-hrtime@1.0.0
├─ interpret@0.6.5
├─ deprecated@0.0.1
├─ archy@1.0.0
├─ minimist@1.2.0
└─ tildify@1.1.0 (os-homedir@1.0.1)
```

Creating Gulp Task

After successful installation of Gulp, the next step is to create **gulpfile.js** file.

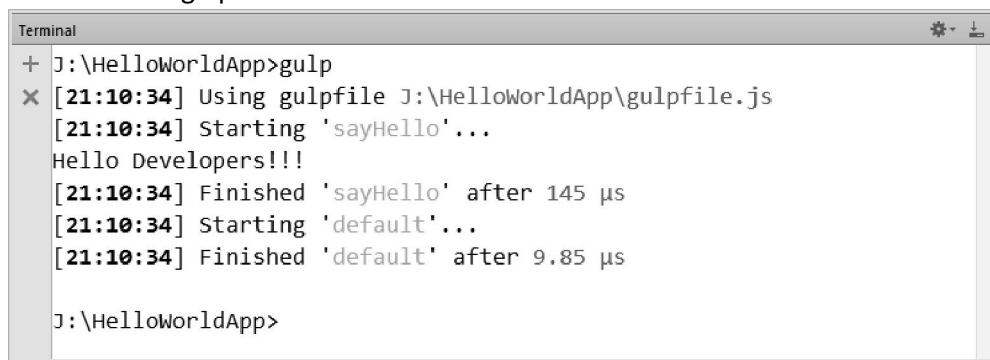
The **gulpfile.js** file contains the code to define the Gulp task. We can call the gulp using **require()** function and create a task using **task()** method.

Let's create a task named **sayHello** which is a sample task and prints a text message in console. We can make this task as default task using **default** key word. The code content of **gulpfile.js** are as follows: -

```
var gulp = require('gulp');
gulp.task('sayHello', function() {
  console.log("Hello Developers!!!");
});
gulp.task('default',['sayHello']);
```

Running Gulp Task

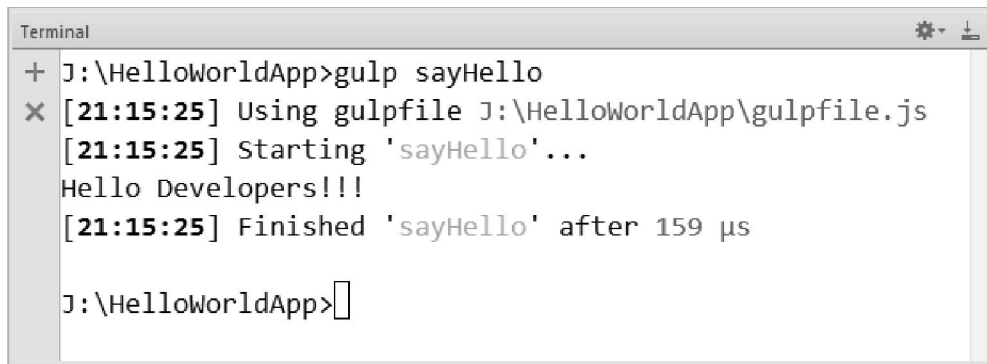
Now we can run the **default** task using Gulp command. The following screenshot shows the terminal with gulp task in execution.



```
Terminal
+ J:\HelloWorldApp>gulp
x [21:10:34] Using gulpfile J:\HelloWorldApp\gulpfile.js
[21:10:34] Starting 'sayHello'...
Hello Developers!!!
[21:10:34] Finished 'sayHello' after 145 μs
[21:10:34] Starting 'default'...
[21:10:34] Finished 'default' after 9.85 μs

J:\HelloWorldApp>
```

We can also execute the **sayHello** task using **gulp sayHello** command. The following screenshot shows the terminal with gulp task in execution.

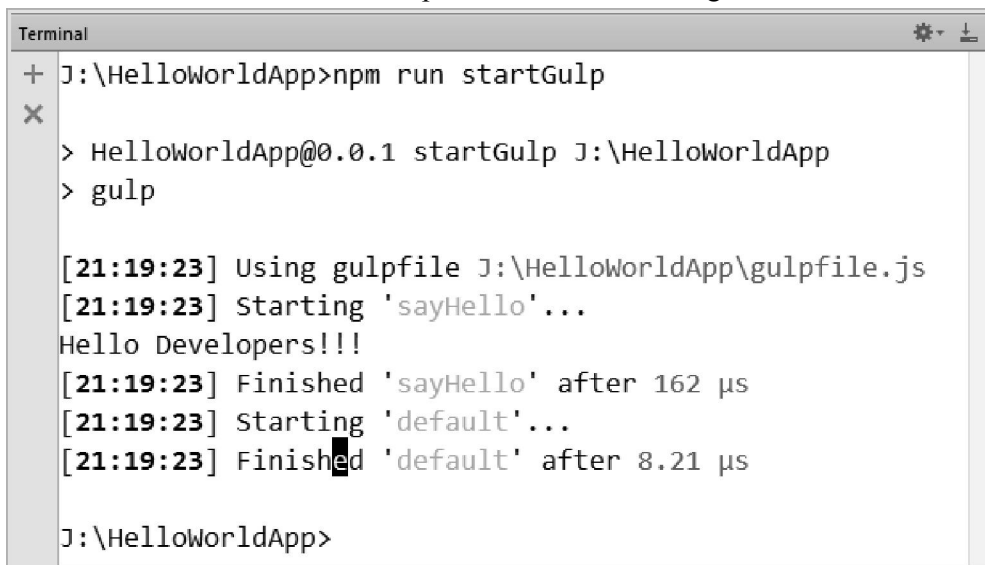
A terminal window titled "Terminal" with a standard Windows-style title bar (minimize, maximize, close buttons). The command prompt shows the directory J:\HelloWorldApp. The user enters 'gulp sayHello'. The output shows that gulpfile.js is used, the 'sayHello' task starts, prints 'Hello Developers!!!', and finishes after 159 microseconds. The prompt returns to J:\HelloWorldApp>.

```
Terminal
+ J:\HelloWorldApp>gulp sayHello
X [21:15:25] Using gulpfile J:\HelloWorldApp\gulpfile.js
[21:15:25] Starting 'sayHello'...
Hello Developers!!!
[21:15:25] Finished 'sayHello' after 159 μs
J:\HelloWorldApp>
```

We can also call gulp through NPM by adding an entry to **package.json** using script property. The code content of the **package.json** file are as follows:-

```
{
  "name": "HelloWorldApp",
  "version": "0.0.1",
  "description": "Getting Started With Gulp",
  "scripts": {
    "startGulp": "gulp"
  },
  "author": "Sandeep",
  "license": "ISC",
  "devDependencies": {
    "gulp": "^3.9.0"
  }
}
```

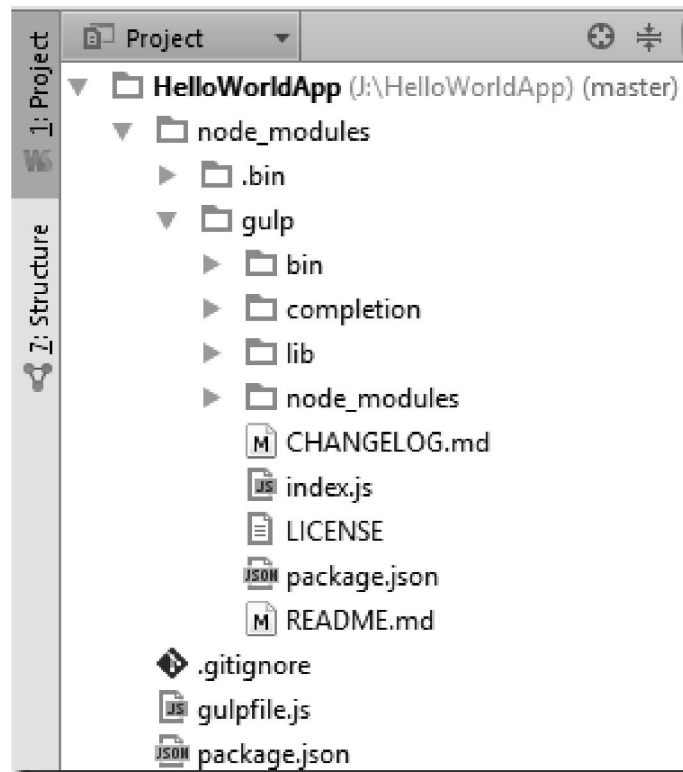
Now we can execute the gulp task using **npm run startGulp** command. The following screenshot shows the terminal with Gulp task in execution using NPM module.

A terminal window titled "Terminal" with a standard Windows-style title bar. The command prompt shows the directory J:\HelloWorldApp. The user enters 'npm run startGulp'. The output shows the command being executed, the 'startGulp' script running 'gulp', and the same 'sayHello' task being executed as in the previous screenshot, but now through the npm script. It also shows the 'default' task starting and finishing after 8.21 microseconds. The prompt returns to J:\HelloWorldApp>.

```
Terminal
+ J:\HelloWorldApp>npm run startGulp
X
> HelloWorldApp@0.0.1 startGulp J:\HelloWorldApp
> gulp

[21:19:23] Using gulpfile J:\HelloWorldApp\gulpfile.js
[21:19:23] Starting 'sayHello'...
Hello Developers!!!
[21:19:23] Finished 'sayHello' after 162 μs
[21:19:23] Starting 'default'...
[21:19:23] Finished 'default' after 8.21 μs
J:\HelloWorldApp>
```

The following screenshot shows the updated project structure for **HelloWorldApp** directory. We can see a **gulp** directory is created inside the **node_modules** directory.



Summary

In this chapter we have introduced with the Gulp build system. We have also learnt to install Gulp and created a sample task. In the coming chapters we will learn more about Gulp.

*You can find the complete code for this chapter in the following link:-
<https://github.com/saan1984/HelloWorldApp>*