```
link null
title: 珠峰架构师成长计划
description: .vscode\launch.ison
keywords: null
author: null
date: null
publisher: 珠峰架构师成长计划
stats: paragraph=162 sentences=414, words=2857
```

1.create-vite

1.1 create-vite简介

- vite官層 (https://cn.vitejs.dev/guide/#scaffolding-your-first-vite-procedure-vite包 (https://www.npmjs.com/package/create-vite)
- create-vite源码 (https://github.com/vitejs/vite/tree/main/packages/create-vite)

1.2 使用

```
npm init vite
 leed to install the following packages:
 create-vite
Ok to proceed? (y) y
V Project name: ... vite-project
√ Select a framework: >> react
V Select a variant: >> react
Scaffolding project in C:\aprepare\t1\vite-project...
Done. Now run:
 cd vite-project
 npm install
 npm run dev
```

1.3 create-vite源码调试

- minimist (https://www.npmjs.com/package/minimist)解析多数选项,类似的还有yargs (https://www.npmjs.com/package/yargs)和commander (https://www.npmjs.com/package/commander (https://www.npmjs.com/package/com/packa
- prompts (https://www.npmjs.com/package/prompts)交互式命令行,类似还有inquirer (https://www.npmjs.com/package/inquirer)

```
git clone https
cd vite
yarn install
packages\create-vite\index.js
```

.vscode\launch.json

```
"version": "0.2.0",
"configurations": [
            "type": "pwa-node",
"request": "launch",
            "name": "Launch Program",
"skipFiles": [
            "program": "${workspaceFolder}\\packages\\create-vite\\index.js",
"args": ["create","vite-project"]
]
```

1.4 create-vite功能#

- 「√」支持参数解析
- [√] 支持自定义项目名
 [√] 支持空目录检查
- [√] 支持静态项目模板
- [x] 不支持lema lema (https://github.com/lema/lema)
- [x] 不支持文件异步写入create-react-app (https://github.com/facebook/create-react-app)
 [x] 不支持多进程执行命令create-react-app (https://github.com/facebook/create-react-app)
- [x] 不支持执行动态 node命令create-react-app (https://github.com/facebook/create-react-app)
 [x] 不支持自动安装依赖create-react-app (https://github.com/facebook/create-react-app)
- [x] 不支持自动启动服务create-react-app (https://qithub.com/facebook/create-react-app)
 [x] 不支持参数配置yam (https://qithub.com/yampkg/yam)
- [x] 不支持 gitub和 gitee仓库动态读取
 [x] 不支持模板标签选择
- [x] 不支持动态模板渲染
 [x] 不支持插件化配置技术栈vue-cli (https://github.com/vuejs/vue-cli)

2.初始化项目#

2.1 lerna初始化 **#**

```
mkdir vite2
cd vite2
lerna init
```

2.2 使用 yarn workspace

- 开发多个互相依赖的package时, workspace会自动对package的引用设置软链接(symlink), thy am link更加方便,且链接仅局限在当前workspace中,不会对整个系统造成影响
 所有package的依赖会安装在根目录的 node_modules下,节省磁盘空间,且给了yam更大的依赖优化空间
- Yam workspace只会在根目录安装一个node_modules. 这有利于提升依赖的安装效率和不同package间的版本复用。而Lema默认会进到每一个package中运行yam/npm install,并在每个package中创建一个 node_modules

2.2.1 lerna.json

```
"packages": [
   "packages/*"
"version": "0.0.0",
"npmClient": "yarn",
"useWorkspaces": true
```

2.2.2 package.json

```
"name": "root",
"private": true,
"devDependencies": {
  "lerna": "^4.0.0"
},
"workspaces": [
    "packages/*"
```

2.3 创建子包

```
lerna create @vite2/config -y
lerna create @vite2/create -y
lerna create vite2 -y
lerna create @vite2/settings -y
lerna create @vite2/utils -y
```

2.4 安装依赖

- axios (https://www.npmjs.com/package/axios) 请求接口
 cross-spawn (https://www.npmjs.com/package/cross-spawn) 开启子进程
- userhome (https://www.npmjs.com/package/userhome) 获取用户主目录
 chalk (https://www.npmjs.com/package/chalk) 控制台打印彩色文字
- ejs (https://www.npmjs.com/package/ejs) 模板渲染
 execa (https://www.npmjs.com/package/execa) 通过子进程执行命令
- glob (https://www.npmjs.com/package/glob) 按模式匹配文件
- <u>inquirer (https://www.npmjs.com/package/inquirer)</u> 交互式命令行选择
- vite2 (vite2) 核心命令
- @vite2/settings (@vite2/settings) 常量配置
- @vite2/utils (@vite2/utils) 帮助方法
 @vite2/config (@vite2/config) 配置参数
- @vite2/create (@vite2/create) 创建项目

2.4.1 config\package.json

packages\config\package.ison

```
"dependencies": {
"@vite2/settings": "^0.0.0",
"@vite2/utils": "^0.0.0",
"fs-extra": "^10.0.0",
"userhome": "^1.0.0"
```

2.4.2 create\package.json

packages\create\package.json

```
"dependencies": {
  aepenaencles": {
  "@vite2/settings": "^0.0.0",
  "@vite2/utils": "^0.0.0",
  "chalk": "^4.1.2",
  "clone-git-repo": "^0.0.2",
  "ejs": "^3.1.6",
"execa": "^5.1.1",
  "fs-extra": "^10.0.0",
"glob": "^7.1.7",
  "inquirer": "^8.1.2"
```

2.4.3 utils\package.json

packages\utils\package.json

```
"dependencies": {
"@vite2/settings": "^0.0.0",
"axios": "^0.21.2",
"cross-spawn": "^7.0.3",
"userhome": "^1.0.0"
```

2.4.4 vite2\package.json#

packages\vite2\package.json

```
"dependencies": {
  "@vite2/config": "^0.0.0",
"@vite2/create": "^0.0.0"
```

2.4.5 publishConfig

```
{
  "publishConfig": {
    "access": "public",
    "registry": "http://registry.npmjs.org"
  }
}
```

2.5 配置命令

2.5.1 package.json

packages\vite2\package.json

```
{
  "name": "vite2",
  "version": "0.0.0",
  "dependencies": {
      "@vite2/config":"^0.0.0",
      "@vite2/create":"^0.0.0"
    },
      "bin": {
            "vite2": "index.js"
            "
            ")
}
```

2.5.2 index.js

packages\vite2\index.js

```
async function main() {
  let argv = process.argv.slice(2);
   console.log(argv);
}
main().catch((err) => {
   console.error(err);
});
```

- 一定要先添加 #!/usr/bin/env node再link,否则会用文本编辑器打开
- 这种情况可以 vite2\packages\vite2目录中执行 yarn unlink, 再重新link

```
yarn link
yarn global bin
C:\Users\zhangrenyang\AppData\Local\Yarn\bin
C:\Users\zhangrenyang\AppData\Local\Yarn\Data\link\vite2
npm bin -g
C:\Users\zhangrenyang\AppData\Roaming\npm
vite2 create vite-project
```

3.实现配置命令

3.1 安装依赖

```
yarn workspace @vite2/config add userhome fs-extra
yarn workspace @vite2/utils add cross-spawn userhome fs-extra
```

3.2 settings\index.js

packages\settings\index.js

```
exports.COMMAND_SOURCE = `
const args = JSON.parse(process.argv[1]);
const factory = require('.');
factory(args);
.
exports.RC_NAME = ".vite3rc";
```

3.3 config.js

packages\utils\config.js

```
const userhome = require("userhome");
const fs = require("fs-extra");
const { RC_NAME } = require("evite5/settings");
const configPath = userhome(RC_NAME);
let config = {};
if (fs.existsSync(configPath)) {
    config = fs.readJSONSync(configPath);
}
config.configPath=configPath;
module.exports = config;
```

3.4 executeNodeScript.js

packages\utils\executeNodeScript.js

3.5 log.js

packages\utils\log.js

```
const log = require('npmlog');
log.heading = 'vite2';
module.exports = log;
```

3.6 utils\index.js

packages\utils\index.js

```
exports.log = require('./log');
exports.executeNodeScript = require('./executeNodeScript');
exports.config = require('./config');
```

3.7 packages\config\command.js

packages\config\command.js

```
const {executeNodeScript} = require('@vite2/utils');
const {COMMAND_SOURCE} = require('@vite2/settings');
const command = {
    command: "config [key] [value]",
    describe: "设置或查看配置项,比如GIT_TYPE设置仓库类型, ORG_NAME设置组织名",
    builder: (yargs) => {},
    handler:async function(argv) {
        await executeNodeScript({ cwd: __dirname }, COMMAND_SOURCE, argv);
    },
    ;
    module.exports = command;
```

3.8 config\index.js

packages\config\index.js

```
const fs = require("fs-extra");
const { log ,config} = require("evite2/utils");
async function factory(argy) {
  const { key, value } = argy;
  console.log('config',config);
  if (key && value) {
    config[key] = value;
    await fs.writeJSON(config.configPath, config, { spaces: 2 });
    log.info("vite3","(%s=%s)配置成功保存至%s", key, value, config.configPath);
} else if(key) {
    console.log('%s=%s',key, config[key]);
} else(
    console.log(config);
}
}
module.exports = factory;
```

3.9 vite2\index.js

packages\vite2\index.js

```
#!/usr/bin/env node

const yargs = require("yargs/yargs");

const configCmd = require("\every ite2/config/command");

async function main() {

    const cli = yargs();
    cli
        .usage('Usage: vite2 [options]')
        .demandCommand(1, "至少需要一个命令")
        .recommendCommands()

+ .command(configCmd)
        .parse(process.argv.slice(2));

}

main().catch((err) => {

    console.error(err);

});
```

4.实现创建命令

4.1 create\command.js

packages\create\command.js

```
const {COMMAND_SOURCE} = require('@vite2/settings');
const {executeNodeScript} = require('@vite2/utils');
const command = {
    command: "create ",
    describe: "创建项目",
    builder: (yargs) => {
        yargs.positional("name", {
            type: "string",
            describe: "项目名称",
        ));
    },
    handler:async function(argv) {
        let args = {name:argv.name,cwd:process.cwd()};
        await executeNodeScript({ cwd: __dirname }, COMMAND_SOURCE,args);
    });
    module.exports = command;
```

4.2 create\index.js

packages\create\index.js

```
async function factory(argv) {
  console.log('create',argv);
}
module.exports = factory;
```

4.3 vite2\index.js

packages\vite2\index.js

```
#!/usr/bin/env node
const yargs = require("yargs/yargs");
const configCmd = require("@vite2/command");
+const createCmd = require("@vite2/create/command");
async function main() {
    const cli = yargs();
    cli
        .usage('Usage: vite2 [options]')
        .demandCommand(1, "至少需要一个命令")
        .strict()
        .recommendCommands()
        .command(configCmd)
+        .command(createCmd)
        .parse(process.argv.slice(2));
}
main().catch((err) => {
        console.error(err);
});
```

5.创建项目目录

5.1 安装#

yarn workspace @vite2/create add chalk fs-extra inquirer

5.2 create\index.js

packages\create\index.js

```
+const path = require("path");
+const { red } = require("chalk");
+const { prompt } = require("inquirer");
+const fs = require("fs-extra");
+const {config, log } = require("@vite2/utils");
async function factory(argv) {
     const { cwd, name } = argv;
process.chdir(cwd);//切换为当前命令执行的工作目录
     const { ORG_NAME } = config;
if (!ORG_NAME) {
           throw new Error(red("X") + " 尚未配置组织名称!");
     const targetDir = path.join(process.cwd(), name);
log.info("vite2", "创建的项目目录为%s", targetDir);
           await fs.access(targetDir);
           const files = await fs.readdir(targetDir);
if (files.length > 0) {
                const ( overwrite ) = await prompt({
   type: "confirm",
   name: "overwrite",
                     message: `目标目录非空,是否要移除存在的文件并继续?`,
                if (overwrite) {
                     await fs.emptyDir(targetDir);
                     throw new Error(red("X") + " 操作被取消");
           await fs.mkdirp(targetDir);
      log.info("vite3", "%s目录已经准备就绪", targetDir);
module.exports = factory;
```

6.下载模板

- github api (https://docs.github.com/en/rest/overview/resources-in-the-rest-api)
- gitee api (https://gitee.com/api/v5/swagger)

6.1 安装 <u>#</u>

• <u>clone-git-repo</u> (https://www.npmjs.com/package/clone-git-repo)下载仓库(GitHub, GitLab, Bitbucket,Gitee)

```
yarn workspace @vite2/create add clone-git-repo
yarn workspace @vite2/utils add axios
```

6.2 settings\index.js

packages\settings\index.js

```
//执行命令脚本
exports.COMMAND_SOURCE = `
const args = JSON.parse(process.argv[1]);
const factory = require('.');
factory(args);

'-
+//配置文件名称
+exports.RC_NAME = ".vite3rc";
+//组织的名称
+exports.ORG_NAME = "ORG_NAME";
+//git仓库类型
+exports.GIT_TYPE = "GIT_TYPE";
+//模板存放名称
+exports.GIT_TYPE = "GIT_TYPE";
+//模板存放名称
+exports.TEMPLATES = ".vite3_templates";
```

6.3 utils\request.js

packages\utils\request.js

```
const axios = require("axios");
const { GIT_TYPE } = require("./config");
const GITEE = "https://gitee.com/api/v5";
const GITHUB = "https://api.github.com";

const BASE_URL = GIT_TYPE === "gitee" ? GITEE : GITHUB;
const request = axios.create({
    baseURL: BASE_URL,
    timeout: 5000,
});

request.interceptors.response.use(
    (response) => {
        return response.data;
    },
        (error) => {
            return Promise.reject(error);
    }
};
module.exports = request;
```

6.4 withLoading.js

packages\utils\withLoading.js

```
async function withLoading(message, fn, ...args) {
  const ora = await import("ora");
  const spinner = ora.default(message);
  spinner.start();
  const result = await fn(...args);
  spinner.succeed();
  return result;
}
module.exports = withLoading;
```

6.5 packages\utils\index.js

packages\utils\index.js

```
exports.log = require('./log');
exports.executeNodeScript = require('./executeNodeScript');
exports.config = require('./config');
+exports.withLoading = require('./withLoading');
+exports.request = require('./request');
```

6.6 create\index.js

packages\create\index.js

```
const path = require("path");
+const { promisify } = require("util");
const { red } = require("chalk");
const fs = require("fs-extra");
+const { prompt } = require("inquirer");
+const userhome = require("userhome");
+const clone = promisify(require('clone-git-repo'));
+const { TEMPLATES } = require("@vite2/settings");
+const { config, log, withhoading, request} = require("@vite2/utils");
async function factory(argv) {
    const { cwd, name } = argv;
process.chdir(cwd);//切换为当前命令执行的工作目录
     const { GIT_TYPE,ORG_NAME } = config;
     if (!ORG_NAME) {
           throw new Error(red("X") + " 尚未配置组织名称!");
     const targetDir = path.join(process.cwd(), name); log.info("vite2", "创建的项目目录为%s", targetDir);
          await fs.access(targetDir);
          const files = await fs.readdir(targetDir);
if (files.length > 0) {
                const ( overwrite ) = await prompt({
   type: "confirm",
   name: "overwrite",
                     message: `目标目录非空,是否要移除存在的文件并继续?`,
                      await fs.emptyDir(targetDir);
                     throw new Error(red("X") + "操作被取消");
          await fs.mkdirp(targetDir);
     log.info("vite3", "%s目录已经准备就绪", targetDir);
      let repos = await withLoading("读取模板列表", async () => request.get(`/orgs/${ORG_NAME}/repos`)
      let { repo } = await prompt({
   name: "repo",
   type: "list",
            message: "请选择模板",
           choices: repos.map((repo) => repo.name)
      let tags = await withLoading("读取标签列表", async () => request.get(`/repos/${ORG_NAME}/${repo}/tags`)
      let { tag } = await prompt({
    name: "tag",
    type: "list",
    message: "请选择版本",
            choices: tags,
      });
      let repository = GIT_TYPE + `:${ORG_NAME}/${repo}`;
if(tag)repository+=`#${tag}`;
      const downloadDirectory = userhome(TEMPLATES);
const repoDirectory = `${downloadDirectory}/${repo}/${tag}`;
log.info("vite3", "准备下载模板到%s", repoDirectory);
      try {
            await fs.access(repoDirectory);
      } catch (error) {
           log.info("vite2", "从仓库下载%s", repository);
            await clone (repository, repoDirectory, {clone:true});
module.exports = factory;
```

7.渲染模板

7.1 安装 <u>#</u>

yarn workspace @vite2/create add ejs glob execa

askjson

7.2 packages\settings\index.js

packages\settings\index.js

7.3 packages\create\index.js

packages\create\index.js

```
const path = require("path");
const { promisify } = require("util");
const { red } = require("chalk");
const fs = require("fs-extra");
const { prompt } = require("inquirer");
const userhome = require("userhome");
const clone = promisify(require('clone-git-repo'));
+const glob = promisify(require("glob"));
reconst grow = points/ryftequaret grow //,
teconst { render } = require("ejs");
teconst execa = require("execa");
teconst { TEMPLATES,RENAME_FILES } = require("@vite2/settings");
const { config, log, withLoading, request } = require("@vite2/utils");
async function factory(argv) {
    const { cwd, name } = argv;
    process.chdir(cwd);//切換为当前命令执行的工作目录
    const { GIT_TYPE, ORG_NAME } = config;
    if (!ORG NAME) {
         throw new Error(red("X") + " 尚未配置组织名称!");
    const targetDir = path.join(process.cwd(), name);
log.info("vite2", "创建的项目目录为%s", targetDir);
    try {
          await fs.access(targetDir);
          const files = await fs.readdir(targetDir);
          if (files.length > 0) {
   const { overwrite } = await prompt({
                     type: "confirm",
                     name: "overwrite",
                     message: `目标目录非空,是否要移除存在的文件并继续?`,
                if (overwrite) {
                     await fs.emptyDir(targetDir);
                } else {
                    throw new Error(red("X") + " 操作被取消");
    } catch (error) {
          await fs.mkdirp(targetDir);
     log.info("vite3", "%s目录已经准备就绪", targetDir);
    let repos = await withLoading("读取模板列表", async () =>
         request.get(`/orgs/${ORG_NAME}/repos`)
    let { repo } = await prompt({
    name: "repo",
          type: "list"
          message: "请选择模板",
          choices: repos.map((repo) => repo.name)
     let tags = await withLoading("读取标签列表", async () =>
         request.get('/repos/${ORG_NAME}/${repo}/tags')
    let { tag } = await prompt({
         name: "tag",
type: "list",
          message: "请选择版本",
         choices: tags,
    let repository = GIT TYPE + `:${ORG NAME}/${repo}`;
   if (tag) repository += '#${tag}';
const downloadDirectory = userhome(TEMPLATES);
const repoDirectory = `${downloadDirectory}/${repo}/${tag}`;
log.info("vite3", "准备下载模板到\s", repoDirectory);
          await fs.access(repoDirectory);
    } catch (error) {
  log.info("vite2", "从仓库下载*s", repository);
          await clone(repository, repoDirectory, { clone: true });
     let ask = path.join(repoDirectory, "ask.json");
     if (fs.existsSync(ask)) {
           const askOptions = await fs.readJSON(ask);
           const result = await prompt(askOptions);
           const files = await glob(`**/*`, {
                cwd: repoDirectory,
                ignore: ['ask.json'],
                nodir: true
           await Promise.all(files.map(file => new Promise(async function (resolve)
                 let content = await fs.readFile(path.join(repoDirectory, file), 'utf8');
let renderContent = await render(content, result);
                 let targetName = RENAME_FILES[file] || file;
let targetFile = path.join(targetDir, targetName);
                 await fs.ensureDir(path.dirname(targetFile));
                 await fs.writeFile(targetFile, renderContent, 'utf8');
                 resolve();
           })));
      } else
           await fs.copy(repoDirectory, targetDir);
     process.chdir(targetDir);
     process.chdir(targetDir);
log.info("vite3", "在$初始化 Git 仓库", targetDir);
await execa("git", ["init"], { stdio: "inherit" });
log.info("vite3", "在$安装依赖", targetDir);
await execa("npm", ["install"], { stdio: "inherit" });
log.info("vite3", "启动服务");
await execa("node", ["./node_modules/esbuild/install.js"], {
   stdio: "inherit",
}
...
      await execa("npm", ["run", "dev"], { stdio: "inherit" });
  dule.exports = factory;
```

8.发布

8.1 创建组织

• create (https://www.npmjs.com/org/create)

8.2 发布

package.json

```
{
  "publishConfig": {
    "access": "public",
    "registry": "http://registry.npmjs.org"
  }
}
```

```
npm whoami
npm login
zhangrenyang2000
lerna publish
```

9.参考#

9.1 lerna

命令 功能 Iema bootstrap 安装依赖 Iema clean 删除各个包下的node_modules Iema init 创建新的Iema库 Iema list 查看本地包列表 Iema changed 显示自上次release tag以来有修改的包,选项通 list Iema diff 显示自上次release tag以来有修改的包的差异,执行 git diff Iema exec 在每个包目录下执行任意命令 Iema run 执行每个包package.json中的脚本命令 Iema add 添加一个包的版本为各个包的依赖 Iema import 引入 package Iema link 链接互相引用的库 Iema create 新建package Iema publish 发布

9.2 varn

命令 说明 yam -v 查看yam版本 yam config list 查看yam的所有配置 yam config set registry https://registry.npm.taobao.org/ (https://registry.npm.taobao.org/)

修改yam的源镜像为淘宝源 yam config set global-folder "D:\RTE\Yam\global" 修改全局安装目录, 先创建好目录(global), 我放在了Yam安装目录下(D:\RTE\Yam\global) yam config set prefix "D:\RTE\Yam\global" 修改全局安装目录的bin目录位置 yam config set cache-folder "D:\RTE\Yam\cache" 修改全局缓存目录, 先创建好目录(cache), 和global放在同一层目录下 yam config list 查看所有配置 yam global bin 查看当前yam的bin的位置 yam global dir 查看当前yam的全局安装位置

9.2 yarn workspace

- yarn官网 (https://yarn.bootcss.com/docs/)
- yarn add
- yarn add

作用 命令 查看工作空间信息 yam workspaces info 给所有的空间添加依赖 yam workspaces run add lodash 给根空间添加依赖 yam add -W -D typescript jest 给某个项目添加依赖 yam workspace create-react-app3 add commander 删除所有的 node_modules lema clean 等于 yam workspaces run clean 安装利Inform fob yam install 等于 lema bootstrap -npm-client yam -use-workspaces 重新获取所有的 node_modules yam install force 查看缓传目录 yam cache dire 清本本地缓存 yam cache clean 在所有package中运行指定的命令 yam workspaces run

9.3 yargs

• yargs (https://www.npmjs.com/package/yargs)帮助你构建交互命令行工具,可以解析参数生成优雅的用户界面

```
const yargs = require("yargs/yargs");
const cli = yargs();
   .usage(`Usage: vite2 [options]`)
   .demandCommand(1, "至少需要一个命令")
   .strict()
   .recommendCommands()
   .command({
       command: "create "
       describe: "创建项目",
       builder: (yargs) => {
          yargs.positional("name", {
               type: "string"
              describe: "项目名称",
          });
       handler: async function (argv) {
          console.log(argv);
   .parse(process.argv.slice(2));
```

9.4 node -e

- node -e (https://nodejs.org/api/cli.html#cli e eval script)可以直接执行一段js脚本并输入
- -e, --eval "script"
- 设置 stdion: 'inherit',当执行代码时,子进程将会继承主进程的stdin、stdout和stdem

```
node -e "console.log(process.argv)" -- a b
node -e "console.log(JSON.parse(process.argv[1]))" -- "{\"name\":\"zhufeng\"}"
node -e "console.log(process.cwd())"
```

9.5 clone