

Always Ready To Code

# Getting productive with Ephemeral Developer Environments

Sven Efftinge - Co-Founder of Gitpod

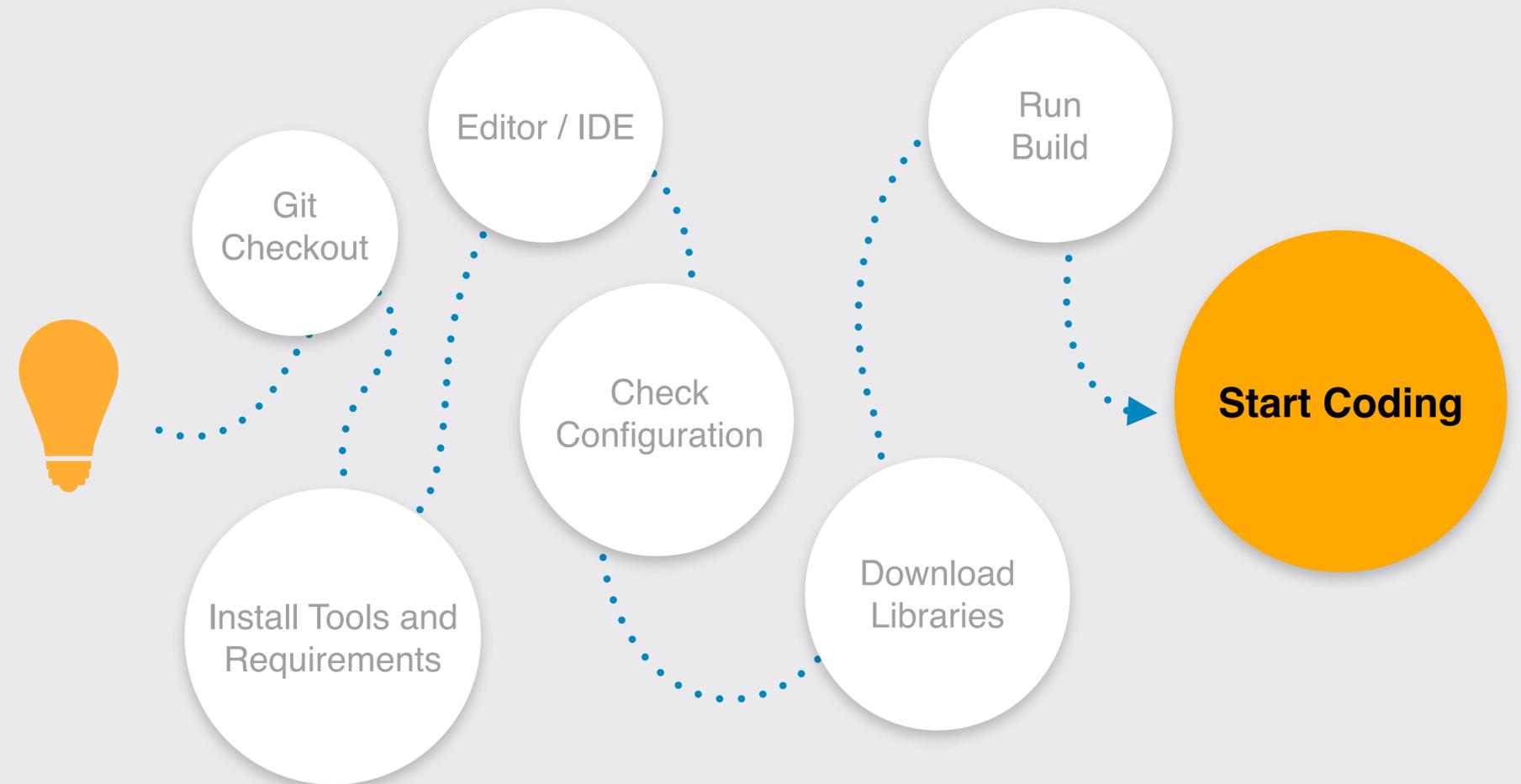




## Problem

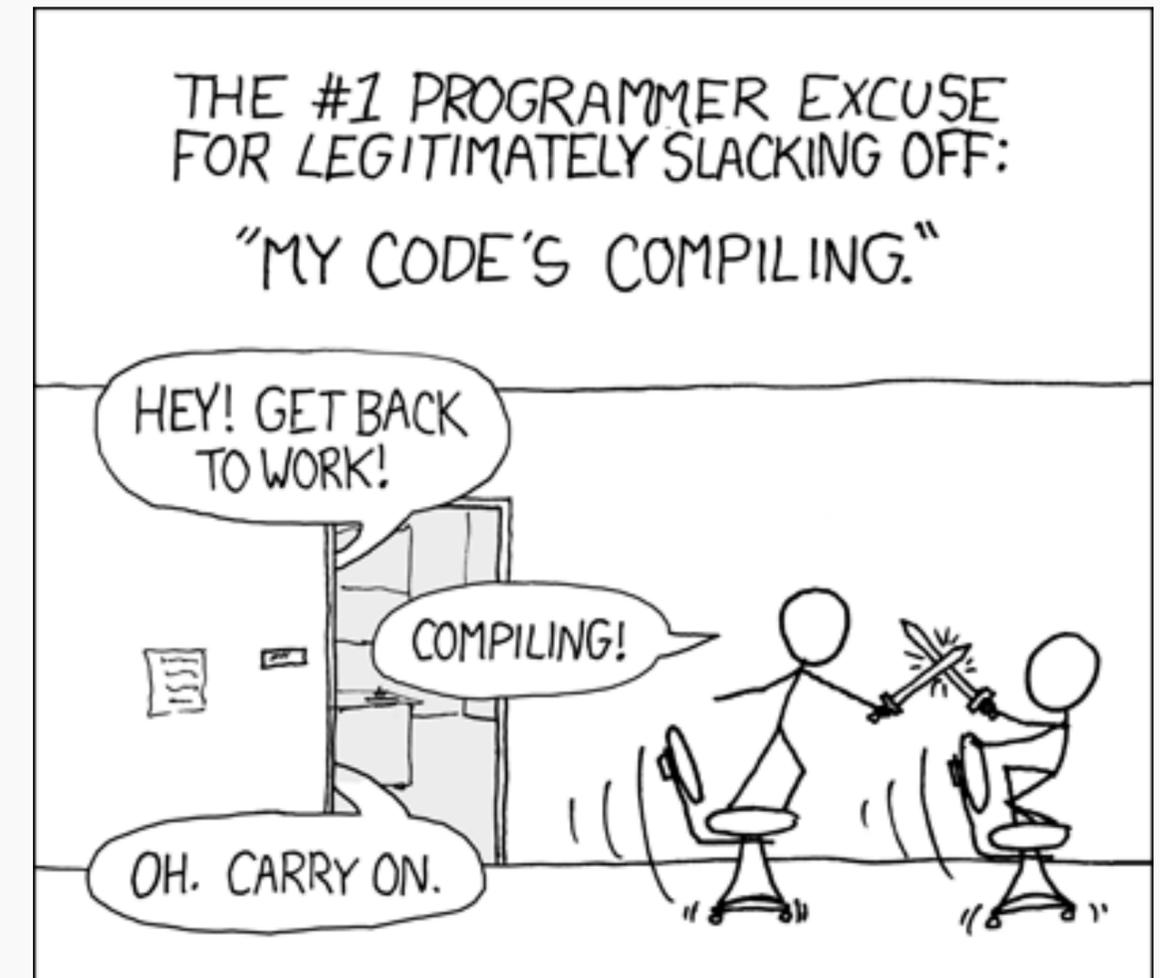
It is 2022 and developers still

- **Manually manage** their dev environments on local machines and
- **Wait for builds and tests to complete** before coding.



Every week ...

“ Software engineers spend  
**3.7 hours waiting for tests** [...],  
**3.5 hours waiting for builds** [...],  
and **2.7 hours on dev environment**  
management.<sup>1</sup> ”



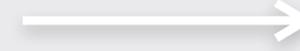
<sup>1</sup><https://www.infoworld.com/article/2613762/software-engineers-spend-lots-of-time-not-building-software.html>



Solution

- **Describe** dev environments as code.
- Continuously prepare **ephemeral dev environments** for every branch.

*Think CI/CD applied to dev environments.*



Start coding



**Automated**





# Demo Time

Workspaces Settings Admin Docs Community

## Workspaces

Manage recent and stopped workspaces.

Search Workspaces Filter: Active Limit: 50 New Workspace

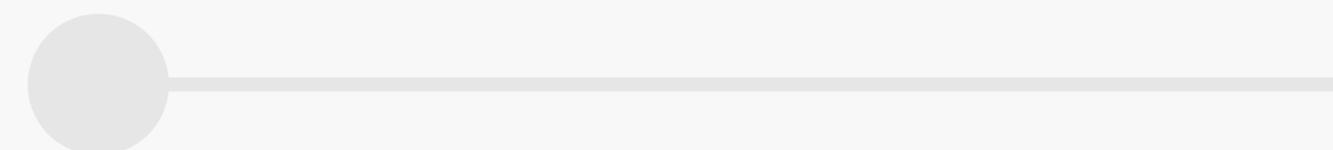
Name	Context	Pending Changes	Last Start
blush-aardvark-jzbytye9 github.com/gitpod-io/spring-petclinic	gitpod-io/spring-petclinic - master https://github.com/gitpod-io/spring-petclinic	master No Changes	8 minutes ago

Open

```
src > main > java > org > springframework > samples > petclinic > model > Person.java
17
18 import javax.persistence.Column;
19 import javax.persistence.MappedSuperclass;
20 import javax.validation.constraints.NotEmpty;
21
22 /**
23  * Simple JavaBean domain object representing a person.
24  *
25  * @author Ken Krebs
26  */
27 @MappedSuperclass
28 public class Person extends BaseEntity {
29
30     @Column(name = "first_name")
31     private String firstName;
32
33     @Column(name = "last_name")
34     @NotEmpty
35     private String lastName;
36
37     public String getFirstName() {
38         return this.firstName;
39     }
40
41     public void setFirstName(String firstName) {
42         this.firstName = firstName;
43     }
44
45     public String getLastName() {
46         return this.lastName;
47     }
48
49     public void setLastName(String lastName) {
50         this.lastName = lastName;
51     }
52 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
actions. (feature not supported)
2021-04-21 09:41:05.649 INFO 590 --- [main] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Start completed.
2021-04-21 09:41:06.282 INFO 590 --- [main] org.hibernate.jpa.internal.util.LogHelper : HHH000204: Processing PersistenceUnitInfo [
name: default
...
2021-04-21 09:41:06.442 INFO 590 --- [main] org.hibernate.Version : HHH000412: Hibernate Core (5.3.10.Final)
2021-04-21 09:41:06.445 INFO 590 --- [main] org.hibernate.cfg.Environment : HHH000206: hibernate.properties not found
2021-04-21 09:41:06.679 INFO 590 --- [main] org.hibernate.annotations.common.Version : HCANN000001: Hibernate Commons Annotations (5.0.4.Final)
2021-04-21 09:41:06.982 INFO 590 --- [main] org.hibernate.dialect.Dialect : HHH000400: Using dialect: org.hibernate.dialect.HSQLDialect
2021-04-21 09:41:08.135 INFO 590 --- [main] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit 'default'
2021-04-21 09:41:08.547 INFO 590 --- [main] org.springframework.orm.jpa.LocalContainerEntityManagerFactoryBean : Initializing EntityManagerFactory
2021-04-21 09:41:09.173 INFO 590 --- [main] org.springframework.orm.jpa.LocalContainerEntityManagerFactoryBean : Initializing EntityManagerFactory
2021-04-21 09:41:09.230 WARN 590 --- [main] org.springframework.web.servlet.mvc.annotation.AnnotationMethodMapping : Warning: Spring MVC is enabled by default. Therefore, database queries may be performed during view rendering. Explicitly configure spring.jpa.open-in-view to disable this warning.
2021-04-21 09:41:09.778 INFO 590 --- [main] org.springframework.web.servlet.mvc.annotation.AnnotationMethodMapping : Exposing 15 endpoint(s) beneath base path '/manage'
2021-04-21 09:41:09.885 INFO 590 --- [main] org.springframework.web.servlet.mvc.annotation.AnnotationMethodMapping : Tomcat started on port(s): 8080 (http) with context path ''
2021-04-21 09:41:09.897 INFO 590 --- [main] org.springframework.boot.SpringApplication : Started PetClinicApplication in 0.858 seconds (JVM running for 0.961)
2021-04-21 09:41:10.813 INFO 590 --- [main] org.springframework.boot.SpringApplication : Initializing Spring DispatcherServlet 'dispatcherServlet'
2021-04-21 09:41:11.813 INFO 590 --- [main] org.springframework.boot.SpringApplication : Initializing Spring DispatcherServlet 'dispatcherServlet'
2021-04-21 09:41:19.827 INFO 590 --- [main] org.springframework.boot.SpringApplication : Completed initialization in 14 ms
```



# Automated Dev Environments

</> Dev Environment As Code

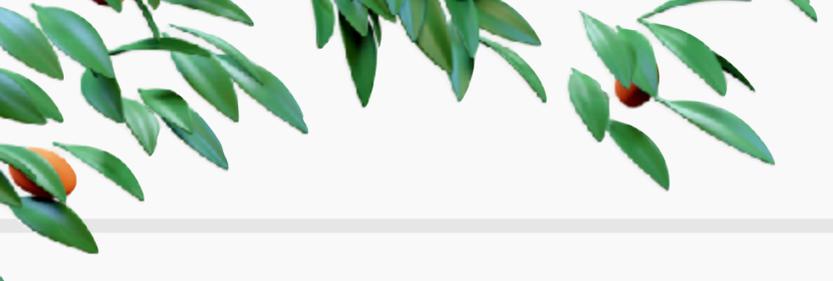
Versioned

Reproducible (No more “works on my machine”)

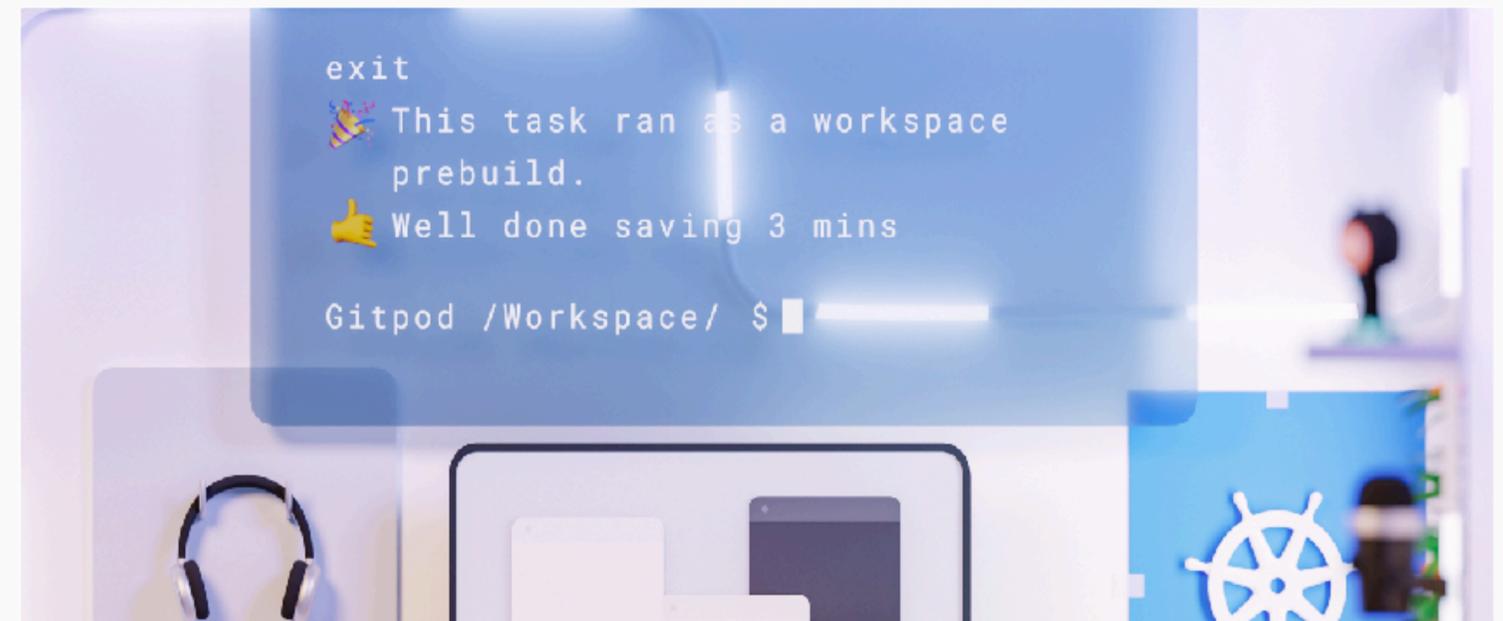
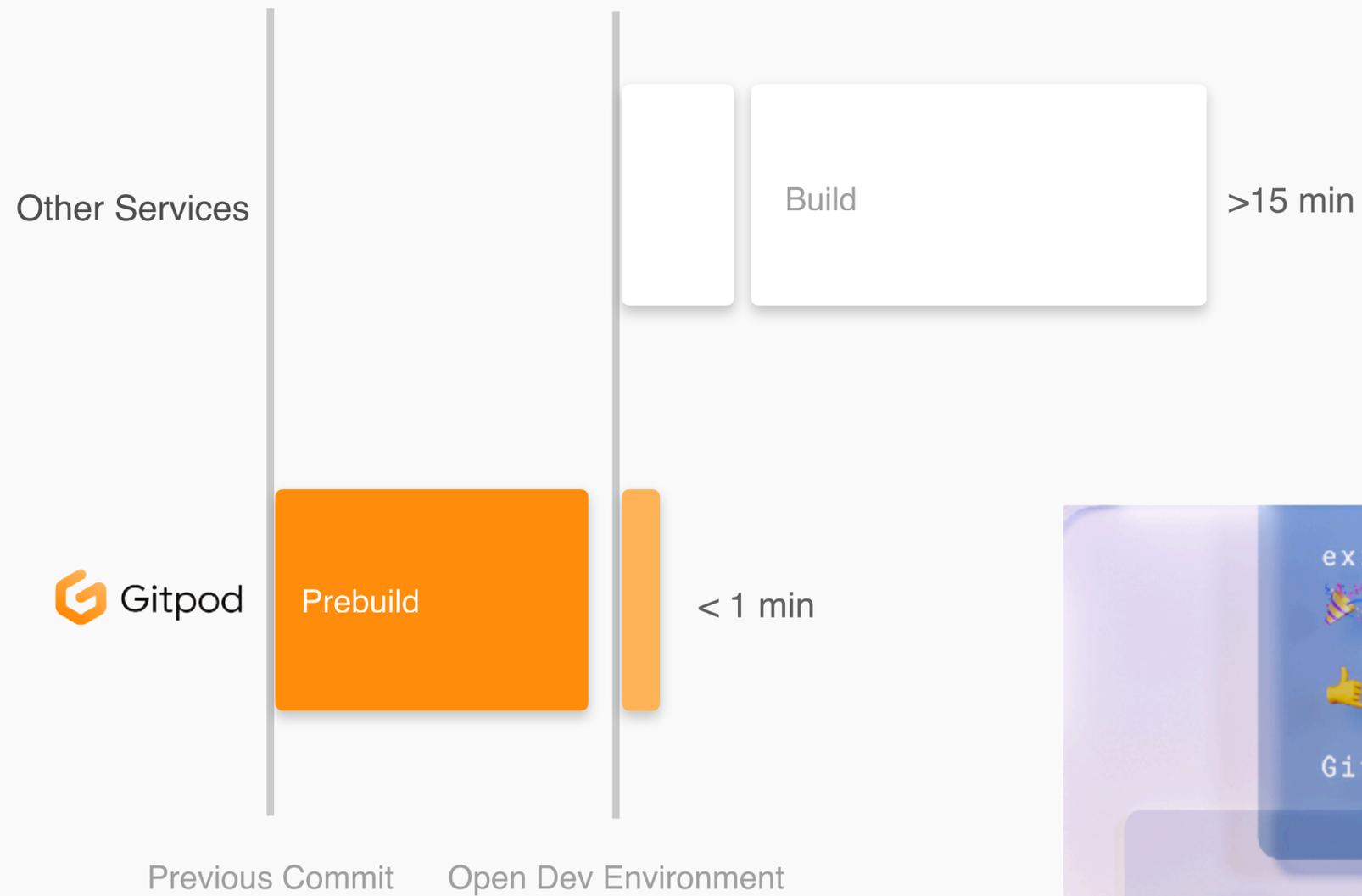
# Ephemeral Dev Environments

- ✨ Always Start Fresh
- ⚙️ Continuously Applied Automation
- 🔄 Work in Parallel





# Prebuilt Dev Environments





# Secure Dev Environments

-  Centralized Data Storage
-  Access Audits
-  SSH connections

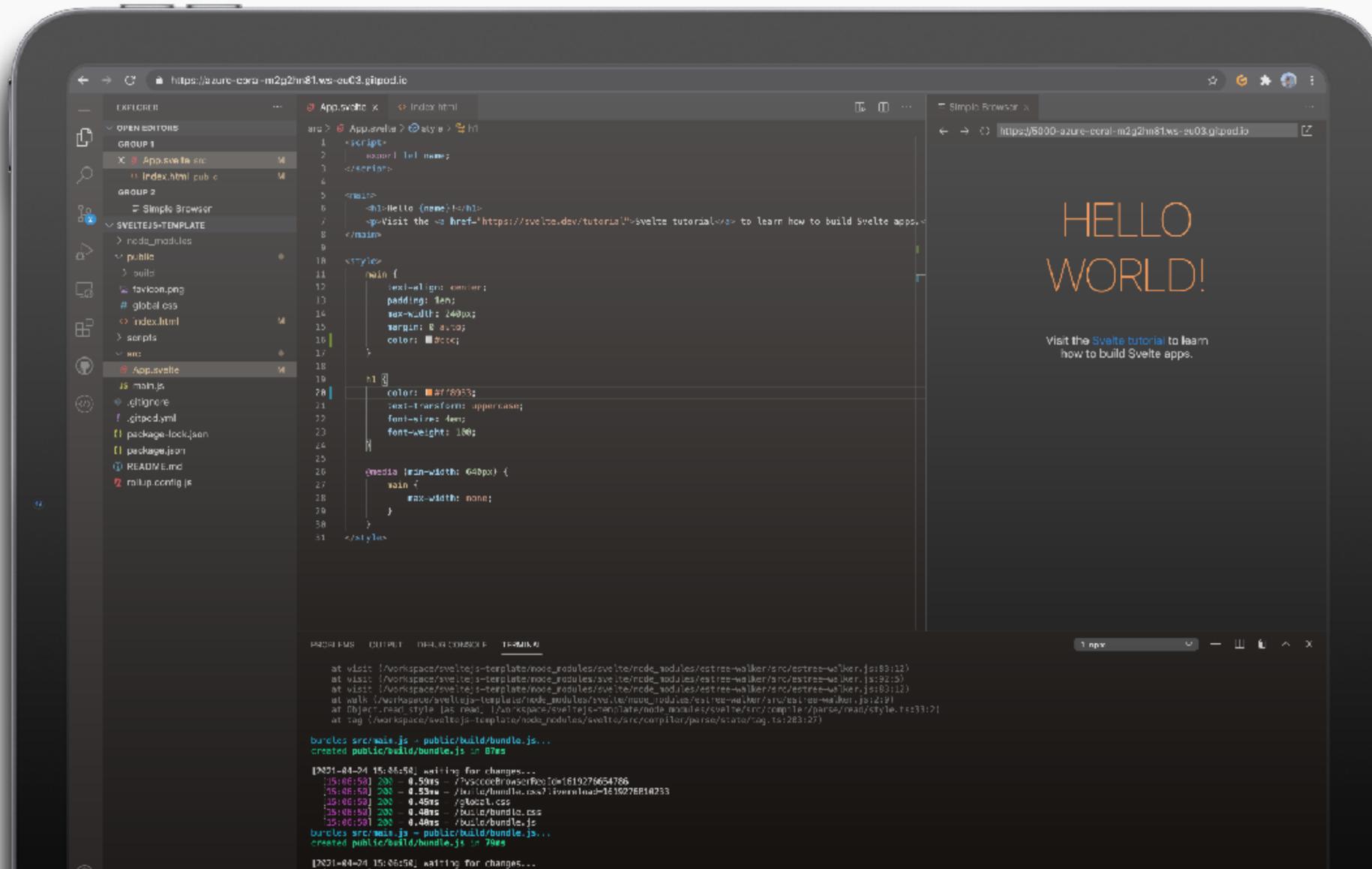
# Contextual Dev Environments

- 🔍 Bug Fix
- 🔗 Code Review
- ... File, Branch, Commit, etc.



# Accessible Dev Environments

Code from any device.



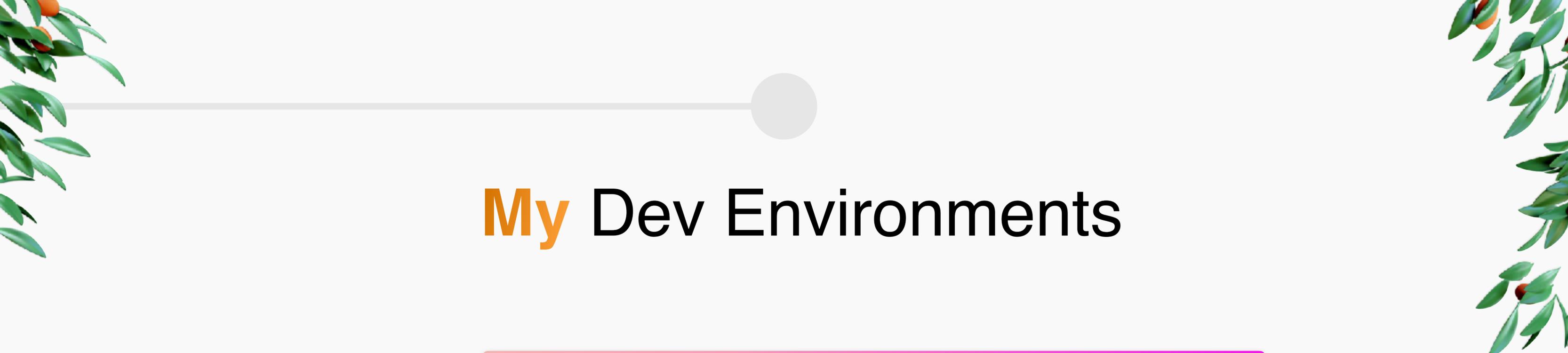
# Collaborative Dev Environments



Live Share Workspaces

Asynchronous Snapshots





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# My Dev Environments

My Extensions

My Themes

User Configuration

My Configuration

Project Configuration

Project A

Project B

Project C



# Are You Ready to Code?

Learn more at

 [gitpod.io](https://gitpod.io)

 [github.com/gitpod-io/gitpod](https://github.com/gitpod-io/gitpod)

 [community.gitpod.io](https://community.gitpod.io)

 [@gitpod](https://twitter.com/gitpod)

