

Introduction to Software Business Product Management

Week 4 Day 1

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for

Oakland University

The background of the slide is a dark, textured surface filled with numerous question marks of varying sizes and shades of gray and brown, creating a sense of depth and mystery. A large, light gray question mark is prominently displayed in the center-left area, partially overlapping the word 'Questions?'.

Questions?

Terms to Listen For

CLI

- Command Line Interface

GUI

- Graphical User Interface

Repositories

- A holding location for programming projects

Environment Terms To Listen For

Dev/Test

- A working environment for functionality testing new features

QA

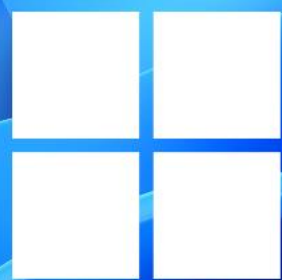
- An environment for user testing new features

Prod/Production

- The most up-to-date publicly used environment

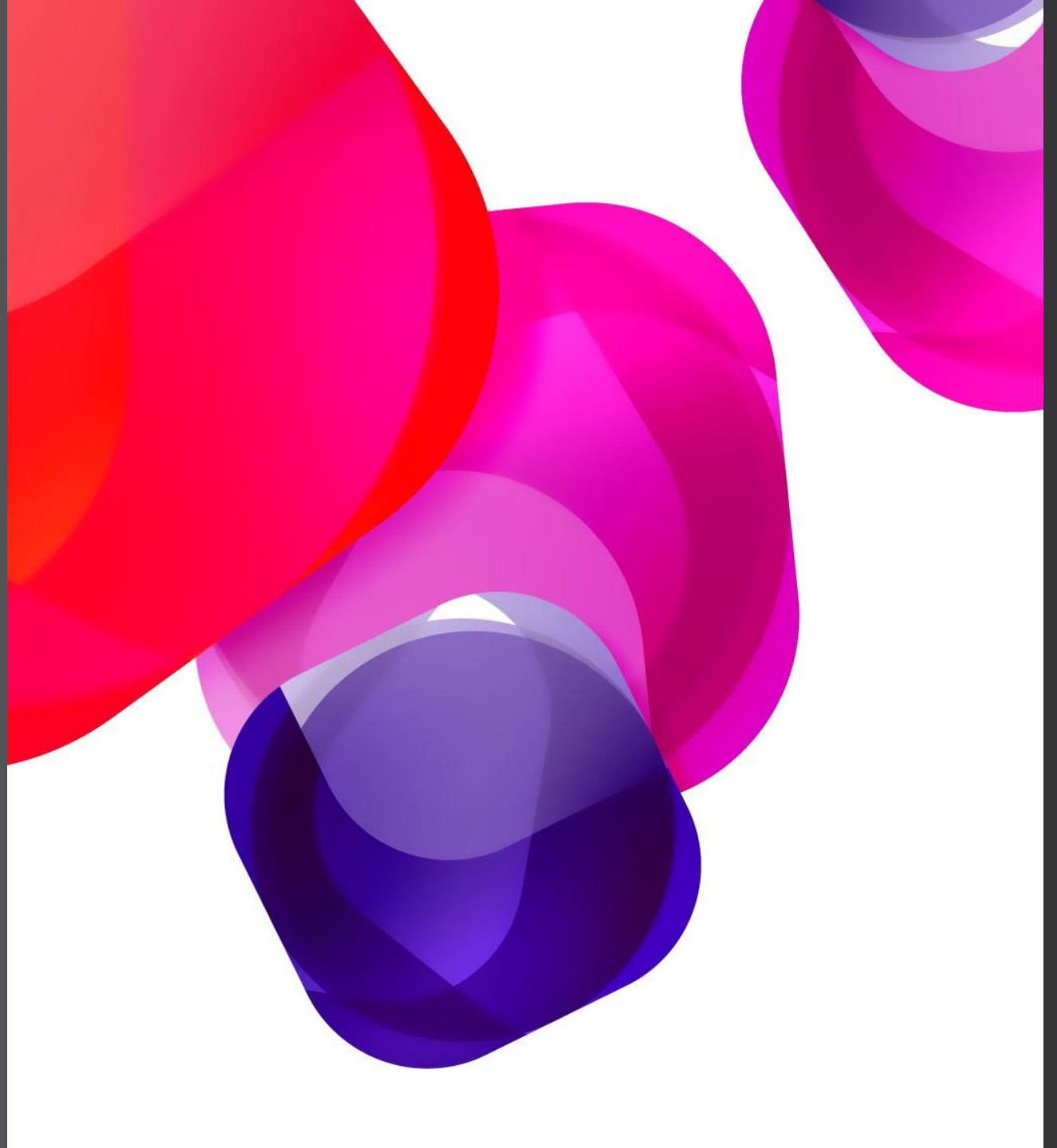


Operating System CLI vs. GUI



Windows 11

GUI



CLI



Command
Line

The diagram shows a dark gray rounded rectangle containing a light gray rounded rectangle, which in turn contains the text 'Command Line'.



Powershell!

The diagram shows a dark gray rounded rectangle containing a light gray rounded rectangle, which in turn contains the text 'Powershell!'.



Mac



CLI

Terminal



GIT

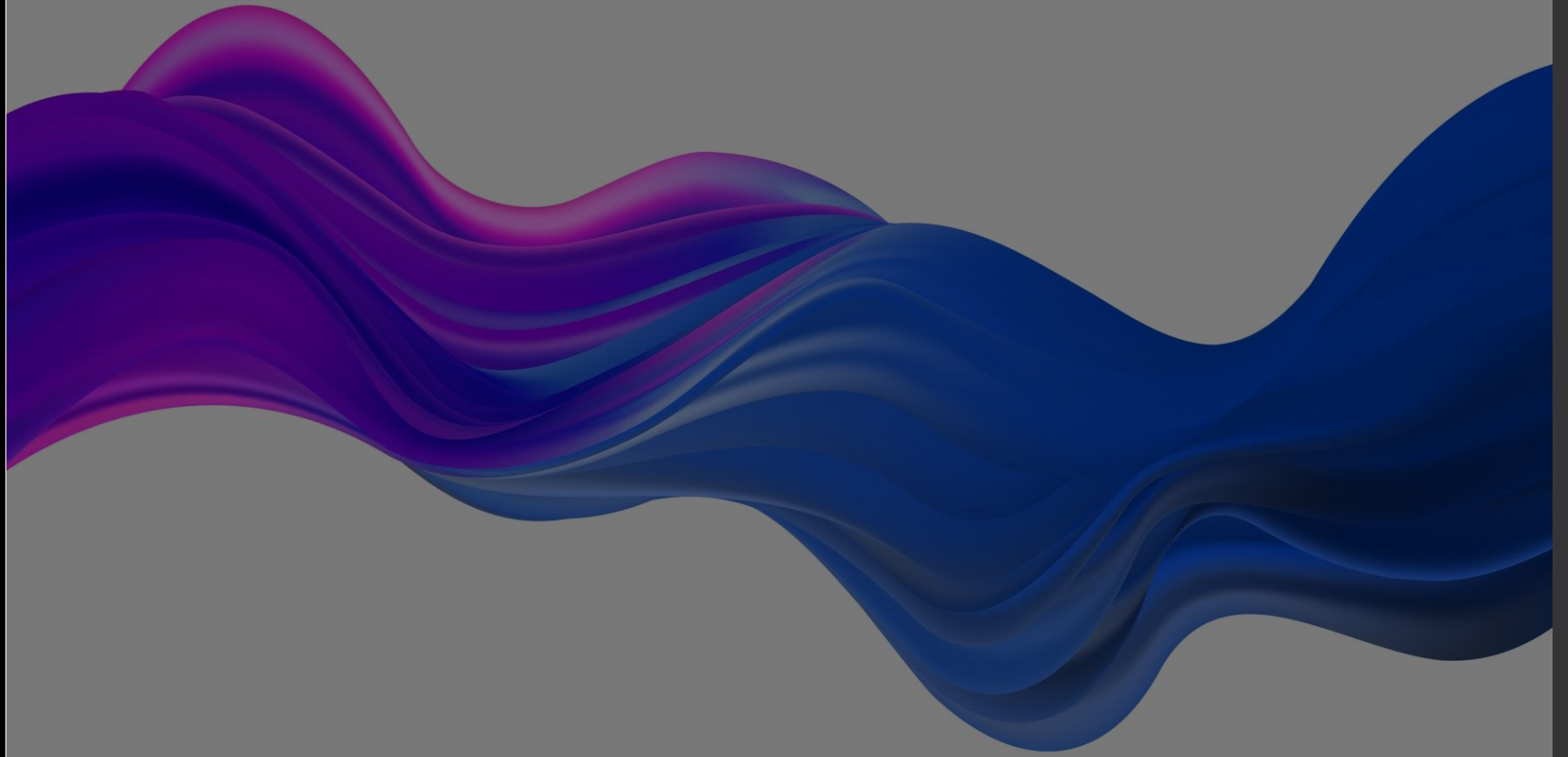


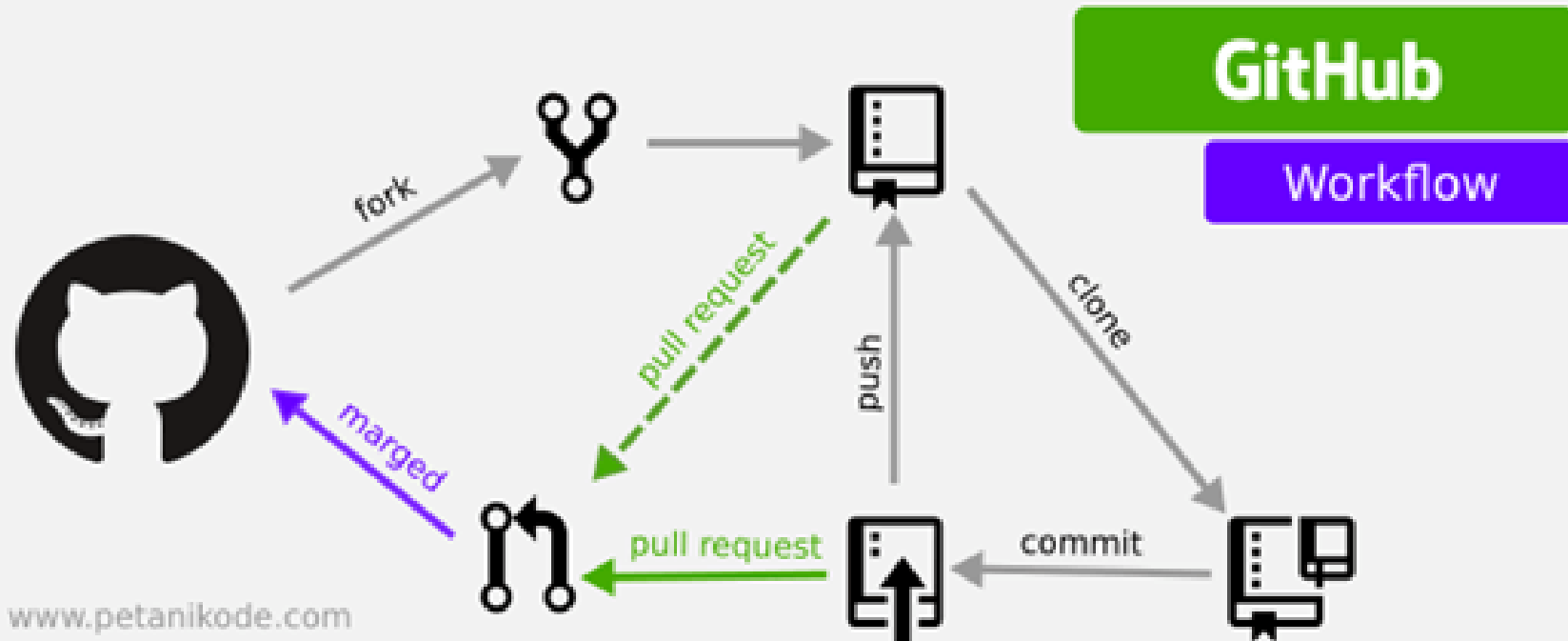
What is Github?

- Allows us to:
 - save projects
 - organize programming progress between multiple coders
 - do change management
 - publish new versions

Github vs. Git

Git Tool Basics





www.petanikode.com

A Walk Around The Graphical User Interface (GUI)

A Walk Around The Command Line Interface (CLI)

A close-up, slightly angled view of a clock face. The clock has a dark grey or black background with white numbers for the hours. The numbers 8, 9, 10, and 12 are visible. The clock hands are black, and there is a red second hand. The text '10 minute break' is written in a white, serif font across the center of the clock face.

10 minute break



Repositories



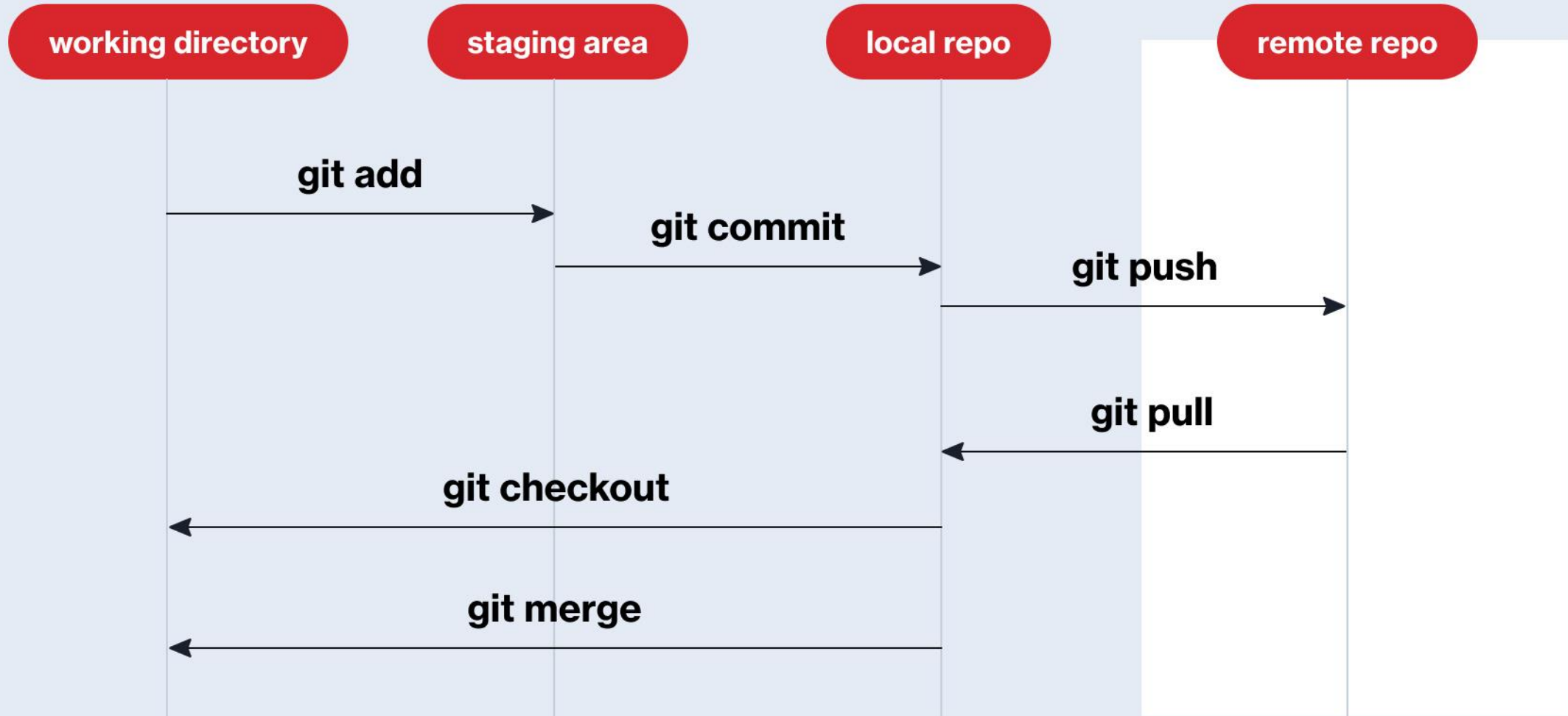
Purpose of a Repository



Making Our First Repo

Local

Remote



README.md

A TINY CHEATSHEET ON



MARKDOWN

Markdown is a lightweight markup language. Its design allows it to be converted to many output formats like HTML

Titles

Heading 1
Heading 2
Heading 3
Heading 4
Heading 5
Heading 6

Text

Italic
Also Italic
Bold
Also Bold

Lists

- * Item 1
- * Item 2

- This works
- Too

1. Ordered
2. Lists
3. Are Fun

Links & Images

![Image Title](Image URL)
[Click Me](Link URL)
[profile](github.com/godcrampy)

Quotes

Linus Said:

```
> Cheat Sheets are Cool!  
And they are Funky
```

Checklist

- [x] this is a complete item
- [] this is an incomplete item

Code

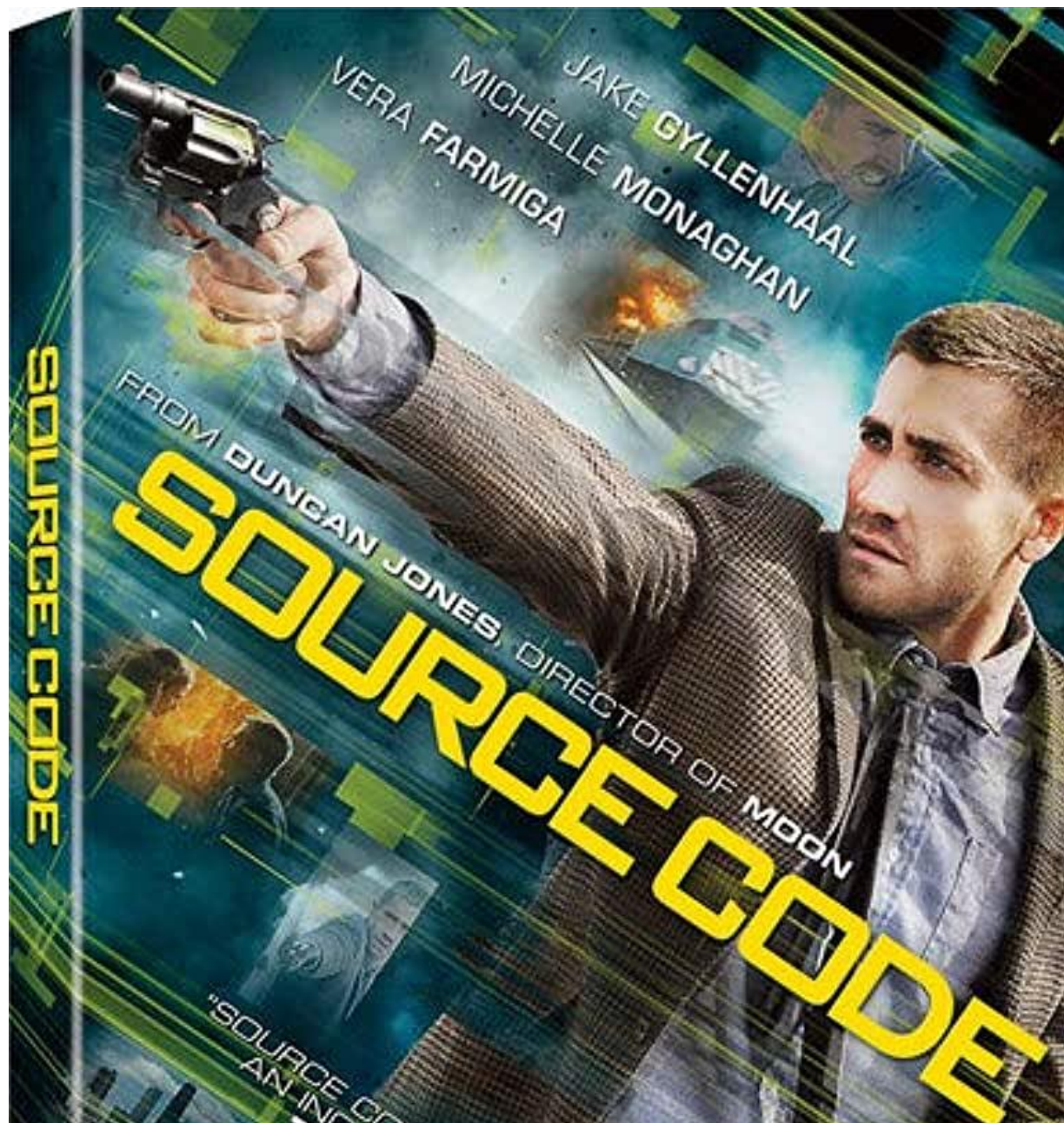
```
```javascript  
function foo() {
 // Comment
 let a = 5;
 let b = 7;
 return a + b;
}
```\n\n`<inline-code>`
```

README.md

Markdown



What is Source Code?

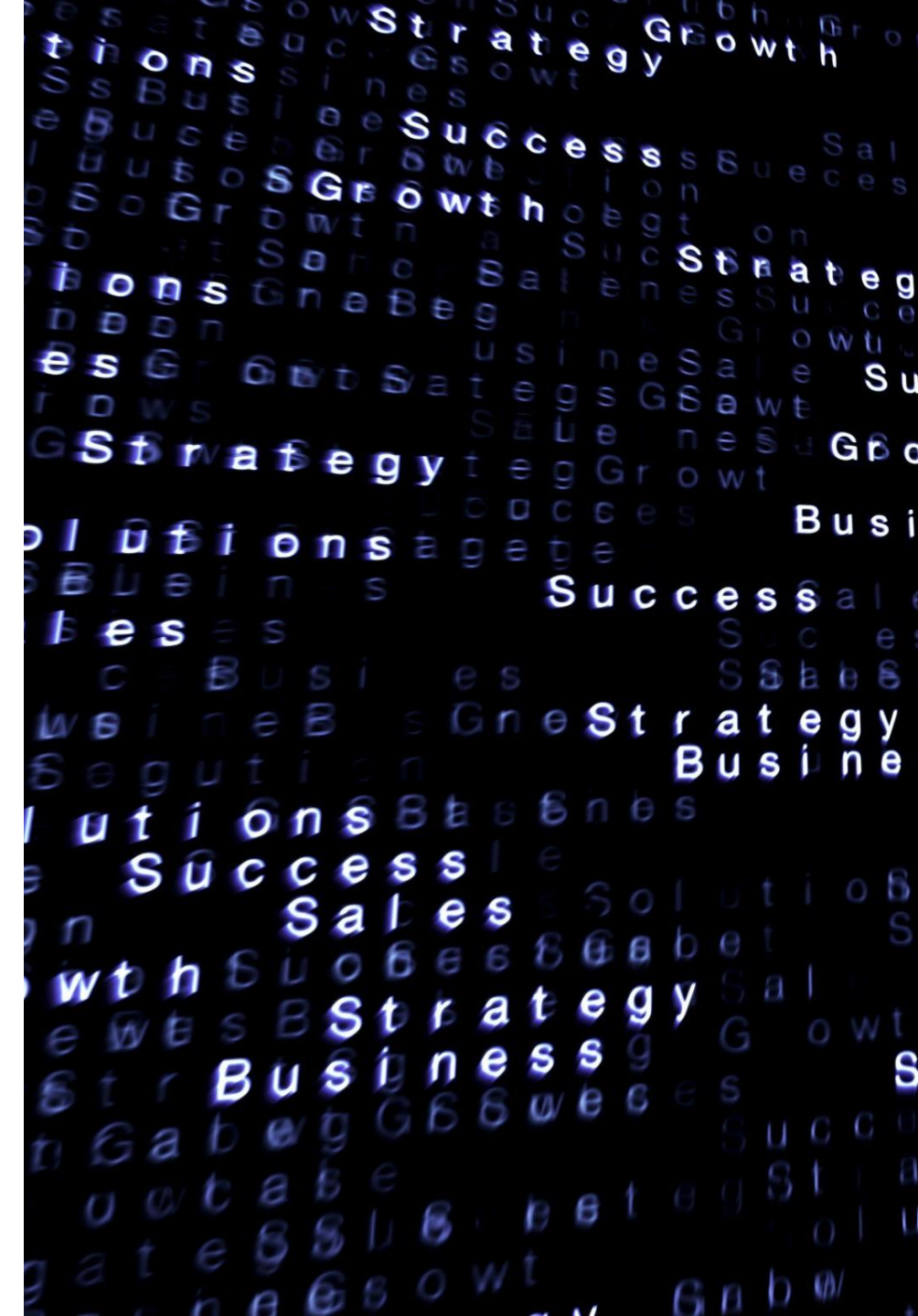


```
185 var cpassword = document.getElementById('password');
186 var firstame=document.getElementById('firstame');
187 var firstame=document.getElementById('firstame');
188 var firstame=document.getElementById('firstame');
189 var firstame=document.getElementById('firstame');
190 var firstame=document.getElementById('firstame');
191 var firstame=document.('');if(isComputer('MTT', 'Please enter the correct password.
192 var firstame=document.('');if(isComputer('PALAME', 'Please enter the correct password.
193 var firstame=document.('');if(isComputer('VIRAL', 'Please enter the correct password.
194 var firstame=document.getElementById('firstame');if(!isComputer('MTT', 'Please enter the correct password.
195 var firstame=document.getElementById('firstame');if(!isComputer('PALAME', 'Please enter the correct password.
196 var firstame=document.getElementById('firstame');if(!isComputer('VIRAL', 'Please enter the correct password.
197 var firstame=document.getElementById('firstame');if(!isComputer('MTT', 'Please enter the correct password.
198 var firstame=document.getElementById('firstame');if(!isComputer('PALAME', 'Please enter the correct password.
```

```
506 self._headers_buffer.append(("s %d s\r\n" %
507     (self.protocol_version, code, message)).encode(
508         'latin-1', 'strict'))
509
510 def send_header(self, keyword, value):
511     """Send a MIME header to the headers buffer."""
512     if self.request_version != 'HTTP/0.9':
513         if not hasattr(self, '_headers_buffer'):
514             self._headers_buffer = []
515         self._headers_buffer.append(
516             ("s: %s\r\n" % (keyword, value)).encode('latin-1', 'strict'))
517
518     if keyword.lower() == 'connection':
519         if value.lower() == 'close':
520             self.close_connection = True
521         elif value.lower() == 'keep-alive':
522             self.close_connection = False
```


Let's Take A Look At Some Source Code!

- <https://github.com/hexa-decim8/girltalk>
- <https://github.com/PowerShellMafia/PowerSploit>
- <https://github.com/GhostPack>



Cloning A Repository

A decorative background pattern on the right side of the slide. It consists of a complex, interlocking geometric design in shades of green, teal, and brown. The pattern resembles a stylized mosaic or a traditional Islamic geometric pattern, with various shapes like stars, polygons, and floral motifs. The overall effect is a textured, organic-looking border that contrasts with the solid grey background.



What can we do with
code once we have it?

Publishing Through Git

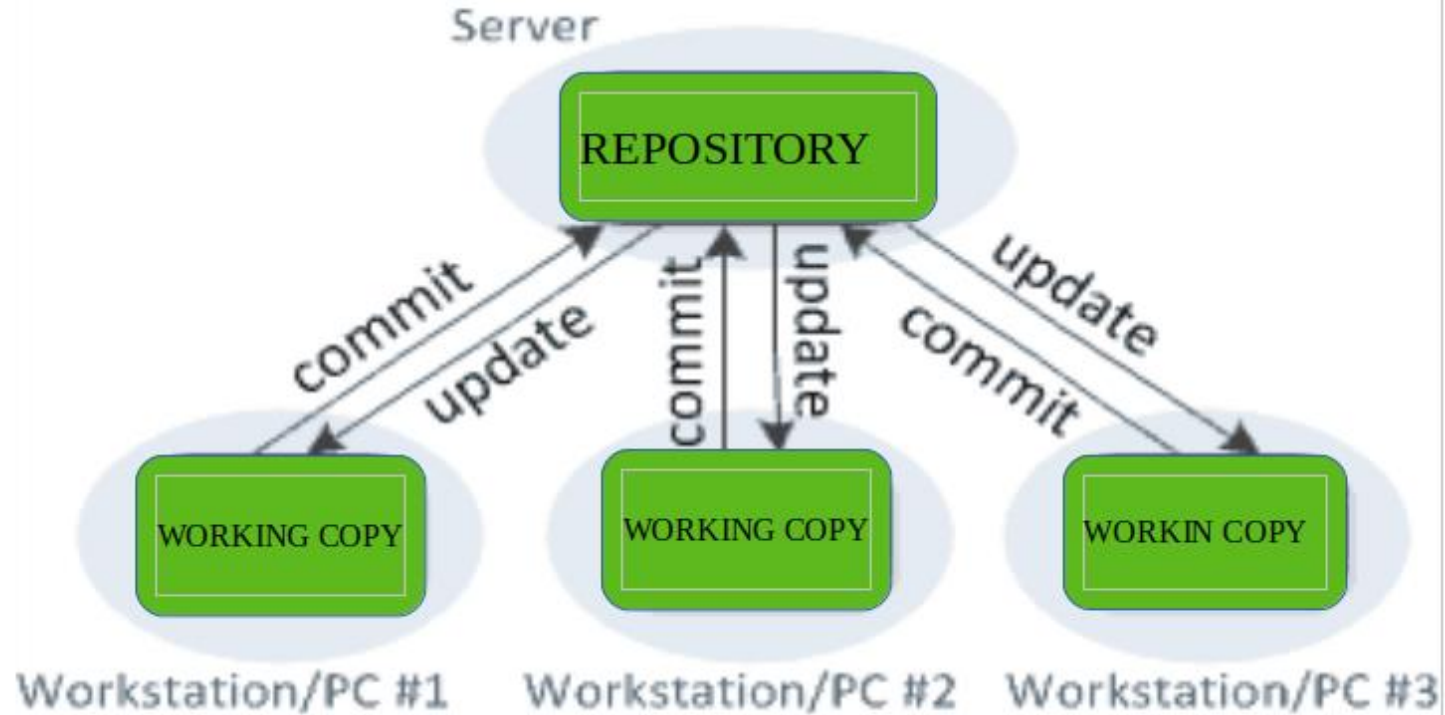


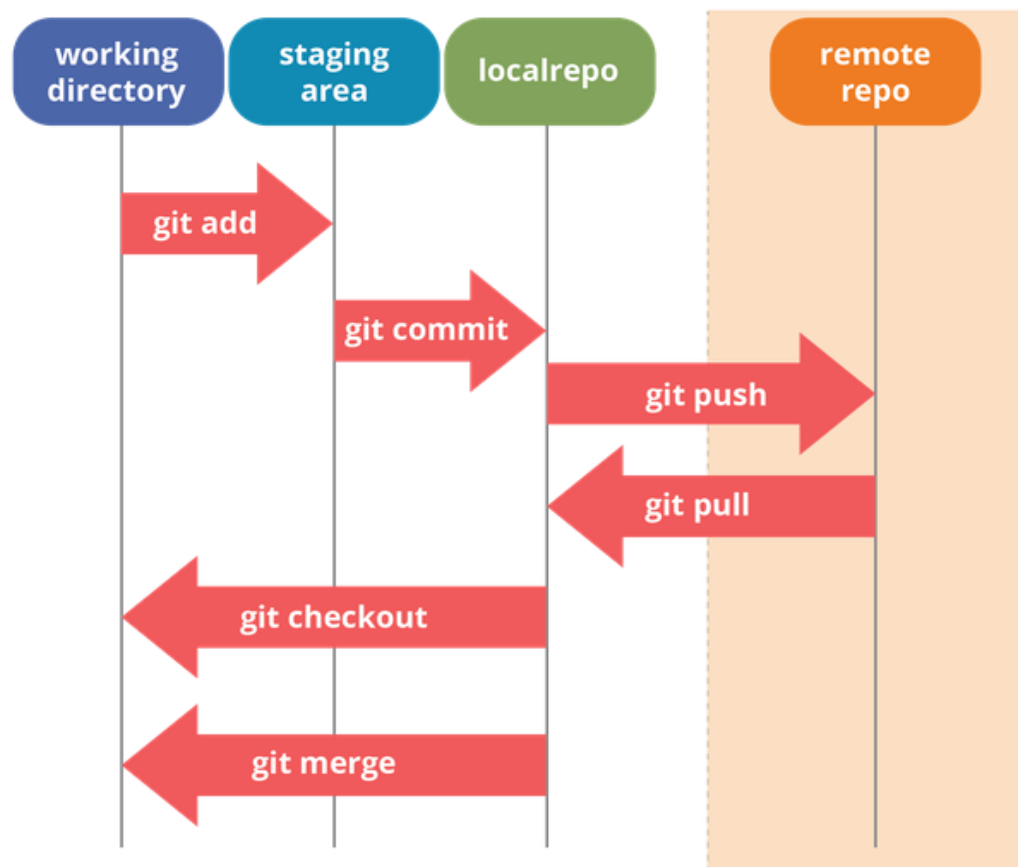
Basics of Version Control

- What do we do when we want to make changes to our app?
- How do we SAFELY make changes to our app?



Centralized version control





A close-up, slightly blurred image of a clock face. The clock has a white face with grey numbers and hands. The numbers 8, 9, 10, and 12 are visible. A red second hand is pointing towards the 8. The text "10 minute break" is overlaid in a black serif font. A dark grey vertical bar is on the right side of the image.

10 minute break



Branching



Branching Starters

- Main Branch
 - Used to be called “Master”
- Multiple test/feature branches
 - Active development happens here
- We should have policies for when & how to create branches

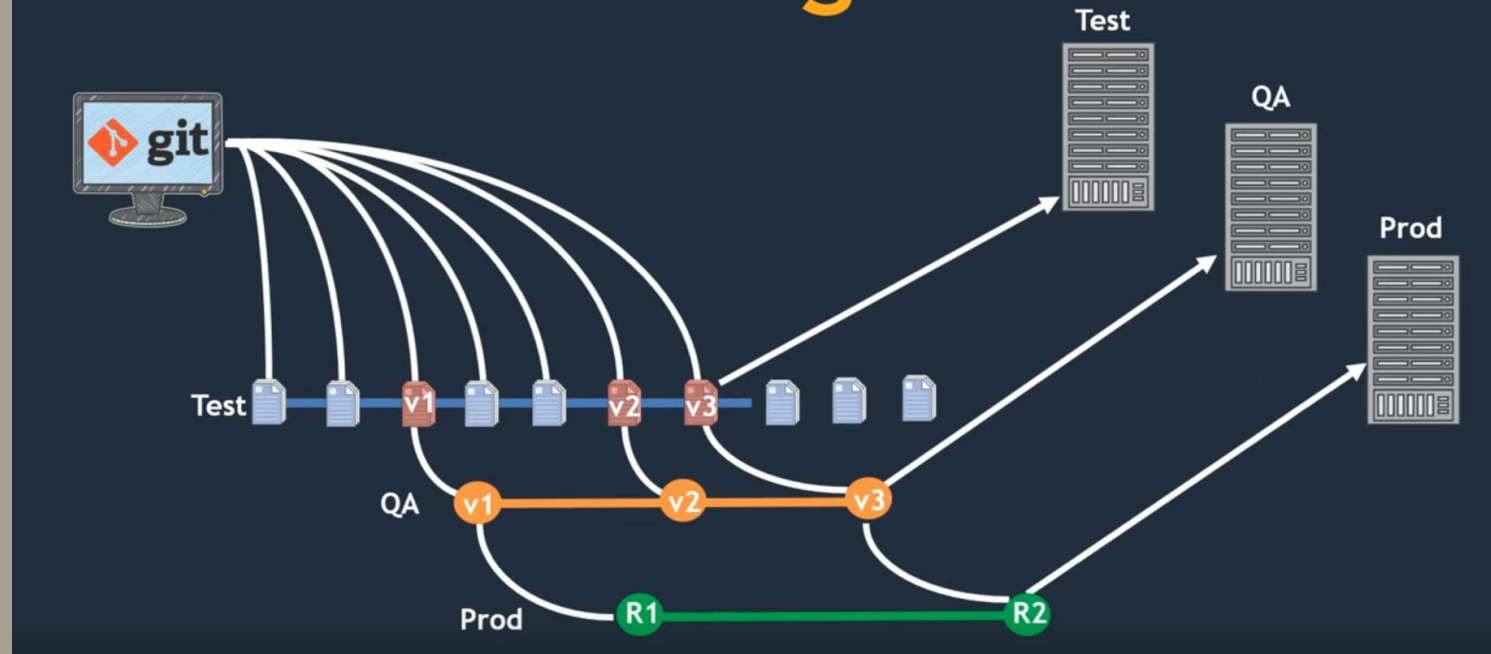
First
commit

head



Parent

Branches Strategies



Branching Strategy

Common Git Commands

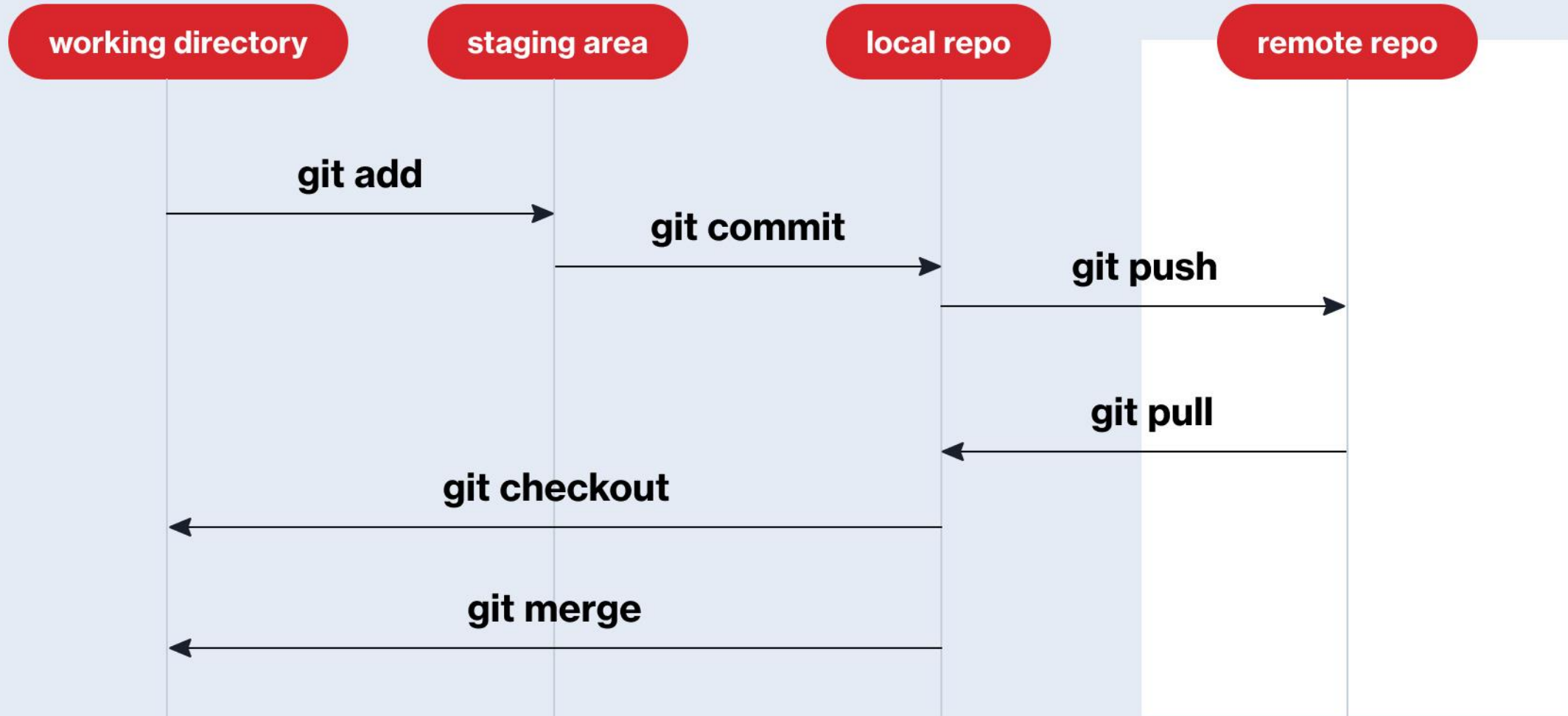


The background of the image is a complex 3D maze. The maze is constructed from thick, dark grey or black walls that create a series of concentric, winding paths. The perspective is from a low angle, looking down into the maze, which gives it a sense of depth and complexity. The lighting is dramatic, with strong highlights on the top edges of the walls and deep shadows in the recessed areas, emphasizing the three-dimensional nature of the structure. In the center of the maze, the word "Commit" is written in a clean, white, serif font. The text is positioned in the lower-left quadrant of the image, standing out prominently against the dark, intricate background.

Commit

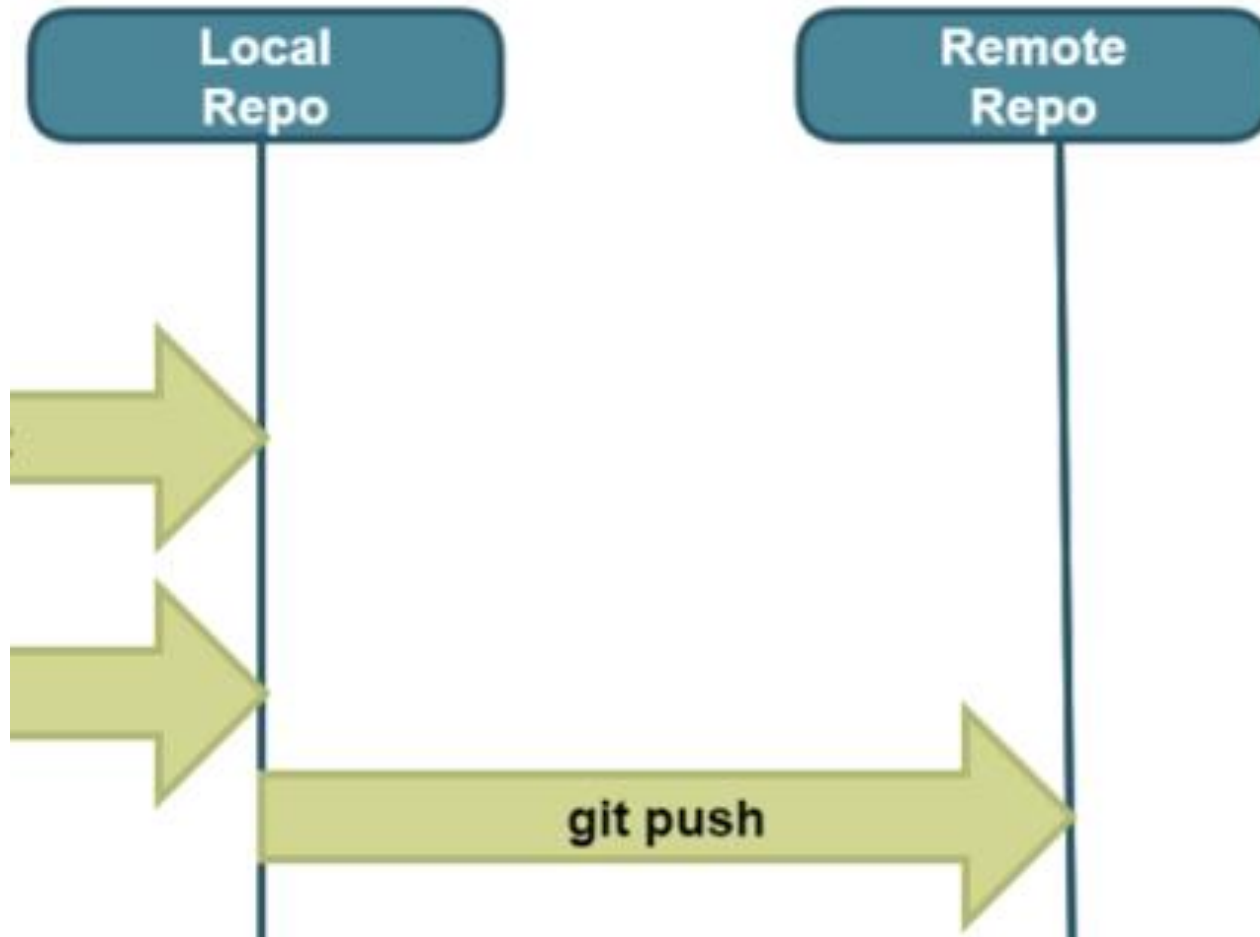
Local

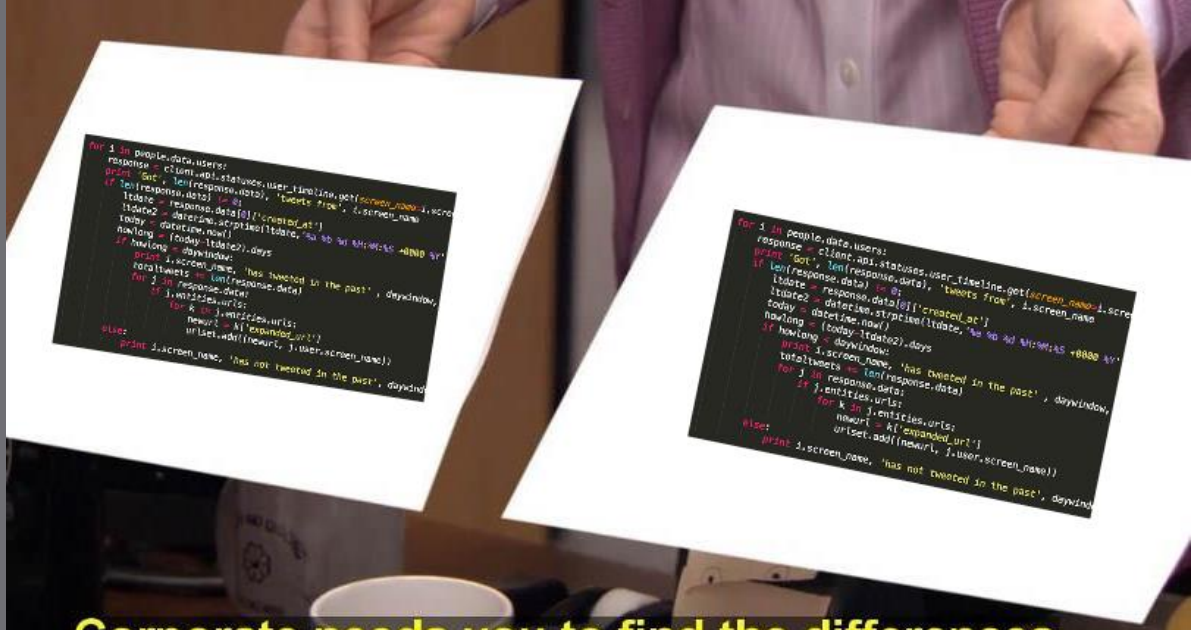
Remote





Push



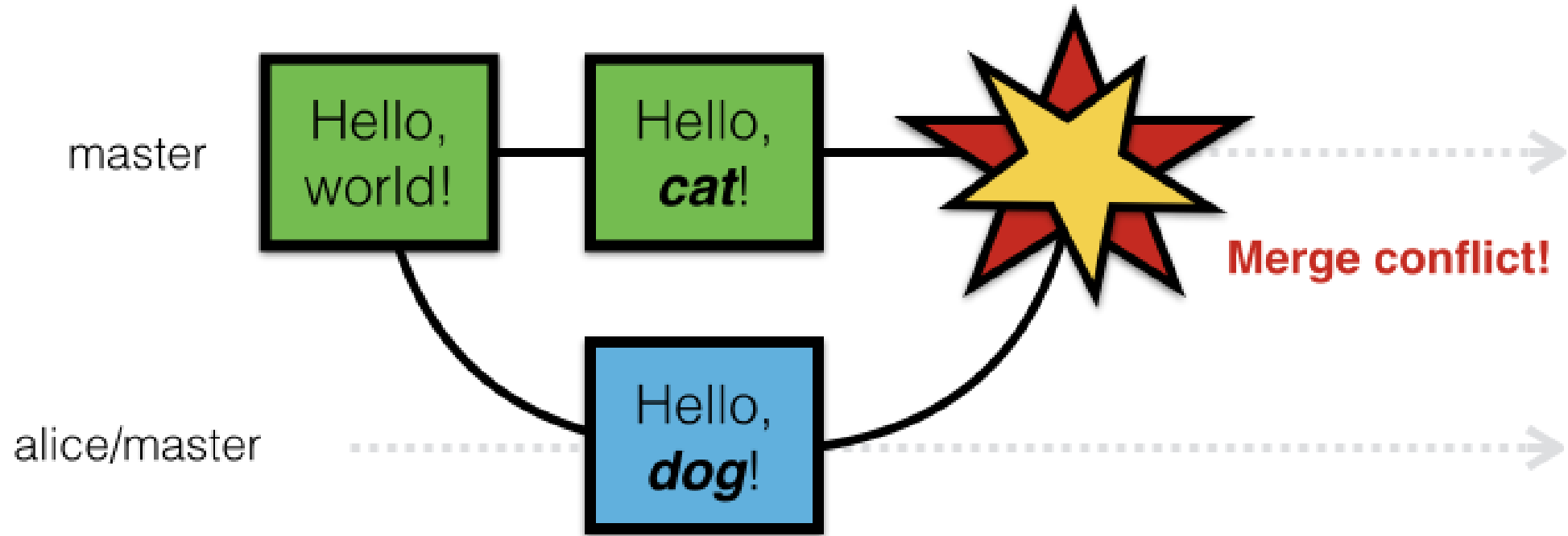


Corporate needs you to find the differences between this picture and this picture.



They're the same picture.

Diff

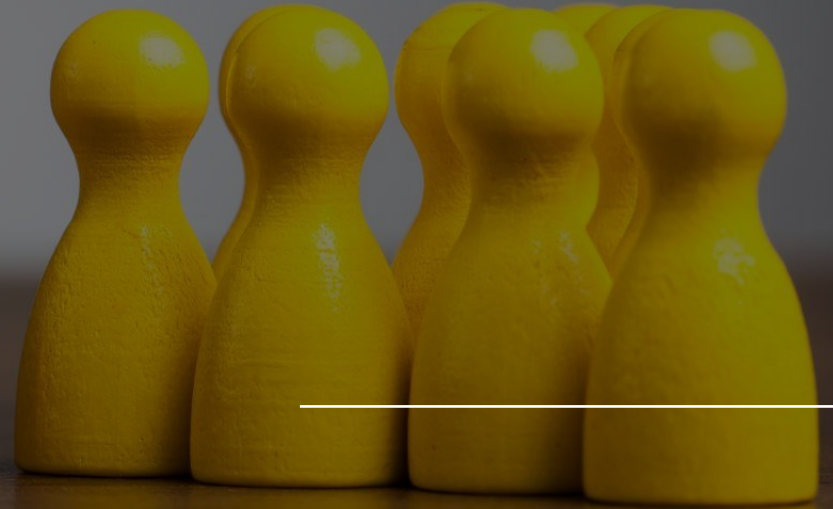


Let's settle this like adults!



Conflict Resolution

How do we work with teams?



Question or clarifications?



Preview Day 2

See you next time!