C#
Putting it all together

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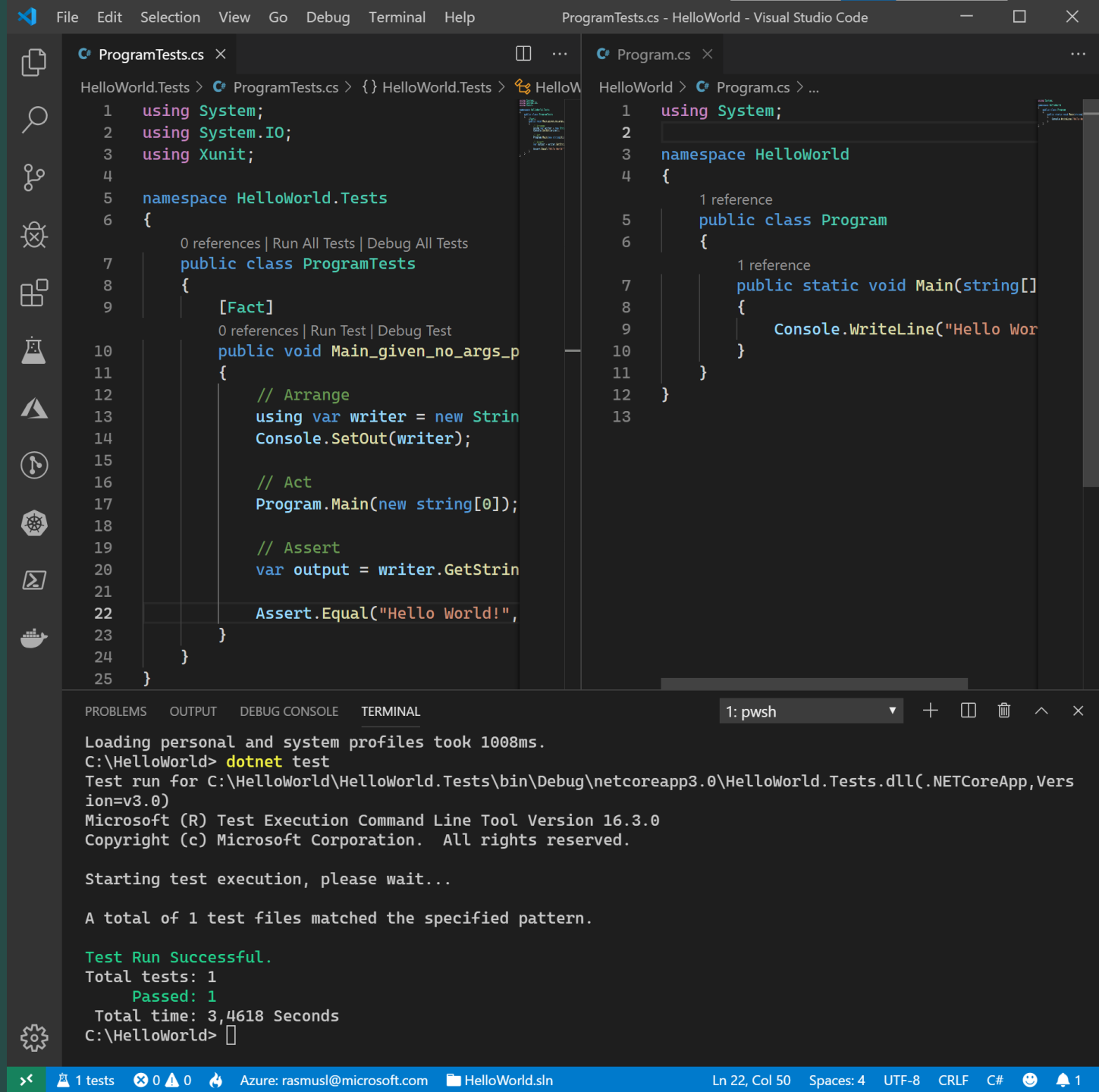


Agenda

Error handling in Xamarin.Forms

Security – authentication / authorization

DevOps

Continuous Integration/Delivery/Deployment (Azure DevOps)

Trunk Based development

Branching strategy vs. tactics

Infrastructure as Code

Error Handling in Xamarin.Forms

Error handling in Xamarin.Forms

The exception to the rule:

In ViewModels *only*:

try/catch → log

Image Source: https://bizshifts-trends.com/cracking-enigma-the-exception-that-proves-the-rule-its-nonsense-absurd-or-an-unlikely-defense/

Security

Image source: http://lazergaze.tumblr.com/post/26333564955

Authentication in Xamarin.Forms

https://portal.azure.com/

Create new App Registration

https://azure.microsoft.com/en-us/resources/samples

Authentication and Error Handling

Demo

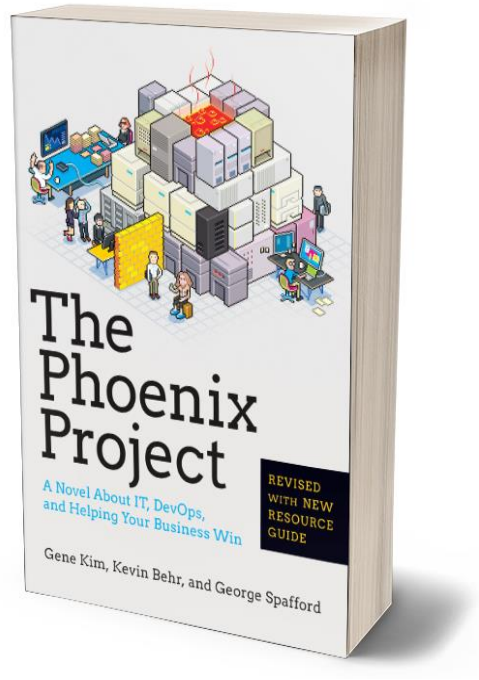
DevOps

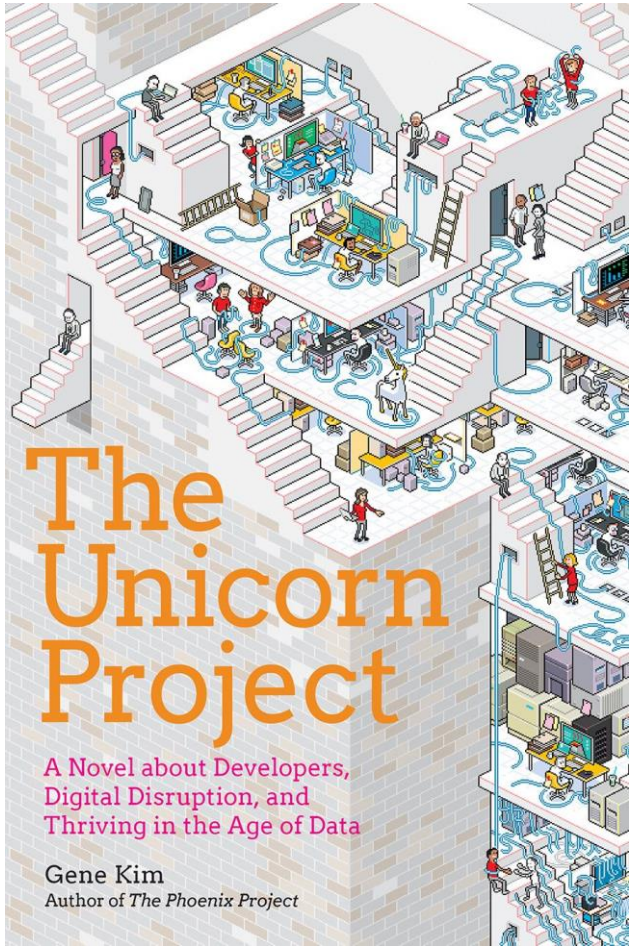
DevOps

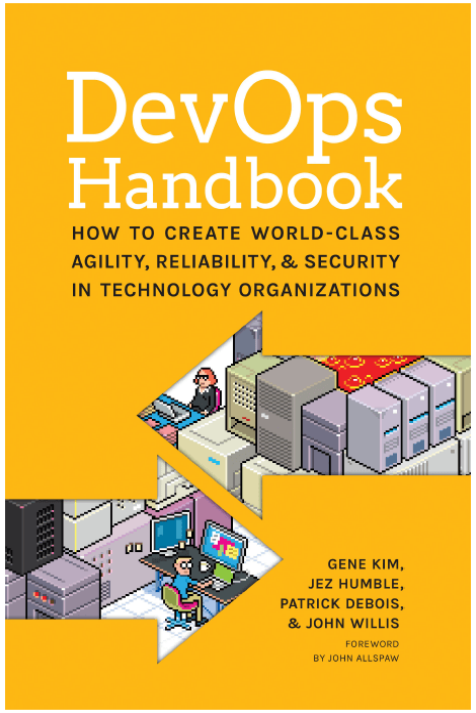
DevOps is a set of practices that automates the processes between software development and IT teams, in order that they can build, test, and release software faster and more reliably. The concept of **DevOps** is founded on building a culture of collaboration between teams that historically functioned in relative siloes.

Source: https://www.atlassian.com/devops

Books


The Phoenix Project
A Novel About IT, DevOps, and Helping Your Business Win
REVISED WITH NEW RESOURCE GUIDE
Gene Kim, Kevin Behr, and George Spafford


The Unicorn Project
A Novel about Developers, Digital Disruption, and Thriving in the Age of Data
Gene Kim
Author of The Phoenix Project


DevOps Handbook
HOW TO CREATE WORLD-CLASS AGILITY, RELIABILITY, & SECURITY IN TECHNOLOGY ORGANIZATIONS
GENE KIM, JEZ HUMBLE, PATRICK DEBOIS, & JOHN WILLIS
FOREWORD BY JOHN ALLSPAW


ACCELERATE
Building and Scaling High Performing Technology Organizations
Nicole Forsgren, PhD
Jez Humble, and Gene Kim
Accelerate
Building and Scaling High Performing Technology Organizations

Continuous Integration

Continuous Integration

Continuous integration (CI) is the practice of automating the **integration** of code changes from multiple contributors into a single software project. The CI process is comprised of automatic tools that assert the new code's correctness before **integration**.

Trunk Based Development

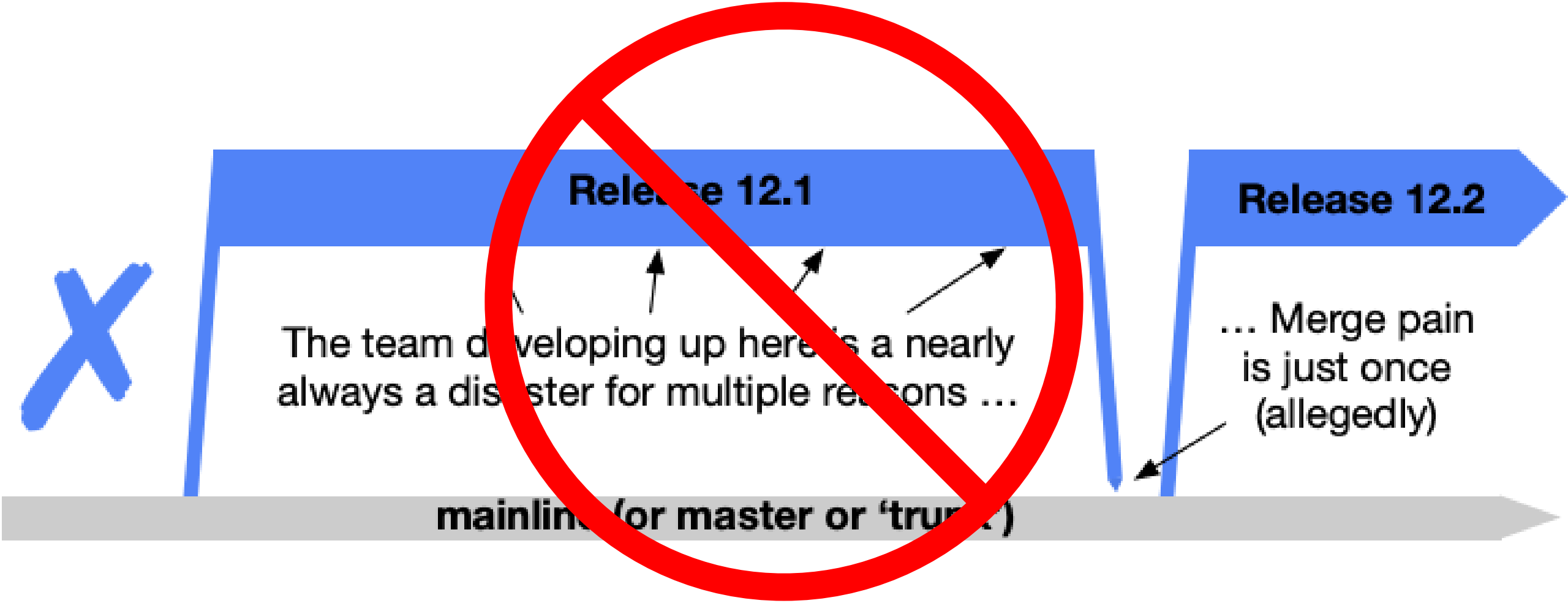
Trunk Based Development

A source-control branching model, where developers collaborate on code in a single branch called ‘trunk’ *, resist any pressure to create other long-lived development branches by employing documented techniques. They therefore avoid merge hell, do not break the build, and live happily ever after.

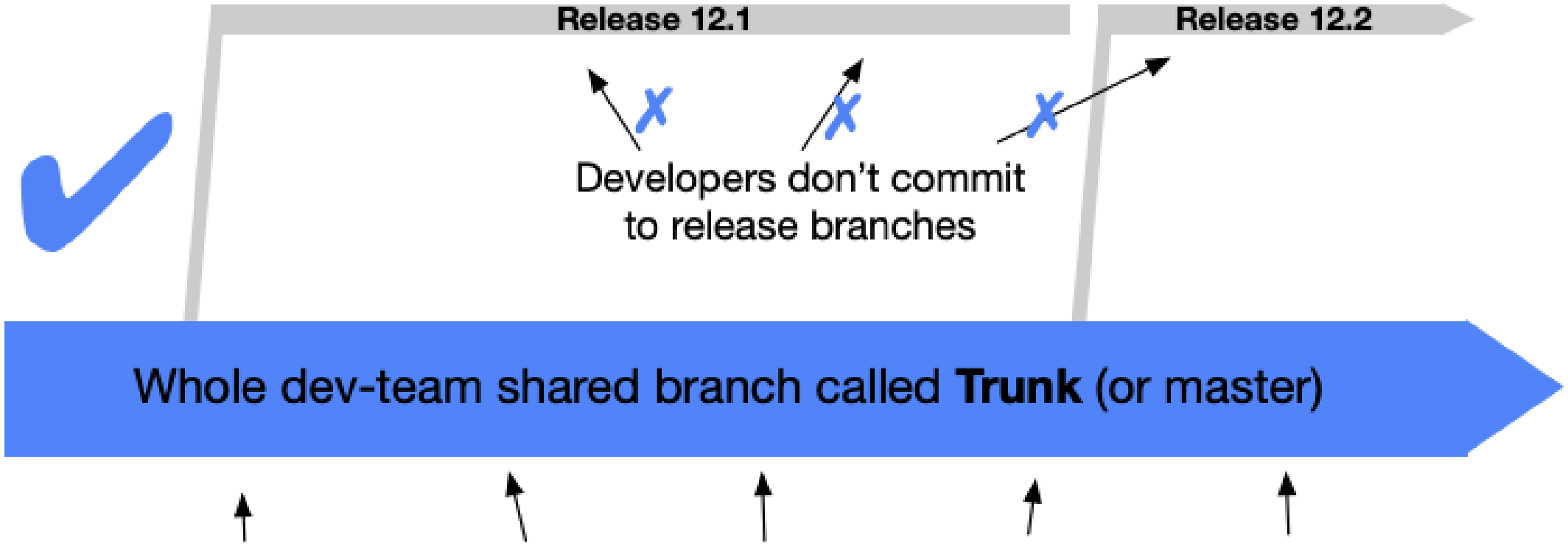
* master, in Git nomenclature

Source: https://trunkbaseddevelopment.com/

Shared branches off mainline/master/trunk are bad at any release cadence



Trunk Based Development

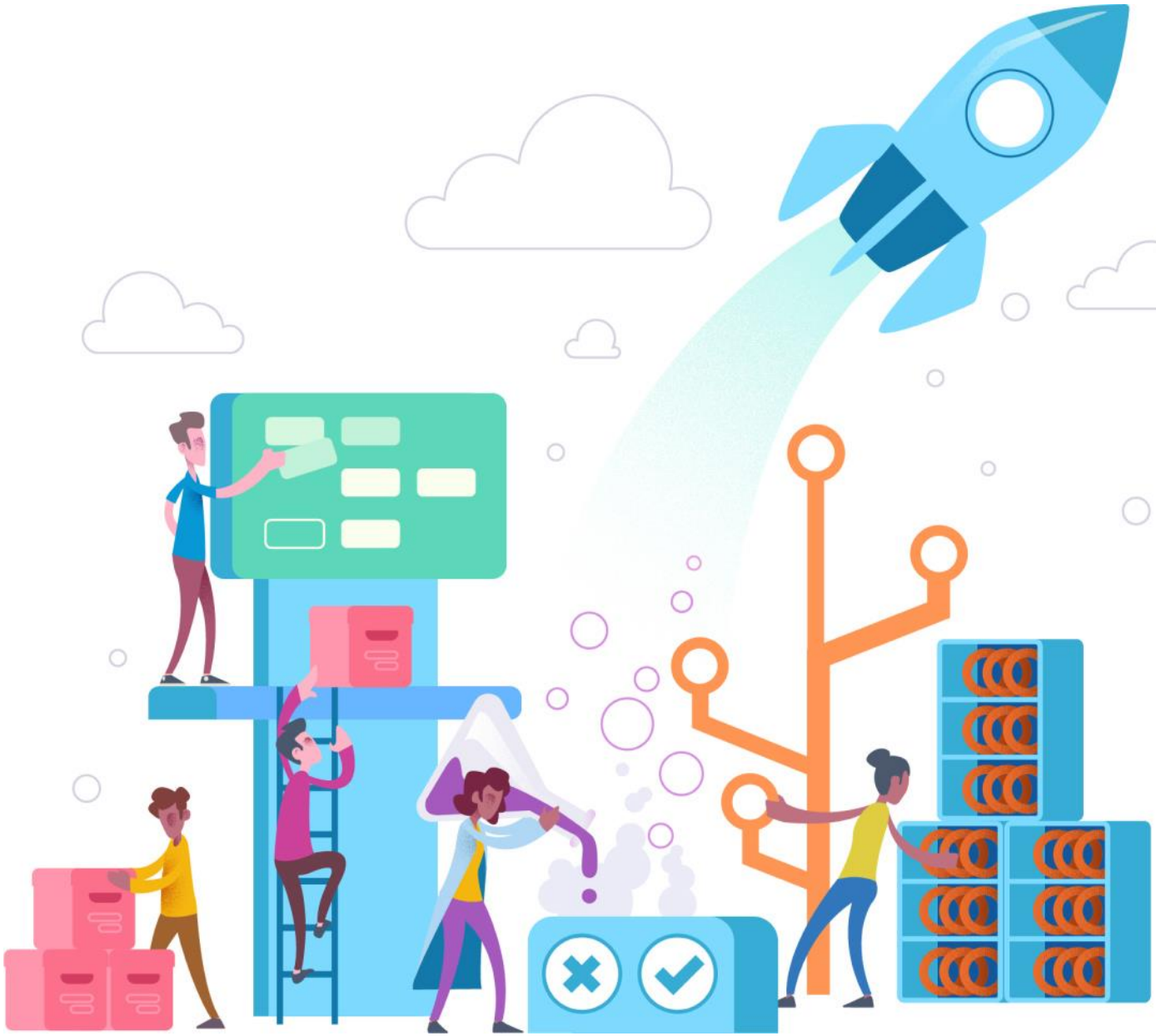


Branching strategy vs. tactics

Short-lived < 1 day

No *strategy*!

Azure DevOps



Azure DevOps

Azure Boards

Plan, track, and discuss work across teams, deliver value to your users faster.

Azure Repos

Unlimited cloud-hosted private Git repos. Collaborative pull requests, advanced file management, and more.

Azure Pipelines

CI/CD that works with any language, platform, and cloud. Connect to GitHub or any Git provider and deploy continuously to any cloud.

Azure Test Plans

The test management and exploratory testing toolkit that lets you ship with confidence.

Azure Artifacts

Create, host, and share packages. Easily add artifacts to CI/CD pipelines.

Azure DevOps

Demo

Continuous Integration
Trunk Based Development

Demo

Continuous Delivery

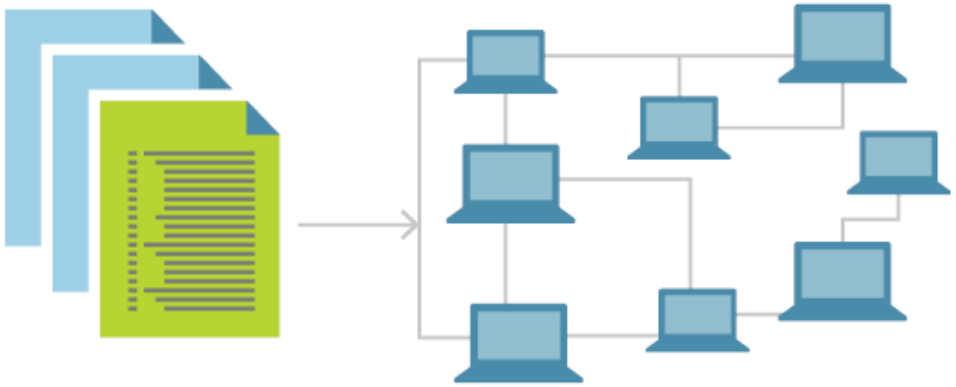
Continuous Delivery

Continuous delivery is an approach where teams release quality products frequently and predictably from source code repository to production in an automated fashion.

Continuous Deployment

Infrastructure as Code

Infrastructure as Code



Infrastructure as Code (IaC) is the management of infrastructure (networks, virtual machines, load balancers, and connection topology) in a descriptive model, using the same versioning as DevOps team uses for source code.

Idempotent

IaC is a key DevOps practice and is used in conjunction with CD

Source: https://docs.microsoft.com/en-us/azure/devops/learn/what-is-infrastructure-as-code

Infrastructure as Code Tools for Microsoft Azure

Azure PowerShell

Azure CLI

ARM Templates

Terraform

Continuous Delivery and Deployment Infrastructure as Code

Demo