



CIVCD

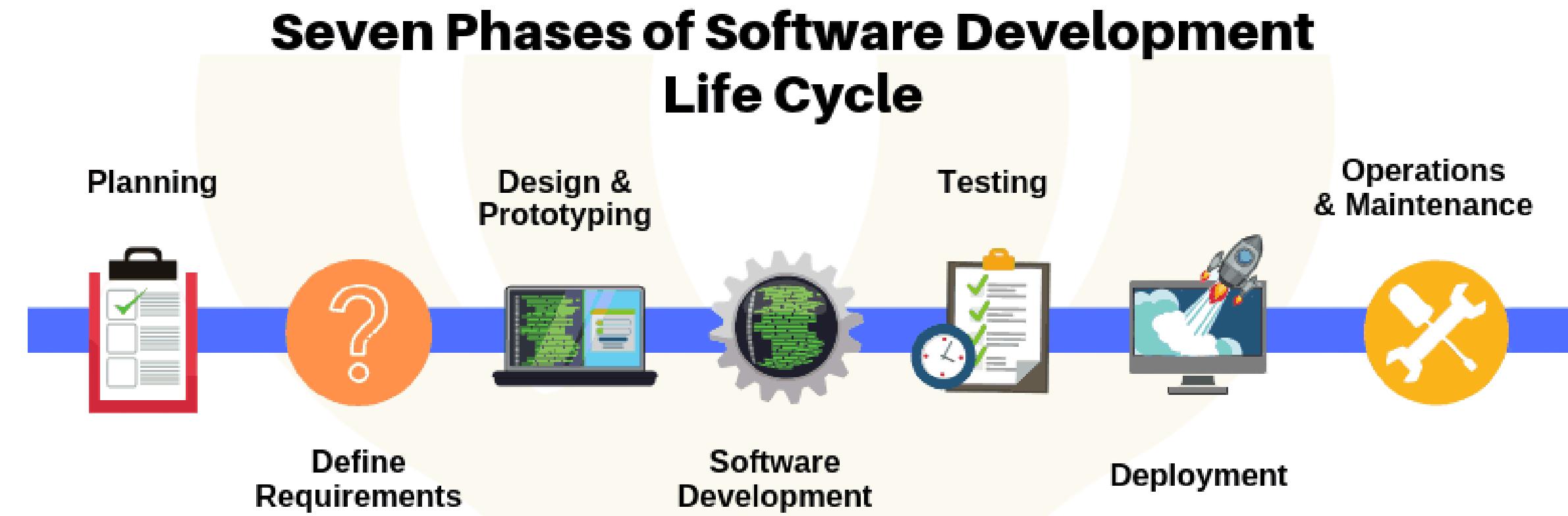
ENG MOHAMED ELWEZA - ENG NADER ASHOUR

📌 AGENDA

1. SDLC
2. CI/CD
3. DevOps Tools
4. GitHub Actions for Web and Mobile.
5. Jenkins.
6. Conclusion.

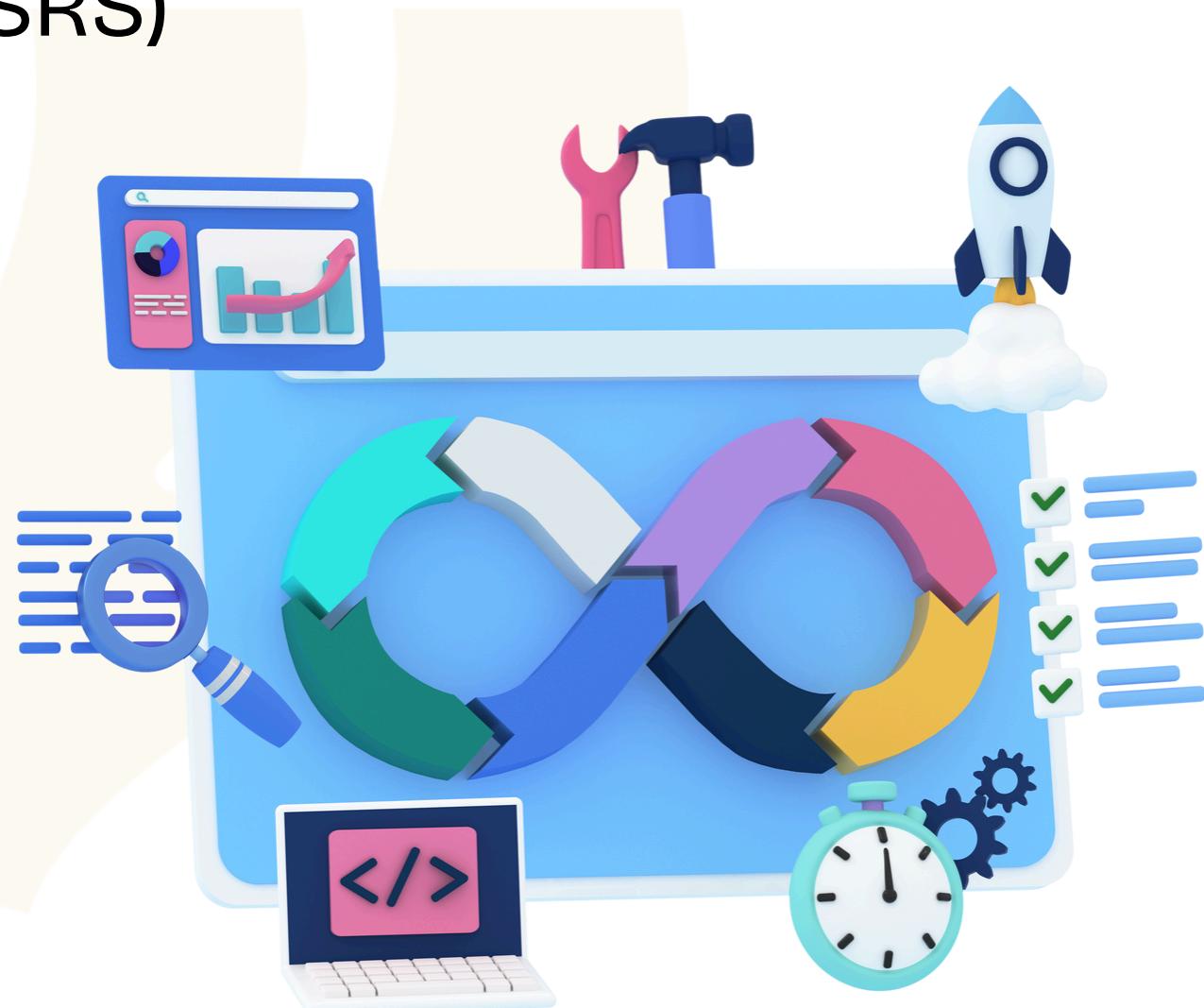
SDLC

Software Development Life Cycle



PLAN

1. Business Requirements Document (BRD)
2. Software Requirements Specification(SRS)
3. User Stories



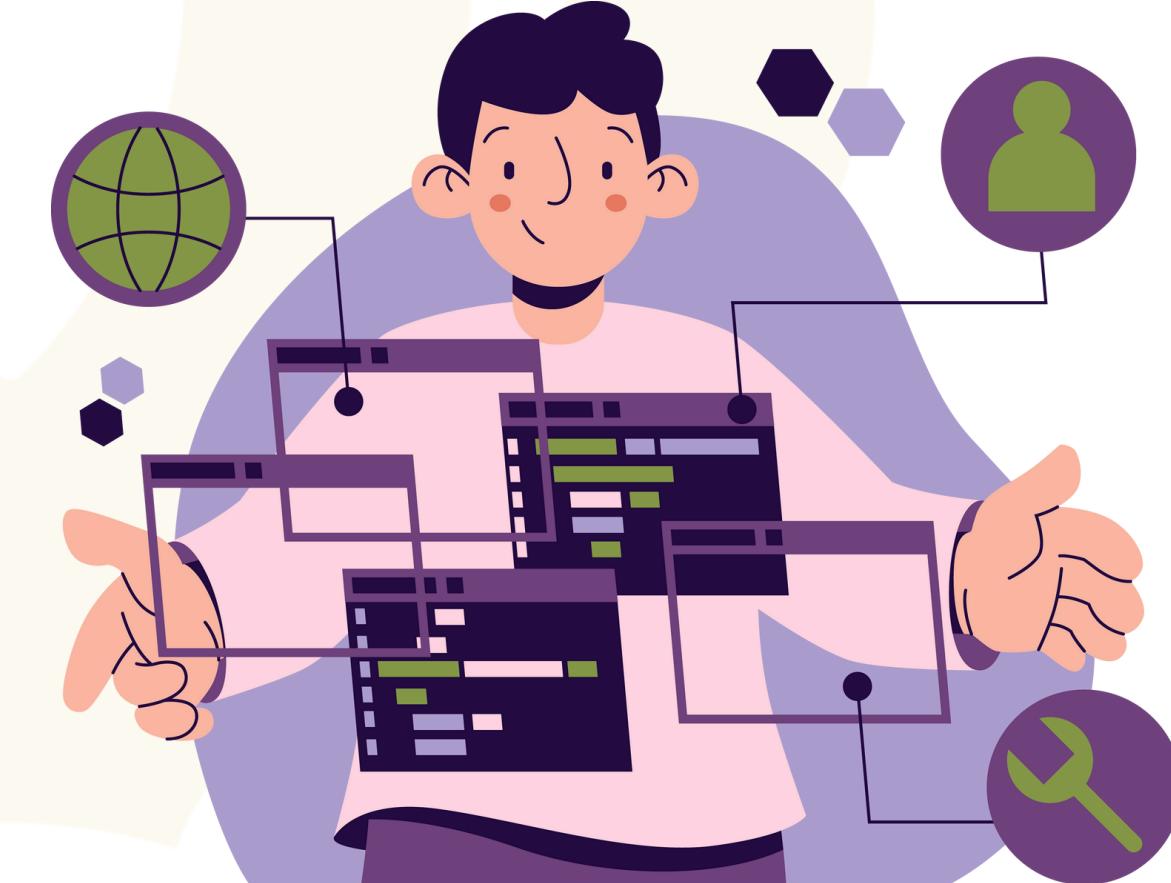
CODE



BUILD

Artifact:

- EXE
- APK
- RBM
- JAR OR WAR



Beta Version...

- Unit Testing
- Integration Testing
- Performance Testing
- Security Testing

TEST



Valid ?

Applicable???

RELEASE

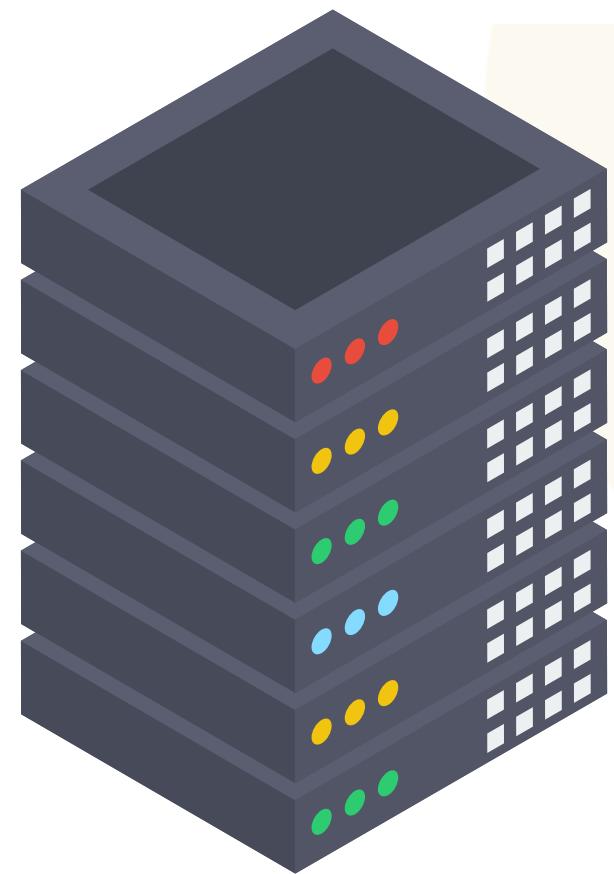
Tested + Trusted + Approved

Artifact

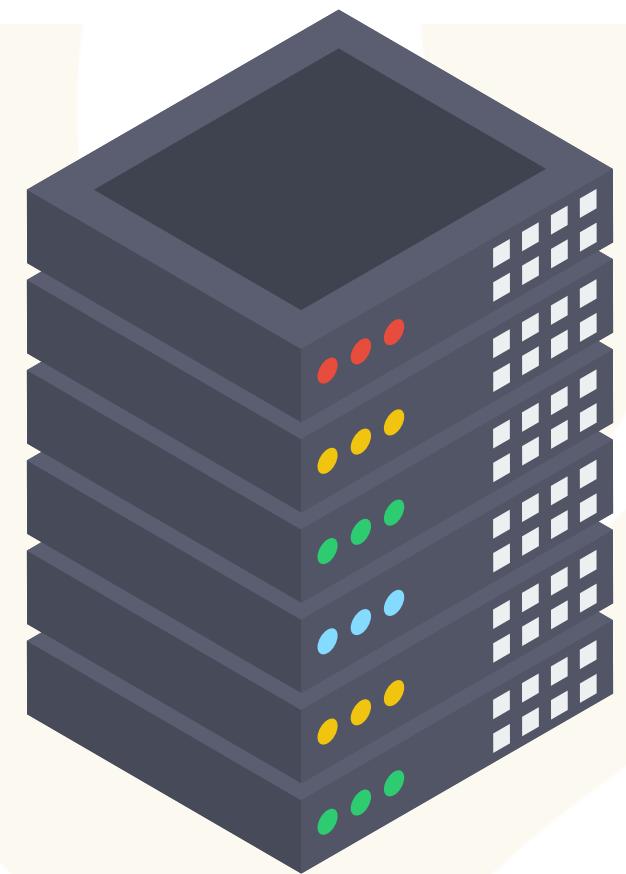


DEPLOY

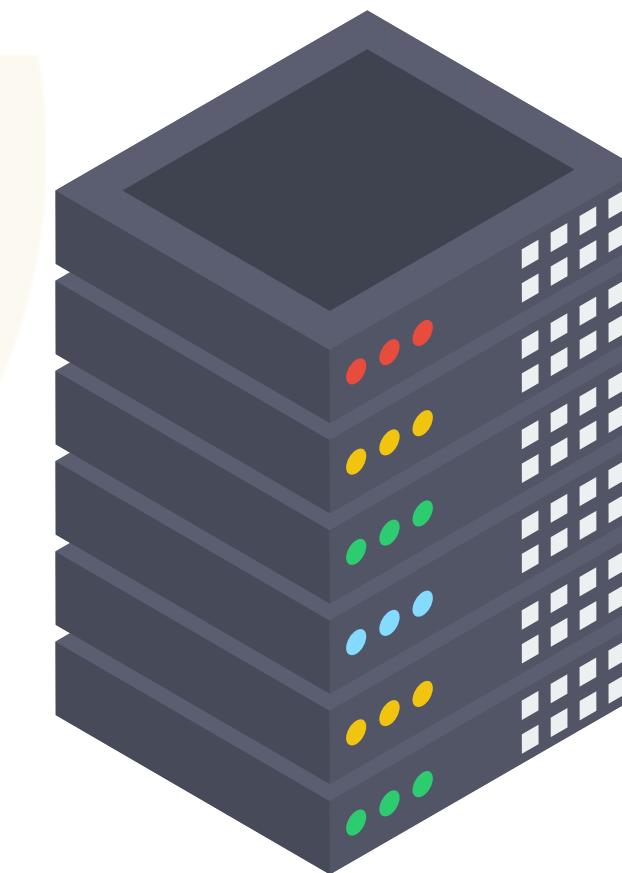
Dev



Test



Prod



OPERATION

- Configurations
- Updates
- setup new feature ,etc..



MONITOR

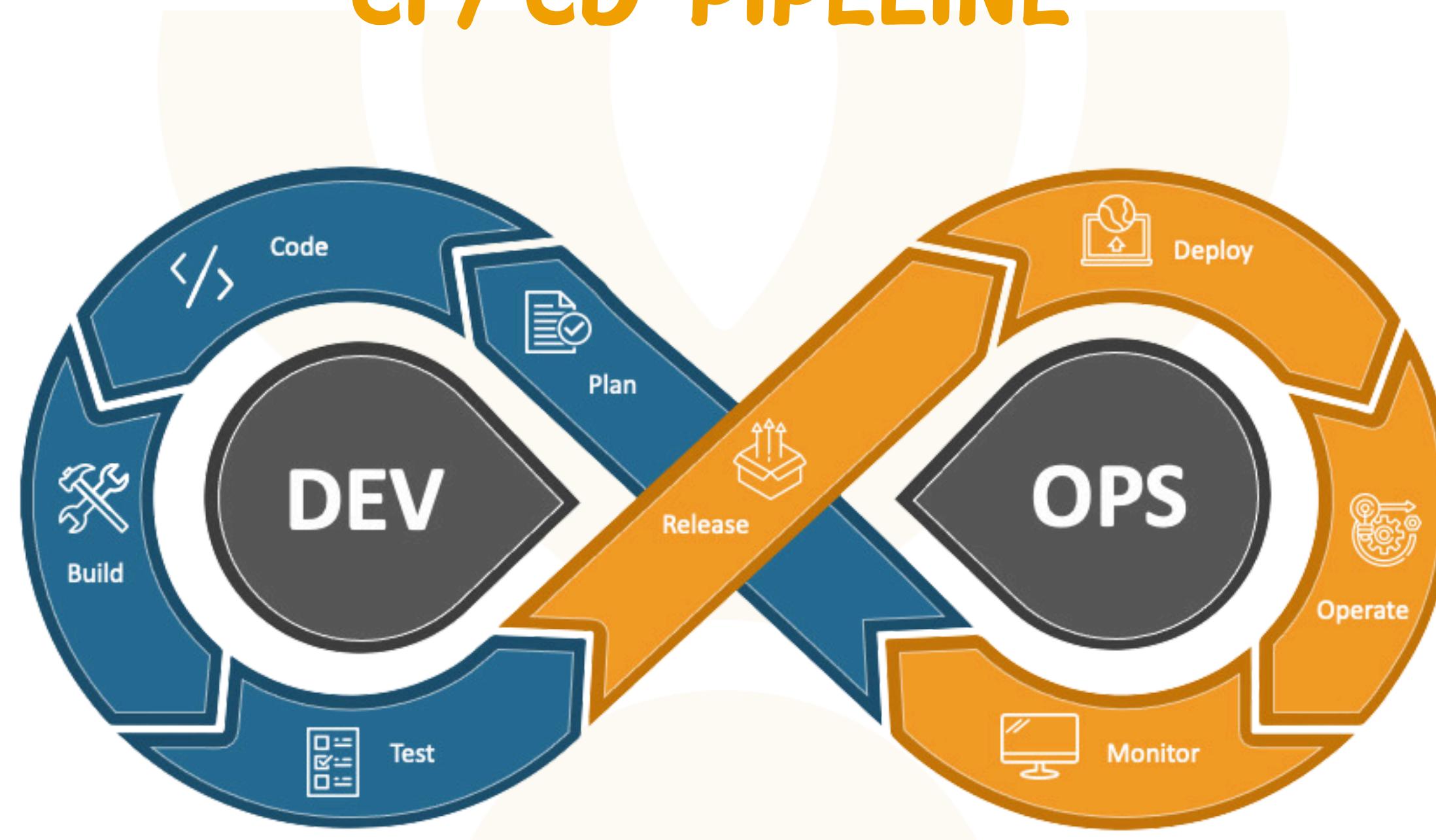


? WHAT IS THE PROBLEM

without CI/CD , SDLC faces slow development, late bug detection, deployment failures, and difficult rollbacks, leading to delays, higher costs, and inconsistent software quality.



CI / CD PIPELINE





CONTINUOUS INTEGRATION

With Continuous Integration (CI), code is merged frequently, automatically tested, and built consistently, reducing conflicts and catching bugs early for faster development.

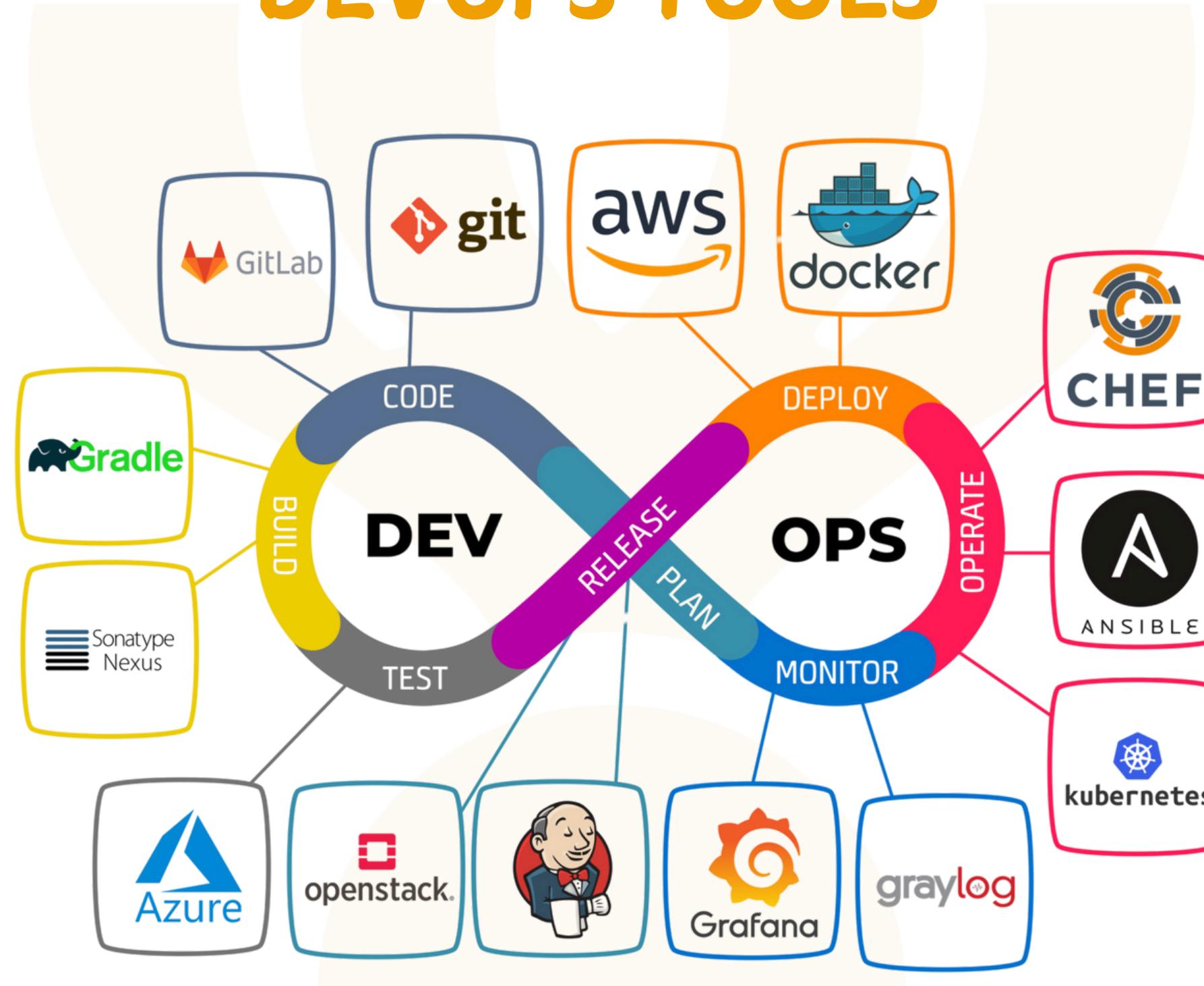


CONTINUOUS DELIVERY / DEPLOYMENT

With Continuous Deployment/Delivery (CD), code changes are automatically deployed, and rolled back if needed, ensuring faster, reliable, and seamless software releases.

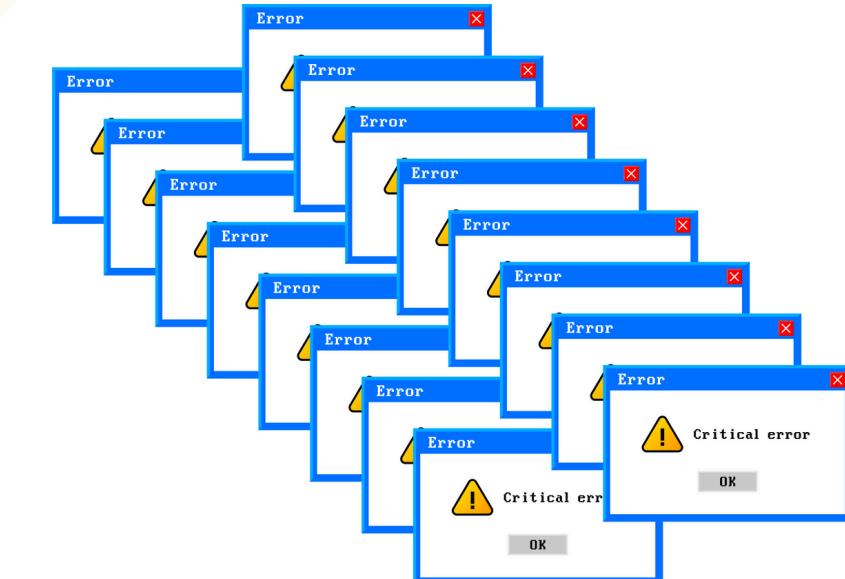


DEVOPS TOOLS



WHAT HAPPENED 2024 WITH MICROSOFT WINDOWS ?

- https://www.lemonde.fr/en/pixels/article/2024/07/19/airports-banks-and-hospitals-disrupted-by-biggest-it-outage-in-history_6690699_13.html
- <https://www.voanews.com/a/microsoft-users-worldwide-report-widespread-outages-affecting-banks-airlines-broadcasters/7704549.html>





You deserve a break!

Let's Practice!



Docs

Task time



Create a web project with GitHub Actions



Create a CI/CD for mobile App(Flutter) with GitHub Actions

Docs

Let's Practice!



Docs



CONCLUSION

Today, we learned:

- SDLC & CI/CD.
- DevOps Tools.
- Practicing with CI/CD Tools.





REFERENCES

- <https://www.jenkins.io/doc/>
- <https://docs.github.com/en/actions>
- <https://learn.microsoft.com/en-us/azure/devops/?view=azure-devops>
- <https://attractgroup.com/blog/mastering-technical-documentation-in-devops/>





THANK YOU

FOR LISTENING

ANY QUESTIONS ?