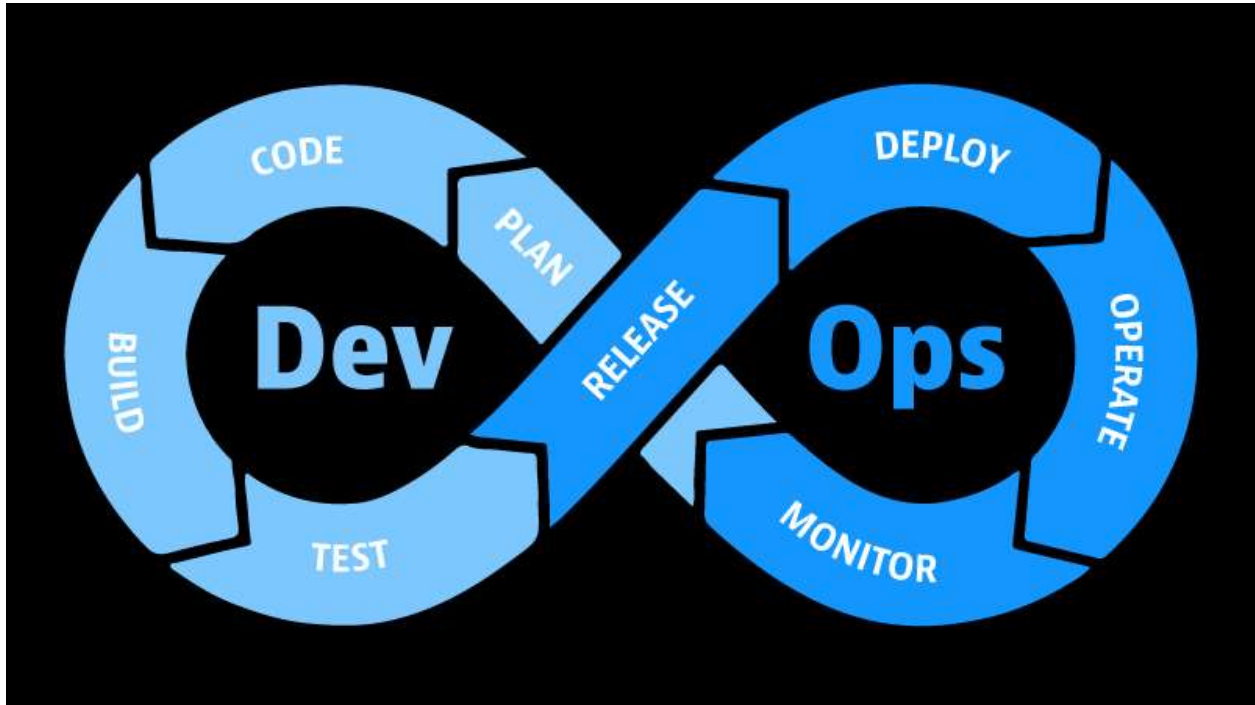


Keywords :

DevOps
Test Driven Development
Behavior driven development
Infrastructure as Code
Continuous Integration
Continuous Delivery

What is **DevOps**?



Plan > Code > Build > Testing > Release > Deploy > Operate > Monitor >

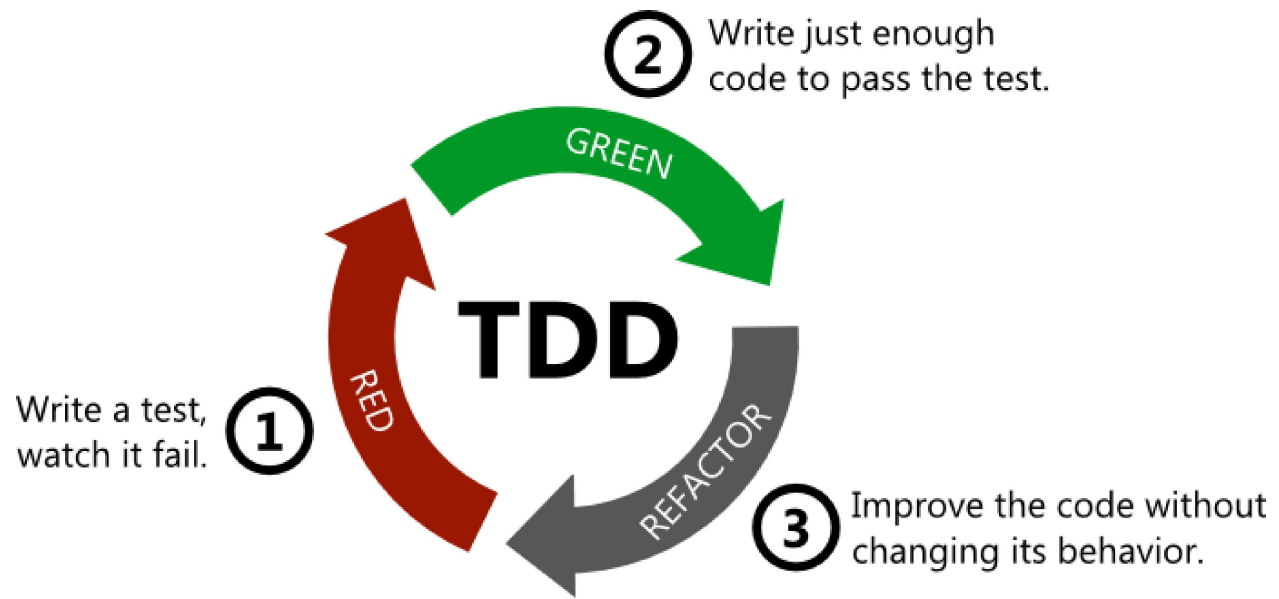
DevOps is a cultural change that required team in development and operation engineer working together and follow lean and agile principles to deliver software in rapid/ continuous manner

What is **DevOps characteristic**?

1. Cultural change
2. Automated pipeline
3. Infrastructure as code
4. Microservice
5. Container
6. Immutable infrastructure

What is **Test Driven Development**? A programming practice

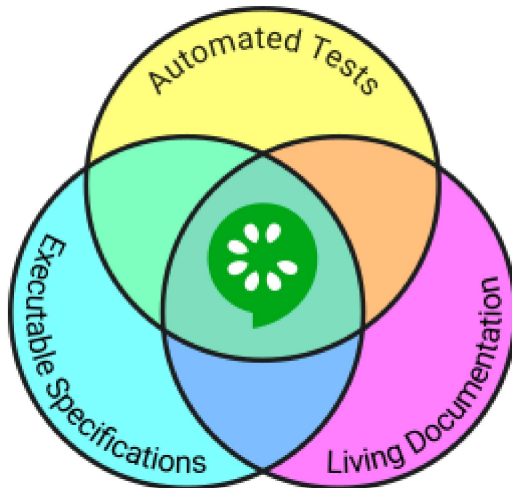
1. Pick a function and write a test first
2. Apply test and get failed
3. Write just enough code to pass the test
4. Test again and passed
5. Refactor



What is **Behavior driven development**? Software development process

TDD is hard for people who are not study in engineering field to understand, therefore BDD is created

BDD is about discovery, collaboration and examples



```

1  // file: src/test/features/step-definitions/emp-report-stepdefs.js
2
3  const { Given, When, Then } = require('cucumber');
4  const expect = require('expect');
5  const empReport = require('../../src/main/emp-report');
6
7  Given('today is: year 2019, month 1, day 1', function () {
8    this.baseDate = new Date(2019, 0, 1);
9  });
10
11  When('I get employee report by seniority over 10 years', function () {
12    this.result = empReport.getReportBySeniority(this.baseDate, 10, false);
13  });
14
15  Then('the report should have length 2', function () {
16    expect(this.result).toHaveLength(2);
17  });
18
19  Then('the entry 1 of report should match: name is Max, onboardDate is 2008-05-04', function () {
20    expect(this.result[0]).toMatchObject({ name: 'Max', onboardDate: '2008-05-04' });
21  });
22
23  Then('the entry 2 of report should match: name is Mike, onboardDate is 2005-01-01', function () {
24    expect(this.result[1]).toMatchObject({ name: 'Mike', onboardDate: '2005-01-01' });
25  });

```

What is **Infrastructure as Code**?

Use automation tool to write code in the infrastructure

What is Continuous Integration?

- the practice of automating the integration of code changes from multiple contributors into a single software project
- Continuous Integration = Plan > Code > Build > Test > Release

What is Continuous Delivery?

- software development practice where code changes are automatically prepared for a release to production.
- Continuous Delivery = Plan > Code > Build > Test

