01) What is Jenkins pipeline?

Jenkins Pipeline is a collection of jobs or events that brings the software from version control like git into the hands of the end users by using automation tools.

02) What scripting language is Jenkins pipeline syntax based on?
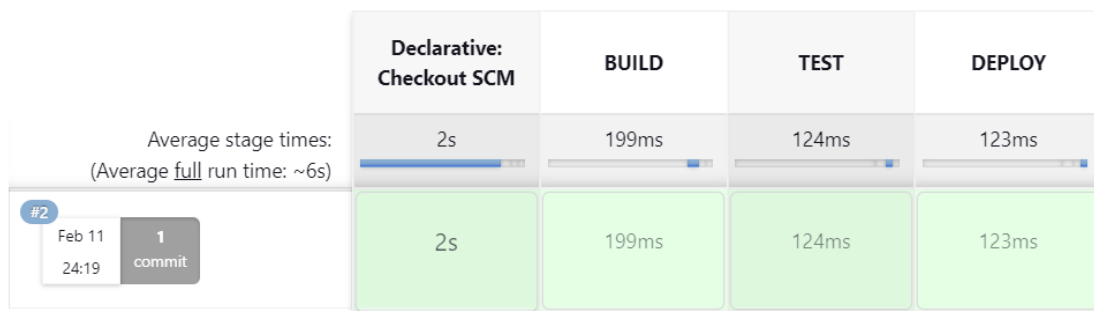
Everything in Jenkins is written in JAVA

03) What are the ways you can write pipeline in Jenkins?

Two types of syntax are used for defining your Jenkins File.

- Declarative:
  Declarative pipeline syntax offers a simple way to create pipelines. It consists of a predefined hierarchy to create Jenkins pipelines. It provides you the ability to control all aspects of a pipeline execution in a simple, straight forward manner.
- Scripted:
  Scripted Jenkins pipeline syntax runs on the Jenkins master with the help of a lightweight executor. It uses very few resources to convert the pipeline into atomic commands.

04) Create Jenkins pipeline for your repo and use script file (Jenkins file) to write pipeline syntax?

	Declarative: Checkout SCM	BUILD	TEST	DEPLOY
Average stage times: (Average full run time: ~6s)	2s	199ms	124ms	123ms
#2 Feb 11 24:19 1 commit	2s	199ms	124ms	123ms

```
1   pipeline {
2       agent any
3       stages {
4           stage('BUILD') {
5               steps {
6                   echo "BUILD SUCCEEDED..."
7               }
8           }
9           stage('TEST') {
10              steps {
11                  echo "TEST SUCCEEDED..."
12              }
13          }
14          stage('DEPLOY') {
15              steps {
16                  echo "DEPLOYMENT SUCCEEDED..."
17              }
18          }
19      }
20  }
```

05) Create another multibranch pipeline and filter branches to contain only (master, dev, test) ?

Behaviors

Discover branches
?

Filter by name (with wildcards)
Include ?

```
dev main test
```

- Check File Fingerprint
- Rename
- Pipeline Syntax
- Credentials

Build Queue (3)   ∨

multi-branch-lab02 » main

multi-branch-lab02 » test

multi-branch-lab02 » dev

Build Executor Status   ∨

1 Idle

2 Idle

```
 > git ls-remote -h -- https://github.com/Ahmed-Shoushaa/prv-jenkins-start.git # timeout=10
Fetching upstream changes from origin
 > git config --get remote.origin.url # timeout=10
using GIT_ASKPASS to set credentials
 > git fetch --tags --force --progress --prune -- origin +refs/heads/*:refs/remotes/origin/* # timeout=10
Checking branches...
  Checking branch main
      'Jenkinsfile' found
    Met criteria
Scheduled build for branch: main
  Checking branch test
      'Jenkinsfile' found
    Met criteria
Scheduled build for branch: test
  Checking branch dev
      'Jenkinsfile' found
    Met criteria
Scheduled build for branch: dev
Processed 4 branches
[Fri Feb 10 23:00:30 UTC 2023] Finished branch indexing. Indexing took 10 sec
Finished: SUCCESS
```

multi-branch-lab02

Branches (3)

S	W	Name ↓	Last Success	
✓	☀	dev	30 sec	#1
✓	☀	main	30 sec	#1
✓	☀	test	30 sec	#1