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| **No** | **Purpose** | **Junit 3** | **Junit 4** | **TestNG** |
| 1 | Tests declearation | testXXX pattern | @Test | @Test |
| 2 | Run a method Before each Test Method | override setUp() | @Before | @BeforeMethod |
| 3 | Run a method after a each Test Method | override tearDown() | @After | @AfterMethod |
| 4 | Ignoring a test | Remove/Comment | @ignore | @Test(enabled=false) [opposite of ignore]/[works for upper levels] |
| 5 | Run a method before a Test Class | \_ | @BeforeClass | @BeforeClass |
| 6 | Run a method after a Test Class | \_ | @AfterClass | @AfterClass |
| 7 | Run a method before a Test Class which is decleared with <test> tag in xml configuration | \_ | \_ | @BeforeTest |
| 8 | Run a method after a Test Class which is decleared with <test> tag in xml configuration | \_ | \_ | @AfterTest |
| 9 | Runs a method before a suit | \_ | \_ | @BeforeSuite |
| 10 | Runs a method after a suit | \_ | \_ | @AfterSuite |
| 11 | Runs a method before a group configured in XML | \_ | \_ | @BeforeGroups |
| 12 | Runs a method after a group configured in XML | \_ | \_ | @AfterGroups |
| 13 | Exeption Checking | explicitly call fail & then assert in catch block | @Test(expected = <Name of the Exception>.class) | @Test(expectedExceptions = ExceptionClassName.class) |
| 14 | Timeout for test execution | \_ | @Test(timeout = 1000) | @Test(timeout = timeoutinmilisecond) |
| 15 | invoke thereads while running test parallelly | \_ | \_ | @Test(threadPoolSize = threadNumber) |
| 16 | Run a test method all the time(ignores dependent tests) | \_ | \_ | @Test(alwaysRun=true )[works for upper levels] |
| 17 | List of groups a class/method is designed to belong | \_ | \_ | @Test(groups = Name of the group specified in XML)[works for upper levels] |
| 18 | Description | \_ | \_ | @Test(description=The description for the tests) |
| 19 | How many times this method will run | \_ | \_ | @Test(invocationCount=<an integer number>) |
| 20 | When invocation counter set, we can set timeout for that test execution with invocations. | \_ | \_ | @Test(invocationTimeOut=) |
| 21 | Prioritizing test cases, low value runs first | \_ | \_ | @Test(priority=<an integer value>) |
| 22 | Defining Expected success percentage | \_ | \_ | @Test(successPercentage=<an integer value>) |
| 23 | Explicitly difining to run a method in single threaded(of its class) | \_ | \_ | @Test(singleThreaded=true) |
| 24 | Define name of the data provider(in XML) for a test method | \_ | \_ | @Test(dataProvider=NameOfProvider) |
| 25 | Define name of the data provider Class for a test method | \_ | \_ | @Test(dataProviderClass=DataProviderClassName.class) |
| 26 | Run all dependents methods specified here before this test run | \_ | \_ | @Test(dependsOnMethods=Name of all methods)[works for upper levels] |
| 27 | Run all dependents methods under all dependent groups specified here before this test run | \_ | \_ | @Test(dependsOnGroups=Name of all Groups)[works for upper levels] |
| 28 | Defining Test Runner/Class | \_ | @RunWith(SpringJUnit4ClassRunner.class) | \_ |
| 29 | Define all tests include in a suit | \_ | @SuiteClasses | \_ |
| 30 | Marks a method as supplying data for a test method , must return an Object[][] | \_ | @DataProvider by TNG | @DataProvider |
| 31 | Add multiple imput values as parameter(initialize while adding as parameter of test method) | \_ | @TestWith by zohhak | \_ |
| 32 | Rules initilize (of Test Rules type)at method level | \_ | @Rules | \_ |
| 33 | Fixing ordering of test execution at class level | \_ | @FixMethodOrder | \_ |
| 34 | Rules initilize (of Test Rules type) at class level/static | \_ | @ClassRule | \_ |
| 35 | Aulternative @test method run as theories by assumptions | \_ | @Theory | \_ |
| 36 | Multiple Data Input for theries | \_ | @TestedOn | \_ |
| 37 | iteratable of data points in array | \_ | @DataPoints | \_ |
| 38 | Assign of a data point(field/method) | \_ | @DataPoint | \_ |
| 39 | Parametersupplier provided values used as test data in @Theory | \_ | @ParametersSuppliedBy | \_ |
| 40 | Parameter of @Theory decleared as @datapoints and will be selected by this | \_ | @FromDataPoints | \_ |
| 41 | Makes a tese/class as belonging of another test catagories | \_ | @Category | \_ |
| 42 | Validate any test method using annotationValidator(use in your custom annotation) | \_ | @ValidateWith | \_ |
| 43 | single test data field(you can add values, default start 0) | \_ | @Parameter | \_ |
| 44 | Test data in a iteratable collection | \_ | @Parameters | @parameters={arrayOfStrings} |
| 45 | Runs only the classes and methods that are annotated with either the category given with this | \_ | @IncludeCategory | \_ |
| 46 | Excluds classes and methods that are not annotated with either the category or given with this | \_ | @ExcludeCategory | \_ |
| 47 | Defines a listner in a test class | \_ |  | @Listeners |
| 48 | Marks a method as a factory that returns objects that will be used by TestNG as Test classes. The method must return Object[] | \_ |  | @Factory |