

```

public class AccessExcel {
    wb    XSSSSFWorkbook
    sheet XSSFSheet
}

public static void main(String[] args) {
    wb = new Workbook();
    sheet = wb.getSheet(" ");
    int rows = sheet.getPhysicalNumberOfRows();
    for (i=0; i<rows; i++) {
        Row row = sheet.getRow(i);
        CellKeyed cellKeyed = row.getCell(0);
        String key = cellKeyed.getStringCellValue();
        System.out.println(key);
    }
}

public static XSSSSFWorkbook wb;
public static XSSFSheet sheet;

```

---

```

wb = new XSSSSFWorkbook("path");
sheet = wb.getSheet("sheetName");
int maxRows = sheet.getPhysicalNumberOfRows();
for (i=0; i<maxRows; i++) {
    Row row = sheet.getRow(i);
    CellKeyed cellKeyed = row.getCell(0);
    String key = cellKeyed.getStringCellValue();
    System.out.println(key);
}

```

Reference based datatype.

String text;

Object object.

Primitive data type.

int number

3. Can we declare a private class?

You can declare a private class within another class. A private class is only accessible within the enclosing class and cannot be accessed from outside.

Ex:

Public class MainClass {

Private class PrivateClass {

// Private class members and methods

}

// Main class members and methods.

Public static void main(String[] args) {

MainClass mainObj = new MainClass();

PrivateClass privateObj = mainObj.new

PrivateClass();

4. What is the difference between == and equals.

== : Used to compare the reference equality of two objects. It will check if two object references point to the same memory locations.

!= : It will compare the memory addresses not the actual content of the objects. Output: str1 == str2 → True, str1 != str3 → False.

Ex: String str1 = "Hello";

String str2 = "Hello";

String str3 = new String("Hello"); → Reference/heap memory.

equals. It will compare the actual content of the objects.

str1 = str2 → True

str1 = str3 → True

5. How is the String immutable?
- ② The data state cannot be changed and values cannot be interchanged that's why string is called as immutable.

③ String object remains constant throughout its lifetime

Ex: str1 = "Hello"; → value cannot be interchanged.  
str2 = str1;

Concatenating

str1 = str1 + "world";

6. Where strings get stored and where does the reference get stored?

④ Strings get stored in a specific area of memory called as string pool or string constant pool.

String pool is a special memory area where unique string literals are stored to optimize memory usage.

Adding same value to the string, it will automatically add to the string pool. They will all reference the same memory location in the string pool.

Reference get stored:

Object references are typically stored on the stack for local variables or in the heap (for objects).

Ex: Refer → ④.

7. Can you please explain with reference the memory location of how the string is immutable?
- When a string is created in Java, the JVM checks if an identical string already exists in the string constant pool, if it does, the reference to the existing string is returned instead of creating a new object. This helps conserve memory by reusing existing string objects.

Refer → ④.

- In this code, str1 and str2 both refer to the same memory location in the string constant pool because they have the same values. Therefore str1 = str2 returns true.
- However, str3 is created using the new keyword, which forces the creation of a new string object in the heap memory. Hence str1 = str3, returns false.
- This immutability of strings in Java ensures that they are thread-safe and can be safely shared among multiple threads without the risk of unexpected modifications.

8. if you don't want to use the String class then what can be used?

In Java, if you don't want to use the String class, we can use the StringBuilder class or StringBuffer class to manipulate strings. Both classes provides methods for efficient string concatenation and modification.

StringBuilder  
sb = new StringBuilder(); → StringBuffer  
↓  
// Appending strings  
sb.append("Hello");  
sb.append(" ");  
sb.append("World");  
Remaining steps will be same.

// Inserting strings at a specific position.

sb.insert(5, "Java"); → Replacing a portion of the string.

// Deleting a portion of the string  
sb.delete(0, 3);  
sb.replace(0, 5, "K")

// Converting stringBuilder to string.

String result = sb.toString();

Both stringBuilder and StringBuffer classes provides similar functionality, but stringBuilder is not thread-safe while StringBuffer is thread safe. Therefore, if you are working in a multi-threaded environment, StringBuffer is recommended.

9. Difference between string and stringBuffer?

Refer Java Q&A.

10. what collection have you used?

11. have you used HashMap?

Ex: Program Sample Code.

```
public class HashMapExample {  
    public static void main(String[] args) {  
        hashmap  
        HashMap<String, String> = new HashMap<?>();
```

// Add key-value pairs to the HashMap.

```
hashmap.put("Two wheller", "Honda");  
" . " ("Three wheller", "Bajaj");  
" . " ("four wheller", "Honda");
```

// Retrieve values from the HashMap.

```
String value = hashmap.get("Three wheller");
```

// Print

```
System.out.println("Three wheller Brand" + value);
```

// Remove

```
hashmap.remove("Two wheller");
```

// check if a value exists

```
boolean containsValue = hashmap.containsKey("Honda");
```

// Get the size

```
int size = hashmap.size();
```

We are access the excel for getting Xpath and stores in HashMap concept.

How we are doing:

```
public static HashMap<String, String>
workSheetName = new HashMap<String,
String>;
```

```
public class AccessExcel {
```

```
    public static XSSFWorbook wb2;
    public static XSSFSheet sheetName;
```

```
    public static void main (String[] args) {
```

```
        wb2 = new XSSFWorbook ("System.getProperty ("User.dir") +
                    "Path");
```

```
        sheetName = wb2.getSheet ("Name of the Sheet");
```

```
        if (sheetName != null)
```

```
            int lastRowNo = sheetName.getPhysicalNumberOfRows();
```

```
            for (int i=0; i < lastRowNo; i++) {
```

```
                Row row = sheetName.getRow(i);
```

```
                Cell keyCell = row.getCell(0);
```

```
                String key = keyCell.getStringCellValue().trim();
```

```
                Cell valueCell = row.getCell(1);
```

```
                String value = valueCell.getStringCellValue().trim();
```

```
                workSheetName.put (key, value)
```

3.

Q. List declaration? List is interface. So that we cannot create a object so that it implemented by List class → ArrayList

```
List<String> data = new ArrayList<>();
```

Q. Where is the set used?

It will store the unique record. Adding duplicates elements which will be ignored.

We used in multiple window handles.

```
Set<String> data = new HashSet<>();
data.add("data");
data.remove("data");
data.clear();
```

Q. I have a table and want to store all table data. Then which collection should be used and why?

To store all data in Table, you can use the ArrayList collection from the java.util package. ArrayList provides dynamic resizing, which means it can grow or shrink as needed.

Example:

```
public class TableDataStorage {
```

```
    public static void main (String[] args) {
```

```
        List<String> tableData = new ArrayList<>();
```

```
        String [] row1 = {"data1", "data2", "data3"};
```

```
        "row2" =
```

```
        "row3" =
```

```
        "row4" =
```

```
        "row5" =
```

```
        "row6" =
```

```
        "row7" =
```

```
        "row8" =
```

```
        "row9" =
```

```
        "row10" =
```

```
        "row11" =
```

```
        "row12" =
```

```
        "row13" =
```

```
        "row14" =
```

```
        "row15" =
```

```

tableData.add(row0);
    " (row2);
    " (row3);

for (String [] row : tableData) {
    for (String cell : row) {
        System.out.println (cell + "\t");
            ↴ format for
            ↴ table structure.
    }
}

```

16. what HashMap will return?

HashMap class is used to store Key-Value pairs. When you call the get(key) method on a HashMap object. It returns the value associated with the specific key if the key is not found in the HashMap. it returns null.

Refer "

17. How to achieve inheritance without having an interface?

By using Extends keyword:

child class extends Parent class.

Can achieve by relationship between the parent and child class by using Extends keyword.

18. if i want that my class should not be extended and the instance cannot be created by other classes then how to declare class?

By using final keyword.

```

public final class MyClass {
    private MyClass () {
        ↴ → // Private Constructor Implementation.
    }
}

```

By declaring the class as final, you prevent other classes from extending it. Additionally, you can make the constructor private to ensure that instance cannot be created from outside the class.

19. How to store multiple values in one reference?

By using Non-primitive data Type

Ex: int [] numbers = {1, 2, 3, 4, 5};

List<String> data = new ArrayList<>();

HashMap<String, String> data = new HashMap<(String, String)>();

a1. In cucumber, in which class you have glue, how many classes for glue, and what was the program line limit for the classes?

- The glue code defines the mapping between the steps described in the feature files.
- The number of classes for glue code can vary depending on the organization and complexity of your project.
- Regarding the program line limit for the class with sample code, there is no specific limit imposed by cucumber itself.

a2. How to find a missing implementation in cucumber?

Note: The Implementation code will depend on the specific functionality you are testing.

By using strict, dryRun or Hooks Concepts

a3. How to resolve conflicts while pushing code in git?

```
<<<< HEAD  
your changes  
-----  
other changes  
>>>> Commit-Hash
```

first → will open the git bash.

step 2: git status

will see changes not staged for commit.

And will see untracked files.

step 3: git pull → was success done. like → Already up to date.

if not success, will do git stash

git pull and git stash apply.

git add.

git commit -m "comment"

git push. → To clear stash files git stash clear.

a4. Diff between QTP and Selenium.

QTP → Quick Test professional. now known as UFT

- Cons:
- commercial tool and requires a license.
  - Limited cross-Browser Support
  - Limited Platform compatibility. - windows based restrict its usage on other operating systems.

- Pros:
- Object Repository
  - support for Multiple Technologies. web, desktop, mobile, mainframe applications
  - Record and playback

Selenium:

Pros:

- open source, cross-Browser compatibility, language

- large community support.

Cons:

- lack of Integrated IDE

- steeper learning curve.

- limited support for desktop.

25. How can we achieve parallel execution?  
 By using TestNG concepts, have to refer the automation PDF  
 26. Running multiple tests for the same browser.  
 driver = webdriver.Chrome()

36. How will you establish a connection using a JDBC driver?  
SQl Exception Import → Java.SqL.\*  
 String jdbcDriver = "com.mysql.jdbc.Driver";  
 String dbURL = "jdbc:mysql://localhost:3306/mydatabase";  
 String userName = "root";  
 String password = "password";  
 Class.forName(jdbcDriver); <sup>if it's not Required.</sup>  
datatype  
 Connection connection = DriverManager.getConnection(dbURL, userName, Password);  
 Statement statement = connection.createStatement();  
 ResultSet resultSet = statement.executeQuery("Select query");

27. fire queries using JDBC.

Q. How to find the horizontal and vertical position of an element without JavaScript Executor.  
 webElement().getLocation().getX(); → Horizontal position  
 webElement().getLocation().getY(); → Vertical position.  
 with JavaScript Executor:  
 JavaScript Executor js = (JavaScriptExecutor) driver;  
 int horizontalPosition = Integer.parseInt(js.executeScript(  
 ↗ ("return arguments[0].offsetLeft;", element).toString());  
 int verticalPosition = offsetTop.

41. How does hashmap work?  
 Refer (II)

In java, there are two types of Hashmap  
 1. Hashmap (Implementation of Map interface)  
 2. LinkedHashMap (Implementation of Map interface)

Rest Assured:

How to Read the JSON from Path folder:

```
public JSONObject methodName() throws IOException {
    String JSONPath = System.getProperty("user.dir") + "/json";
    String JSONPath = System.getProperty("user.dir") + "/json";
    JSONParser parser = new JSONParser();
    FileReader reader = new FileReader(JSONPath);
    Object obj = parser.parse(reader); } to string();
    return (JSONObject) obj; convert to string.
```

```
import java.io.*;
org.json.simple.JSONObject
    * parser = JSONParser
```

Maven Dependency: json-simple

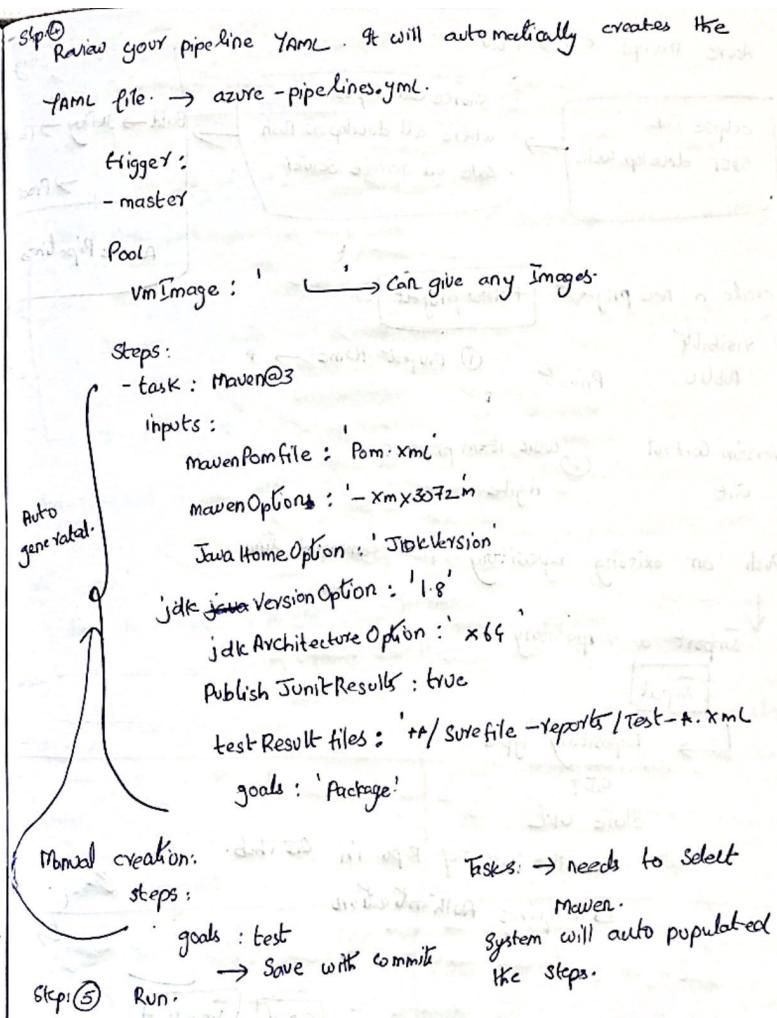
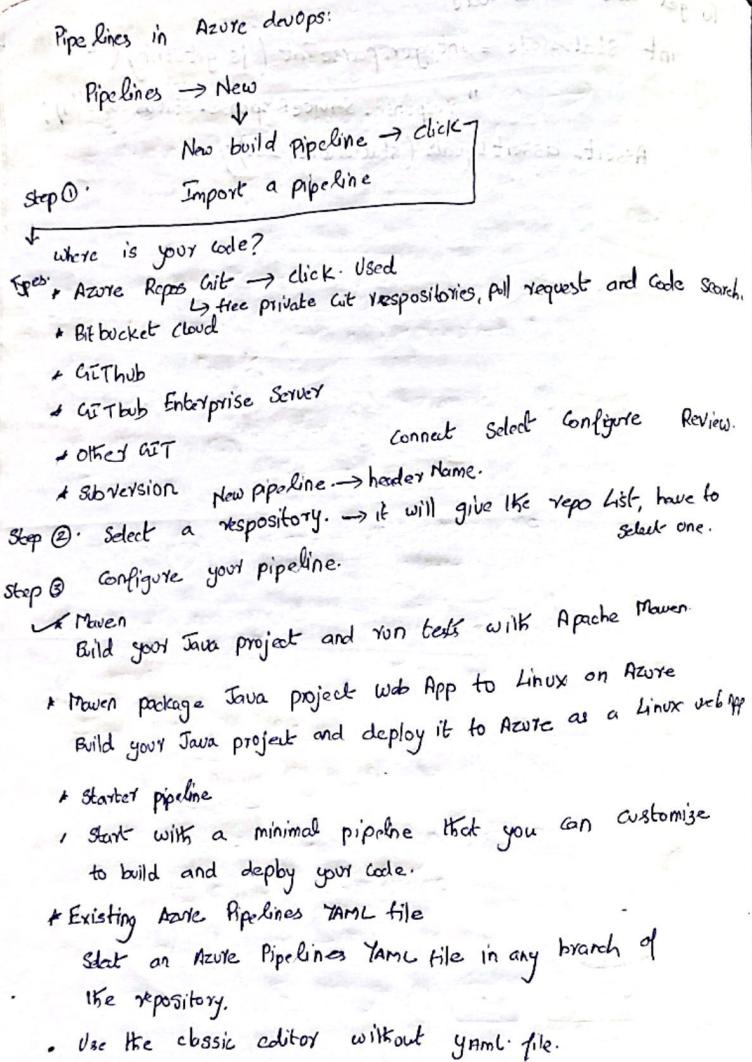
1.1 → Version.  
(String is the input data and response-data) X  
response data to string. response data  
JSONPath js = new JSONPATH("string value");  
String value = js.get("JSONObject");

How to pass the response one API to other API

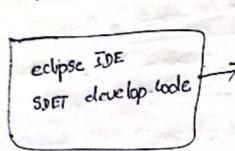
```
String payload = data.replaceAll("worldJSON",
                                "worldHam");
```

To get the status code.

```
int statusCode = Integer.parseInt(js.getString(
    "response.ServiceResponse.StatusCode"));
Assert.assertEquals(statusCode, 200);
```



Azure DevOps CI/CD flow:



create a new project: **+New project**

② visibility:

Public

Private

① project Name → ?

③ Version Control

Git

④ work item process

Agile

Push an existing repository from Command line

Import a repository...

**Import**

Repository Type

GIT

clone URL

Poss the URL of Repo in GITHub.

Requires Authentication

**cancel** **Import**

Jenkins: CI/CD Tool: Continuous Integration /continuous deployment:

→ Services → Jenkins → Start → Running.

once hit the localhost:8080, it will give you "Please wait the while Jenkins is getting ready to work".

"your browser will reload automatically when Jenkins is ready".

once the Jenkins Installed:

It will create a folder in windows c → Program files(x86) → Jenkins.

→ It will ask for login Username and Password.

Environmental Stages: dev, QA, Staging, Preprod, Prod.

Handled by myself. Handled by QA Manager.

How to create pipeline in Jenkins:

- Enter an item name → Have to give Pipeline Name.

freestyle Project

→ Maven Project

Pipeline

External Job

Multi-configuration Project

Folder

Multi-branch pipeline.

If you want to create a new item from other existing, you can use this option.

copy from Type to Autocomplete

before start the Jenkins → Services. Search in Start Menu. needs to check status. Properties → Log on → Allow services to interact with desktop. check.

Configuration: → By Configure

General	Source Code Management	Build Triggers	Build Environment	Post Steps	Build settings	Post-build Actions
Description: → true to give some text reason for this. <input type="checkbox"/> discard old builds. <input checked="" type="checkbox"/> This build requires checkable resource. <input checked="" type="checkbox"/> This project is parameterized. <input checked="" type="checkbox"/> Throttle builds. <input type="checkbox"/> Disable this project. <input checked="" type="checkbox"/> Execute concurrent builds if necessary.	<input type="radio"/> None <input checked="" type="radio"/> GIT Repositories → Have to pass the github credentials [ ] <input type="checkbox"/> Branches to build. Branch Specifier (blank for any) [master] AttBranch Repository browser [Auto]	<input type="checkbox"/> Build whenever a SNAPSHOT dependency is built. <input type="checkbox"/> Trigger builds remotely (e.g. from script) <input type="checkbox"/> Build after other projects are built. <input checked="" type="checkbox"/> Build periodically. Schedule [H 9 * * *]	Build Environment [ ] <input type="checkbox"/> Poll SCM.		Build Root POM <input type="checkbox"/> POM.XML Goals and options → test  <input type="checkbox"/> Pass the mail ID <input checked="" type="checkbox"/> Send email for every unstable build. <input checked="" type="checkbox"/> Send separate e-mails to individuals who broke the build. <input type="checkbox"/> Send e-mail for each failed module.	<input checked="" type="checkbox"/> Add post-build action [ ]

To add cucumber report Plugins in Jenkins. Can be done on Manage Jenkins.

Have to go to the Jenkins folder → cmd.  
 (X) . java -jar jenkins.war → once its executed Jenkins start running.  
 finally it will give the message as Jenkins is fully up and running.

Build History:

Blue colour → Success.  
 Yellow → Unstable.  
 Red → fail.

① #90 → Count how many times pipeline have runned.  
 Sep 24, 2020 7:42 AM.

Console output:

Editable Email notification.  
 Project Recipient List → Receiver mail ID.  
 Default Content → Hi  
 Please find the below attachment.  
 for Attachment → Attach build log [Attach Building]

Jenkins:

- New item
- People
- Build History
- Project Relationship
- check file fingerprint
- Selenium Grid
- Manage Jenkins
- Lockable Resources
- Credentials
- New view

Inside the Project:

- Back to Dashboard.
- Status.
- changes.
- workspace → will copy the source code from git and stores in Jenkins workspace
- Build Now.
- Delete chosen project
- Configure Email, whom to send.
- Modules.
- Email Template Testing
- git polling log.
- Rename
- cucumber reports.

Manage Jenkins: configuration Jenkins URL → if its gmail selenium Hub port is 4444  
configure System .System Admin email address → that give email ID.  
configure Global Security.  
configure Credentials.  
Global Tool configuration → JDK Path from the Server, ↓ Path. Program file \git\cmd\git.exe.  
Reload Configuration from Disk.  
\* Manage Plugins. → it like marketplace, have to install required plugins like cucumber reports, Maven, Email System Information, System Log.

Configure System:

Extended E-mail Notification:

SMTP Server Smtp.gmail.com.

Default recipients surekhit@gmail.com.

Default Subject \$PROJECT\_NAME - BUILD # \$BUILD\_NUMBER - \$BUILD\_STA

Default Content \$PROJECT\_NAME - Build # \$BUILD\_NUMBER - \$BUILD\_STA

check console output of \$BUILD\_URL to view the results.

Email Notification

SMTP server Smtp.gmail.com.

for test ~~Test Configuration by sending test e-mail.~~ pass the receiver email ID.