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### Assignment Template: Schedule and Run Change Request Collections Using Jenkins

**Classroom Session: Schedule and Run Change Request Collections Using Jenkins**

**Learning Objective:** The objective of this session is to learn how to schedule and run Postman collections for Change Requests using Jenkins.

**Expected Completion Time:**

* Best Case: 30 minutes
* Average Case: 45 minutes

### Setting Up Jenkins for Running Postman Collections

#### Precondition Steps:

**Step 1: Install Newman and Node.js on Jenkins Server**

1. **Install Node.js:**
   * Download and install Node.js from <https://nodejs.org/en/download/>
2. **Install Newman:**
   * Open a terminal or command prompt and run the command: npm install -g newman.

**Step 2: Install Jenkins**

(*Follow The Installation Guide which is already shared in your whatsapp Group*)

1. **Download and Install Jenkins:**
   * Download Jenkins from <https://www.jenkins.io/download/>
   * Follow the installation instructions for your operating system.
2. **Start Jenkins:**
   * Start Jenkins by running the command: java -jar jenkins.war.
   * If youn getting **java.io.IOException: Failed to start Jetty ,** use below command

**netstat -ano | findstr :8080**

**taskkill /PID** < PID > **/F *Example,- taskkill /PID 6360 /F***

**Step 3: Prepare Your Postman Collection and Environment Files**

1. **Export Postman Collection:**
   * In Postman, go to the Collections tab.
   * Select the collection you want to export.
   * Click on the three dots (⋮) next to the collection name.
   * Select "Export".
   * Choose the collection format (preferably v2.1) and save the file as collectionname.json.
2. **Export Environment Variable:**
   * Go to the Environments tab.
   * Select the environment you want to export.
   * Click on the three dots (⋮) next to the environment name.
   * Select "Export".
   * Save the file as environmentvariable.json.
3. **Export Global Variable:**
   * Click on the "Manage Environments" gear icon in the top right.
   * Go to the "Globals" tab.
   * Click on the "Download" button.
   * Save the file as globalvariable.json.
4. **Export Data Files:**
   * Prepare your data file as per the required format (CSV or JSON).
   * Save the data file as datafile.csv.

### Configuring Jenkins to Run Newman Commands

**Part 1: Create a New Jenkins Job**

**Step 1: Open Jenkins Dashboard**

1. Launch Jenkins by opening <http://localhost:8080> in your web browser.
2. Log in with your credentials.
3. On Windows: This file is located at

*C:\Program Files (x86)\Jenkins\secrets\initialAdminPassword*

**Or**

*C:\ProgramData\Jenkins\secrets\initialAdminPassword*.

**Step 2: Create a New Job**

1. Click on "New Item" in the Jenkins dashboard.
2. Enter a name for your job, e.g., "Run Change Request Collections".
3. Select "Freestyle project" and click "OK".

**Part 2: Configure the Jenkins Job**

**Step 1: Configure General Settings**

1. In the "General" tab, you can add a description for your job.

**Step 2: Configure Source Code Management (Optional)**

1. If you are using a version control system (e.g., Git), configure the repository settings.

**Step 3: Configure Build Triggers**

1. Check "**Build periodically**" to schedule the job.
2. Enter the cron expression for scheduling the job. For example, to run every day at midnight: H 0 \* \* \*.

**Step 4: Configure Build Environment**

1. If necessary, add build environment configurations.

**Step 5: Add Build Step**

1. Click "Add build step" and select "Execute shell" (or "Execute Windows batch command" if you are on Windows).
2. Enter the Newman command to run the collection. Example:

***newman run /path/to/collectionname.json -e /path/to/environmentvariable.json -g /path/to/globalvariable.json -d /path/to/datafile.csv -r htmlextra***

**Part 3: Save and Run the Job**

**Step 1: Save the Job**

1. Click "Save" to save the job configuration.

**Step 2: Run the Job**

1. Manually trigger the job by clicking "Build Now" in the Jenkins dashboard.

### Expected Outcome:

Upon completion, you should be able to:

* Export collections, environment variables, global variables, and data files from Postman.
* Set up and configure Jenkins to run Newman commands.
* Schedule and run Postman collections using Jenkins.
* Generate reports for executed collections.
* Handle and troubleshoot common mistakes during Jenkins and Newman execution.