**…………………….DOCKER PROJECT……………………..**

**NOTE :-**

* **IN THIS PROJECT I USE MULTIPLE DOCKER IMAGE TO ACHIEVE THE TASK**
* **I ALSO ATTACH A VOLUME TO THE DOCKER IMAGE SO THAT IF DEVELOPER MAKE ANY CHANGE IT AUTOMATICALLY REFLECT TO WEBSITE.**
* **I ALSO USE PAT CONCEPT SO THAT ANYBODY IN MY LAN NETWORK CAN ACCESS MY WEBSITE.**
* **TO MAKE THE WORK DYNAMIC I USE JENKINS.**
* **I ALSO USE GITHUB AND GIT TO ACHIEVE MY TASK.**

**TASK : -**

* WE HAVE A DEVELOPER TEAM WORKING LOCALLY ON TWO BRANCHES USING GIT MASTER AND DEV1 BRANCH.
* AS SOON AS DEVELOPER TEAM PUSH THE CODE TO GITHUB JENKINS AUTO DOWNLOAD THE CODE AND LAUNCH TWO DOCKER IMAGE FOR THE TWO BRANCHES CODE.
* NOW QUALITY ASSURANCE TEAM TEST THE WEBSITES IF THE WEBSITE WORK PROPERLY WE WILL MERGE BOTH BRANCH TO ENHANCE THE FUNCTIONALITY OF THE WEBSITE
* SO FOR THE FINAL WEBSITE JENKINS LAUNCH NEW DOCKER IMAGE IN WHICH I USE PAT IMAGE SO THAT ANYBODY IN MY LAN NETWORK CAN ACCESS MY WEBSITE
* **JOB1 :** USING JENKINS MAKE A JOB FOR DEV1 BRANCH TO COPY DATA IN YOUR REDHAT SYSTEM AND DEPLOY IT USING DOCKER IMAGE
* **JOB2 :** USING JENKINS MAKE A JOB FOR MASTER BRANCH TO COPY DATA IN YOUR REDHAT SYSTEM AND DEPLOY IT USING DOCKER IMAGE
* **JOB3 :** NOW THERE IS A QAT WHO CHECK BOTH DATA OF DEV1 AND MASTER BRANCH AND IF BOTH ARE STABLE THEN MERGE THEM AND LAUNCH WITH A DOCKER IMAGE WHICH IS EXPOSED TO THE PUBLIC WORLD

**SOLUTION :**

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1. FIRSTLY MAKE A LOCAL GIT REPO AND CREATE A NEW BRANCH DEV1 USING COMMAND (git branch dev1)

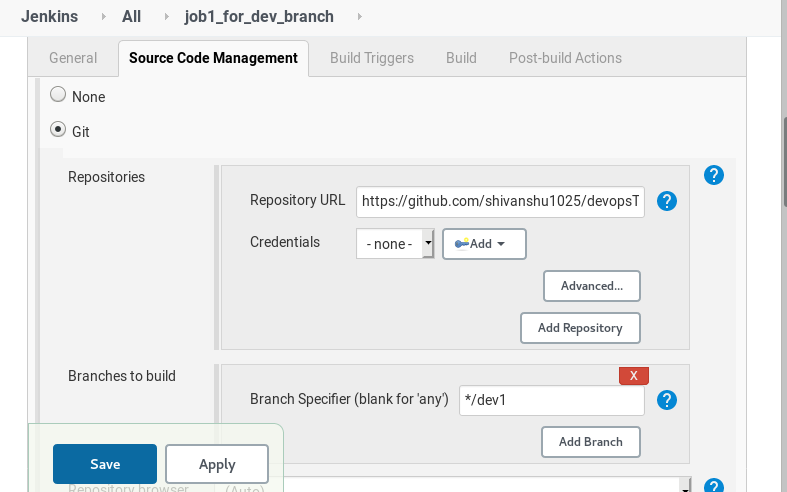
2. YOU CAN SWITH BETWEEN BRANCH USING (git checkout branchname)

3. ENTER THE DATA AND PUSH THE REPO TO THE GITHUB

4. IN YOUR REDHAT SYSTEM START DOCKER AND JENKINS SERVICES

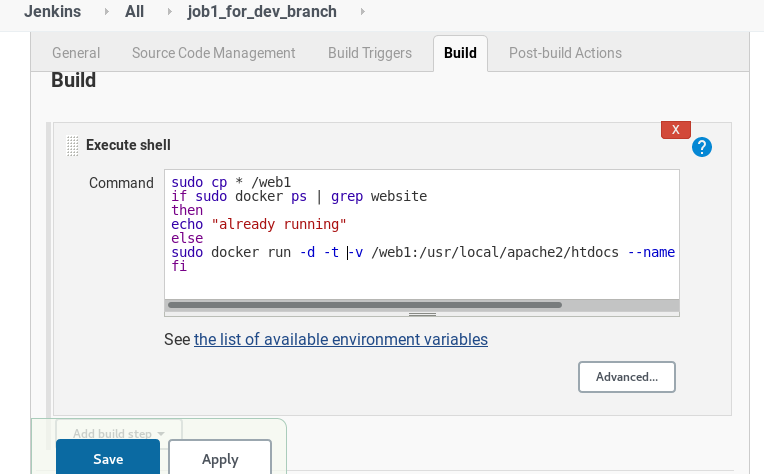
5. NOW LOGIN TO YOUR JENKINS

CREATE JOB 1 AS :



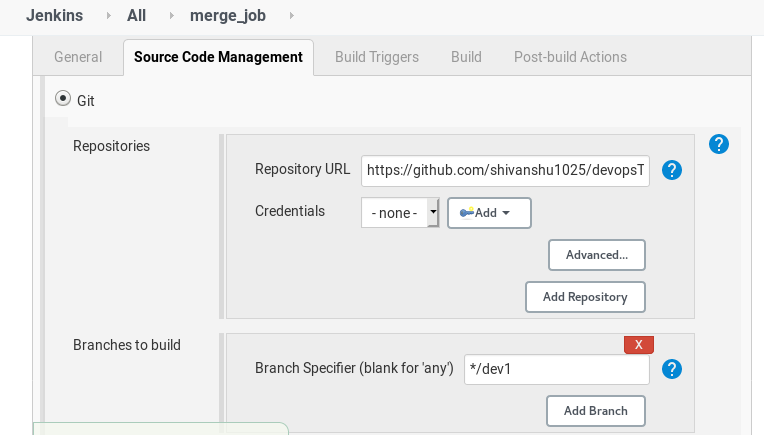
SELECT POLL SCM SO THAT WHEN DEVELOPER DO ANY CHANGE IN GITHUB THEN THE JOB WILL AUTOMATICALLY RUN

WRITE THE CODE TO COPY THE DATA INTO REDHAT MACHINE AND TO LAUNCH AND LINK FILE WITH DOCKER SYSTEM

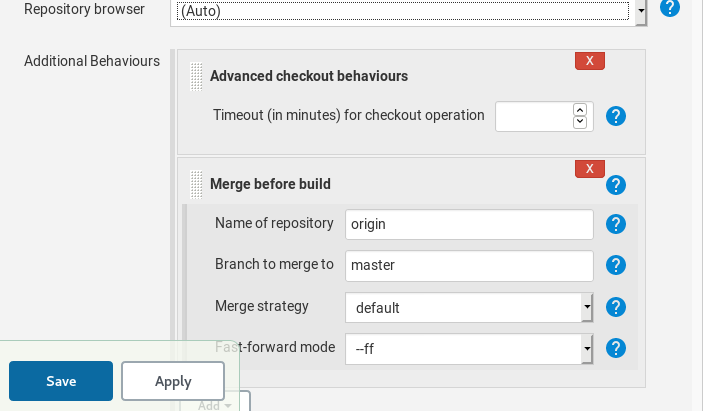


SAME WAY WE CREATE THE JOB FOR MASTER BRANCH

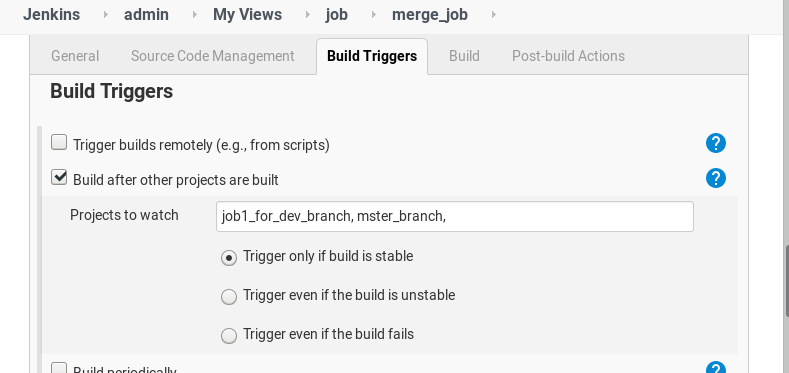
NOW IF BOTH WEBSITE WORK THEN WE WILL MERGE THE CODE OF BOTH BRANCH BY USING NEW JOB AS:-



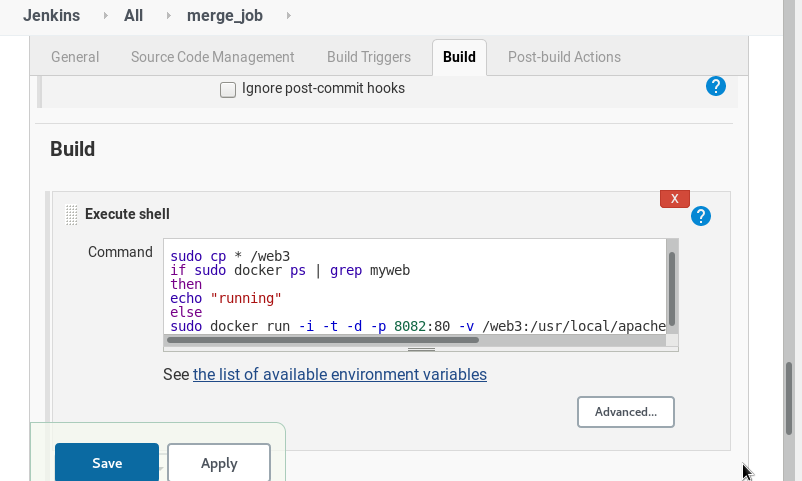
NOW GO TO ADVANCE OPTION TO PERFORM MERGE OPERATION



NOW WE WILL SET TRIGGER THAT IF JOB1 AND JOB2 WORK PROPERLY ONLY THEN PERFORM JOB3 .IT MEANS IF BOTH CODE OF MASTER AND DEV1 BRANCH WORK PROPERLY THEN JOB3 WILL RUN AND MERGE THE CODE.



NOW WE WILL LAUNCH A NEW DOCKER IMAGE USING PAT CONCEPT TO EXPOSE THE IMAGE TO OUTSIDE WORLD.



FINALLY OUR TASK IS COMPLETE AS SOON AS DEVELOPER PUSH CODE ON GITHUB THE JENKINS AUTO DOWNLOAD THE CODE AND CHECK WHETHER CODE WORK PROPERLY OR NOT IF IT WORK PROPERLY THAN IT WILL MERGE THE CODE TO THE MAIN WEBSITE.