Jenkins R Build Support.

Pre-requisites for Creating a R application repo on Bit-Bucket.

1. Bit-Bucket for repository.
2. R studio or R compiler.
3. Installation process of R studio on Linux/Windows.
4. Run the application.

Process of Bit bucket repo creation.

Requirements for the creation of Bit bucket

Account of Bit bucket.

1. Credentials to login.

A bare repository is created .

Git clone http://novartis.devops.altimetrik.io:7990/scm/r/r-helloworld.git to clone the bare repository in the local machine.

User creation on the bare repository.

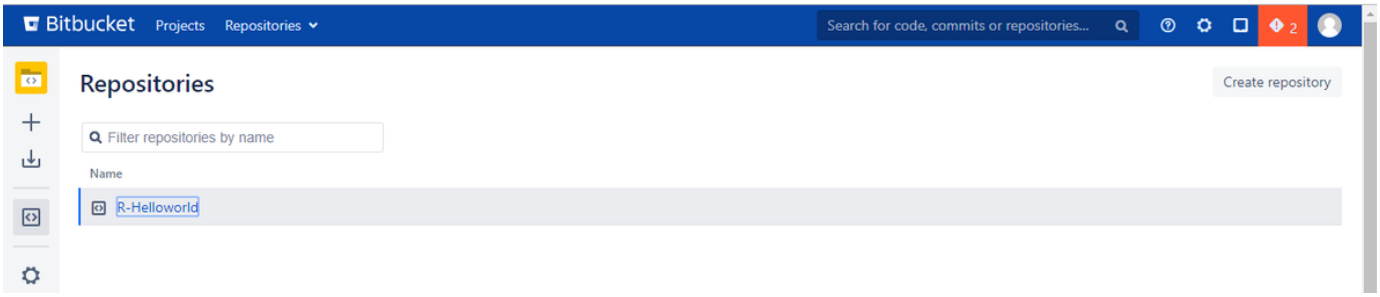
```
git config --global user.name "prasad"

git config --global user.email "pmoka@altimetrik.com"
```

Work with repository to push the code with remote

```
cd existing-project
git init
git add --all
git commit -m "Initial Commit"
git remote add origin http://novartis.devops.altimetrik.io:7990/scm/r/r-helloworld.git
git push -u origin master
```

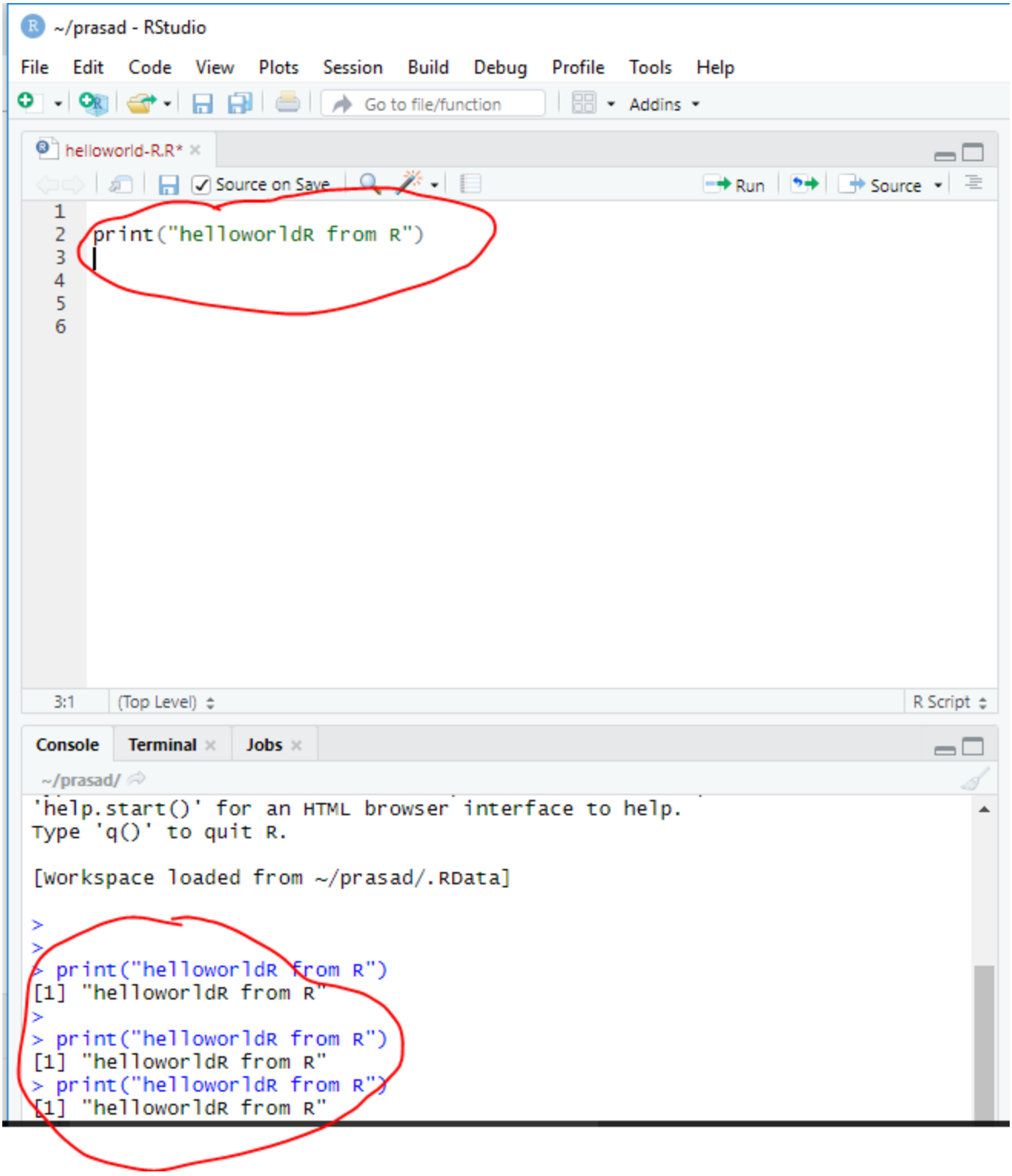
Once the "git push" command is triggered the push to the repository in the bit bucket.



Setup of R compiler and R studio on Bit bucket.

Install R studio on the Windows environment.

Provide the details of the cloned project in the local environment.



Install R Packages on Linux environment and run the cloned program of hello world from the repo

git clone `http://novartis.devops.altimetrik.io:7990/scm/r/r-helloworld.git`

Rscript helloworld.R

Repository used for creating testing and packaging the code available

code for multiplication :

```
new.function <- function(a,b) {
result <- a * b
print(result)
}
```

Code used for testing:

```
for(a in 0:100)
for (b in 0:100)
new.function(a,b)
```

Explanation for code to be executed for test cases:

The function function(a,b) is being assigned to the new.function()

Function can be called and executed or tested multiple times on Jenkins.

The new function can called once packaged

Command : Rscript test.R

Invoke the interpreter present on the machine and Jenkins Slave.

Jenkins pipeline with Poll SCM ,Compilation and Package.

```
//SCRIPT : CONFIGURATION
node ('slave1') {

    //Node Configuration which contains slave internally which has R interpreter installed
    //Node: The node needs to be present online to run the job smoothly

    //STAGE : POLL SCM
    stage("POLL SCM") {
        git credentialsId: 'fefe1963-b4e0-4d09-bd5b-f8a95b934ce0', url: 'http://novartis.devops.altimetri
k.io:7990/scm/rtes/r-mul.git'
    }

    //To Provide the details of the Repository configured and provide credential details for the URL.
    //STAGE COMPILATION
    stage("compile") {
        sh label: '', script: 'Rscript /home/jenkins/workspace/Jenkins_pipeline_R/Rmul/R/test.R'
    }

    //To invoke the script present on the Repository
    //Stage : Package
    stage("Package"){
        sh label: '', script: 'R CMD build /home/jenkins/workspace/Jenkins_pipeline_R/Rmul/R --save'
    }

    //To provide the details of the nexus repository and push the artifact to the nexus.
    //Stage: Deploy/upload to artifact
    stage("Deploy"){
        nexusArtifactUploader artifacts: [[artifactId: 'com.nova', classifier: '', file: '/home/jenkins/w
orkspace/Jenkins_pipeline_R/Rmul_0.1.0.tar.gz', type:
        'tar.gz']], credentialsId: 'nexus', groupId: 'com.nova', nexusUrl: 'novartis.devops.altimetrik.io
:8082', nexusVersion: 'nexus3', protocol: 'http',
        repository: 'Rproject', version: '{$BUILD_NUMBER}'
    }
}
```