EXP. 24: LAUNCH THE HADOOP 2.X AND PERFORM MAPREDUCE PROGRAMFOR A WORD COUNT PROBLEM

AIM: LAUNCH THE HADOOP 2.X AND PERFORM MAPREDUCE PROGRAMFOR A WORD COUNT PROBLEM

PROCEDURE:

Step 1 - Open Terminal

\$ su

hduser

Password:

Step 2 - Start dfs and mapreduce services

\$ cd /usr/local/hadoop/hadoop-2.7.2/sbin

\$ start-dfs.sh \$ start-yarn.sh

\$ ips

Step 3 - Check Hadoop through web UI

// Go to browser type http://localhost:8088 – All Applications Hadoop Cluster

// Go to browser type http://localhost:50070 – Hadoop Namenode

Step 4 - Open New Terminal

\$ cd Desktop/

\$ mkdir inputdata

\$ cd inputdata/

\$ echo "Hai, Hello, How are you? How is your health?" >> hello.txt

\$ cat >> hello.txt

Step 5 - Go back to old Terminal

\$ hadoop fs -copyFromLocal /home/hduser/Desktop/inputdata/hello.txt /folder/hduser

// Check in hello.txt in Namenode using Web UI

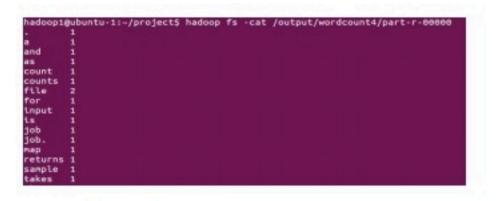
Step 6 – Download and open eclipse by creating workspace

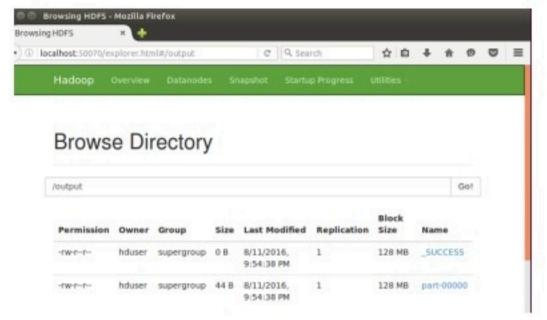
Create a new java project.

Step 7 - Add jar to the project

You need to remove dependencies by adding jar files in the hadoop source folder. Now Clickon Project tab and go to Properties. Under Libraries tab, click Add External JARs and select all the

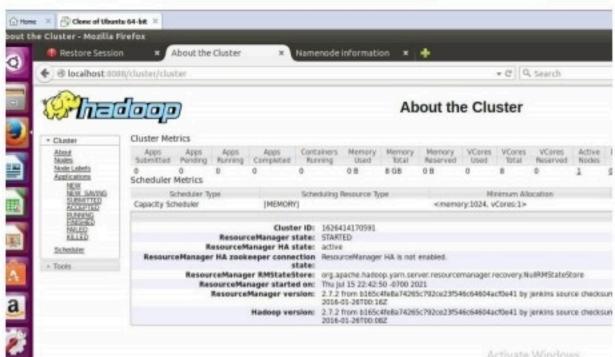
Shdfs dfs -cat /usr/local/hadoop/output/part-r-00000





Step 13 - To Remove folders created using hdfs

\$ hdfs dfs -rm -R /usr/local/hadoop/output



EXP. 23: INSTALL HADOOP 2.X AND CONFIGURE THE NAME NODE AND DATANODE.

AIM: INSTALL HADOOP 2.X AND CONFIGURE THE NAME NODE AND DATANODE.

PROCEDURE:

Step 7 - Modify Hadoop config files

//Hadoop Environmental variable setting - The following files will be modified

- 1. ~/.bashrc
- /usr/local/hadoop/hadoop-2.7.2/etc/hadoop/hadoop-env.sh
- /usr/local/hadoop/hadoop-2.7.2/etc/hadoop/core-site.xml
- /usr/local/hadoop/hadoop-2.7.2/etc/hadoop/hdfs-site.xml
- /usr/local/hadoop/hadoop-2.7.2/etc/hadoop/yarn-site.xml
- /usr/local/hadoop/hadoop-2.7.2/etc/hadoop/mapred-site.xml.template

\$ sudo nano ~/.bashrc

// Add the following lines at the end of the file

export JAVA_HOME=/usr/lib/jvm/java-8-oracle
export HADOOP_HOME=/usr/local/hadoop/hadoop-2.7.2
export PATH=\$PATH:\$HADOOP_HOME/bin
export PATH=\$PATH:\$HADOOP_HOME/sbin
export HADOOP_MAPRED_HOME=\$HADOOP_HOME
export HADOOP_COMMON_HOME=\$HADOOP_HOME
export HADOOP_HDFS_HOME=\$HADOOP_HOME
export YARN_HOME=\$HADOOP_HOME
HADOOP_COMMON_LIB_NATIVE_DIR=\$HADOOP_HOME/lib/native
export HADOOP_OPTS="-D.java.library.path=\$HADOOP_HOME/lib/native
export PATH=\$PATH:/usr/local/hadoop/hadoop-2.7.2/bin

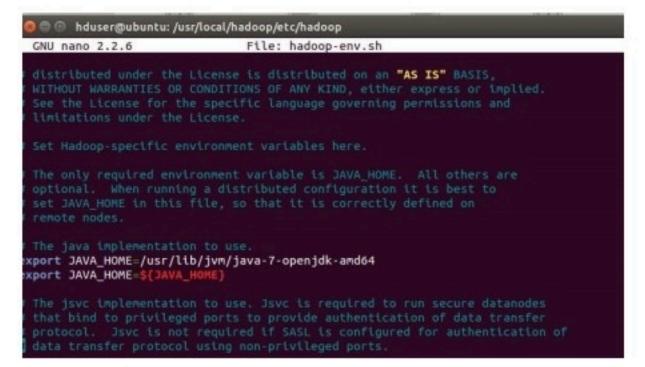
// Configure Hadoop Files

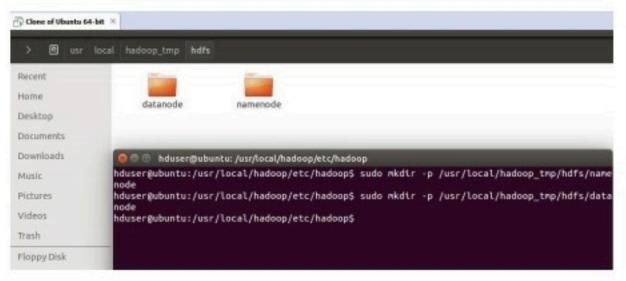
\$ cd /usr/local/hadoop/hadoop-2.7.2/etc/hadoop/

\$ sudo nano hadoop-env.sh

// Add following line in hadoop-env.sh - Set JAVA variable in Hadoop

The java implementation to use. export JAVA_HOME=/usr/lib/jvm/java-8-oracle





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EXP20.CREATE A SQL STORAGE SERVICE AND PERFORM A BASIC QUERY USINGANY PUBLIC CLOUD SERVICE PROVIDER (AZURE/GCP/AWS) TO DEMONSTRATE DATABASE AS A SERVICE (DAAS)

AIM: CREATE A SQL STORAGE SERVICE AND PERFORM A BASIC QUERY USINGANY PUBLIC CLOUD SERVICE PROVIDER (AZURE/GCP/AWS) TO DEMONSTRATE DATABASE AS A SERVICE (DAAS)

PROCEDURE:

STEP1: GOTO AZURE AND GOTO SQLDATABASE.

STEP 02: Now Create a Sql Databse

STEP3: SELECT THE RESOURCE GROUP AND ENTER THE SERVERNAMETHAT APPLICABLE.

STEP4: IN NETWORKING SELECT ALLOW AZURE SERVICES AND RESOURCES TO ACCESS THIS SERVER.

STEP5: IN ADDITIONAL SETTINGS SELECT SAMPLE.

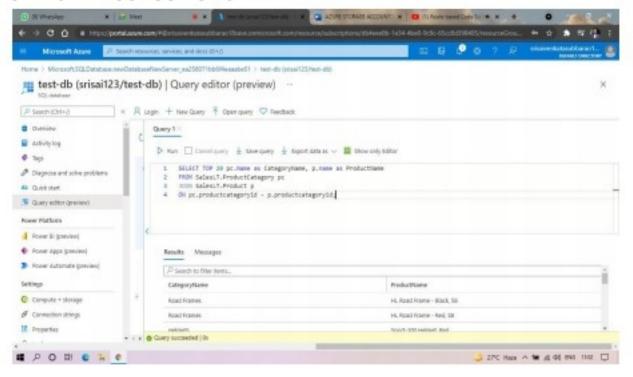
STEP6: AND THE SQL DATABASE IS DEPLOYED

TEP7: NOW GOTO QUERY EDITOR.

STEP8:NOW AGAIN LOGIN TO THE SQLDATADATABASE

STEP9: OUR TABLES WILL SHOWN AND TYPE THE QUERY TO EXCURD

STEP10: AND OUR OUTPUT IS READY.



EXP. 22: PERFORM THE BASIC CONFIGURATION SETUP FOR INSTALLINGHADOOP 2.X LIKE CREATING THE HOUSER AND SSH LOCALHOST

AIM: PERFORM THE BASIC CONFIGURATION SETUP FOR INSTALLINGHADOOP 2.X LIKE	CREATING THE
HDUSER AND SSH LOCALHOST	

PROCEDURE:

Step 1 - System Update

\$ sudo apt-get update

Step 2 – Install Java and Set JAVA_HOME

//This first thing to do is to setup the webupd8 ppa on your system. Run the following command and proceed.

\$ sudo apt-add-repository ppa:webupd8team/java

\$ sudo apt-get update

//After setting up the ppa repository, update the package cache as well.

//Install the Java 8 installer

\$ sudo apt-get install oracle-java8-installer

// After the installation is finished, Oracle Java is setup. Run the java command again to check the version and vendor.

orl

\$ sudo apt-get install default-jdk

\$ java -version

Step 3 - Add a dedicated Hadoop user

\$ sudo addgroup hadoop

\$ sudo adduser --ingroup hadoop hduser

// Add hduser to sudo user group

\$ sudo adduser hduser sudo

Step 4 – Install SSH and Create Certificates

\$ sudo apt-get install ssh

\$ su hduser

Microsoft Azure

Hey, Node developers!

Your app ceretor is up and naming.
Time to take the next step and deploy your code.

To the same of all the same of





EXP 17 .DEMONSTRATE INFRASTRUCTURE AS A SERVICE(IAAS) BY CREATING AVIRTUAL MACHINE USING A PUBLIC CLOUD SERVICE PROVIDER(AZURE/GCP/AWS) CONFIGURE WITH MINIMUM CPU, RAM ANDSTORAGE AND LAUNCH THE VM IMAGE.

AIM:

To demonstrate infrastructure as a service(iaas) by creating a virtual machine using a public cloud service provider(azure/gcp/aws) configure with minimum cpu,ram and storage and launch the vm image.

PROCEDURE:

STEP1: CREATE AN ACCOUNT IN MICROSOFT AZURE.

STEP2: GOTO RESOURCE GROUP AND CREATE A RESOURCE GROUP.

STEP3: GIVE NECESSARY THINGS FOR RESOURCE GROUP.

STEP4: CREATE A VIRTUAL NETWORK FOR TO CREATE A VIRTUALMACHINE.

STEP5: NOW CREATE A VIRTUAL MACHINE WITH UR IPADDRESS ANUSERNAME AND

PASSWORD FOR YOUR VIRTUAL MACINE.

STEP6: AND YOUR VIRTUAL MACHINE IS DEPLOYED.

STEP7: NOW CONNECT THE VIRTUAL MACHINE AND DOWNLOAD THE RDP FILETO OPEN YOUR

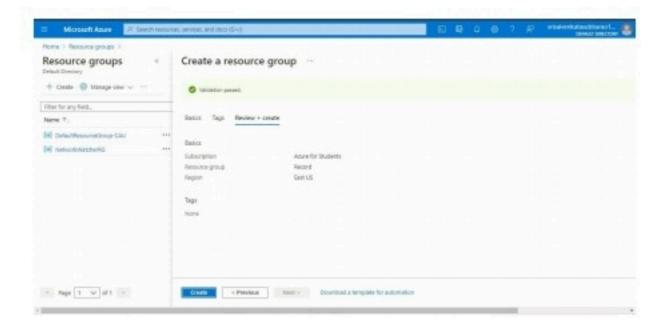
WINDOWS VIRTUAL MACHINE.

STEP8: CREATED A NEW WINDOWS VIRTUAL MACHINE

IMPLEMENTATION:

STEP1: CREATE AN ACCOUNT IN MICROSOFT AZURE.

STEP2: GOTO RESOURCE GROUP AND CREATE A RESOURCE GROUP.



STEP8: CREATED A NEW WINDOWS VIRTUAL MACHINE.



EXP19.CREATE A STORAGE SERVICE USING ANY PUBLIC CLOUD SERVICE PROVIDER (AZURE/GCP/AWS) AND CHECK THE PUBLIC ACCESSIBILITY OF THE STORED FILE TO DEMONSTRATE STORAGE AS A SERVICE

AIM:

PROCEDURE:

STEP1: OPEN AZURE AND GOTO STORAGE ACCOUNTS AND CREATESTOROAGE ACCOUNT

STEP2: ENTER THE RESOURC GROUP AND AND STORAGE ACCOUNT NAMEAND REVIEW AND CREATE AND CLICK TH CREATE AND YOUR STORAGE ACCOUNT WILL BE DEPLOYED SUCESSFULLY.

STEP3: OUR STORAGE ACCOUNT IS CREATED.

STEP4: GOTO STATIC WEBSITE

STEP5: AND ENABLE AND ENTER YOUR INDEX AND ERROR HTML FILES NAMES.

STEP6: AND GOTO STORAGE EXPLORR(REVIEW) AND AND GOTO BLOBCONTAINERS AND WEB AND UPLOAD THE TWO HTML FILES INIT

STEP7: AND AGAIN RETURN TO STATIC WEBSITE AND OPEN THE PRIMARYLINK AND YOUR WEB PAGE IS CREATED

EXP 17 .DEMONSTRATE INFRASTRUCTURE AS A SERVICE(IAAS) BY CREATING AVIRTUAL MACHINE USING A PUBLIC CLOUD SERVICE PROVIDER(AZURE/GCP/AWS) CONFIGURE WITH MINIMUM CPU, RAM ANDSTORAGE AND LAUNCH THE VM IMAGE.

AIM:

To demonstrate infrastructure as a service(iaas) by creating a virtual machine using a public cloud service provider(azure/gcp/aws) configure with minimum cpu,ram and storage and launch the vm image.

PROCEDURE:

STEP1: CREATE AN ACCOUNT IN MICROSOFT AZURE.

STEP2: GOTO RESOURCE GROUP AND CREATE A RESOURCE GROUP.

STEP3: GIVE NECESSARY THINGS FOR RESOURCE GROUP.

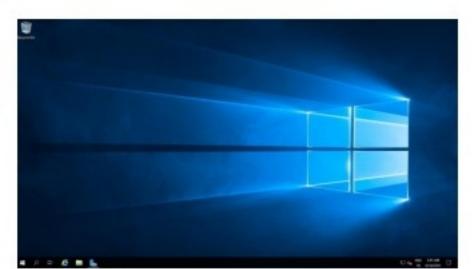
STEP4: CREATE A VIRTUAL NETWORK FOR TO CREATE A VIRTUALMACHINE.

STEP5: NOW CREATE A VIRTUAL MACHINE WITH UR IPADDRESS ANUSERNAME AND PASSWORD FOR YOUR VIRTUAL MACINE.

STEP6: AND YOUR VIRTUAL MACHINE IS DEPLOYED.

STEP7: NOW CONNECT THE VIRTUAL MACHINE AND DOWNLOAD THE RDP FILETO OPEN YOUR WINDOWS VIRTUAL MACHINE.

STEP8: CREATED A NEW WINDOWS VIRTUAL MACHINE



EXP15.CREATE A SIMPLE WEB SITE USING ANY PUBLIC CLOUD SERVICE PROVIDER (AZURE/GCP/AWS) AND CHECK THE PUBLIC ACCESSIBILITY OF THE STORED FILE TO DEMONSTRATE STORAGE AS A SERVICE

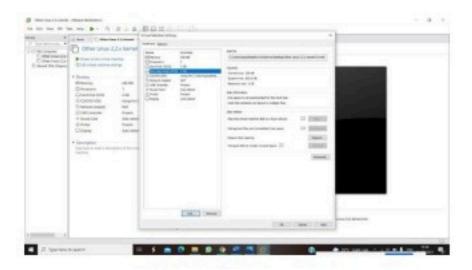
AIM: CREATE A SIMPLE WEB SITE USING ANY PUBLIC CLOUD SERVICE PROVIDER (AZURE/GCP/AWS) AND CHECK THE PUBLIC ACCESSIBILITY OF THE STORED FILE TO DEMONSTRATE STORAGE AS A SERVICE

Procedure:

STEP1: FIRSTLY, GO TO APPSERVICE TO CREATE AN WEBAPP.

STEP2: ENTER THE RESOURCE GROUP AND WEBAPP NAME AND REGIONAND SELECT THE LINUX OS.

STEP3: AFTER ENTER THE ALL THE NECESSARY THINGS CLICK THEREVIEW AND CREATE AND CLICK THE CREATE THE WEB APP.



EXP13. DEMONSTRATE INFRASTRUCTURE AS A SERVICE (IAAS) BY CREATING A VIRTUAL MACHINE USING A PUBLIC CLOUD SERVICE PROVIDER (AZURE), CONFIGURE WITH REQUIRED MEMORY AND CPU.

AIM:

To demonstrate infrastructure as a service (iaas) by creating a virtual machine using a public cloud service provider (azure), configure with required memory and cpu.

PROCEDURE:

STEP1: CREATE AN ACCOUNT IN MICROSOFT AZURE.

STEP2: GOTO RESOURCE GROUP AND CREATE A RESOURCE GROUP.

STEP3: GIVE NECESSARY THINGS FOR RESOURCE GROUP.

STEP4: CREATE A VIRTUAL NETWORK FOR TO CREATE A VIRTUALMACHINE .

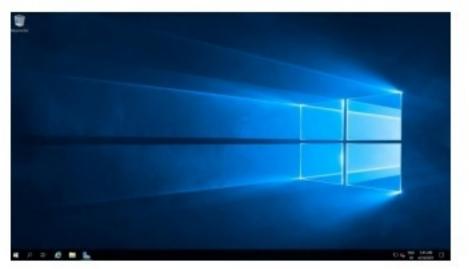
STEP5: NOW CREATE A VIRTUAL MACHINE WITH UR IP ADDRESS ANUSERNAME AND PASSWORD FOR YOUR VIRTUAL MACINE.

STEP6: AND YOUR VIRTUAL MACHINE IS DEPLOYED.

STEP7: NOW CONNECT THE VIRTUAL MACHINE AND DOWNLOAD THE RDP FILETO OPEN YOUR WINDOWS VIRTUAL MACHINE.

STEP8: NOW RESIZE THE VIRTUAL MACHINE SIZE.

STEP9: CREATED A NEW WINDOWS VIRTUAL MACHINE



STEP 4: SNAPSHOT IS BEING DONE



EXPNO 11: CREATE A CLONING OF A VM AND TEST IT BY LOADING THE PREVIOUS VERSION/CLONED VM.

DATE:

AIM:

To create a cloning of a vm and test it by loading the previous version/cloned vm.

PROCEDURE:

STEP 1: GO TO VM AND GOTO MANAGE AND CLICK CLONE

STEP 2: CLICK CLONE

STEP 3: SELECT THE FULL CLONE

STEP 4: AFTER CLONE AGAIN OR VM IS OPENED.



EXP 12: CHANGE HARDWARE COMPATIBILITY OF A VM (EITHER BY CLONE/CREATE NEW ONE) WHICH IS ALREADY CREATED AND CONFIGURED.

DATE:

AIM:

To Change Hardware compatibility of a VM (Either by clone/create new one) which is already created and configured.

PROCEDURE:

STEP 1:GOTO VM WARE WORKSTATION.

STEP2: RIGHT CLICK THE VM AND GOTO THE SETTINGS.

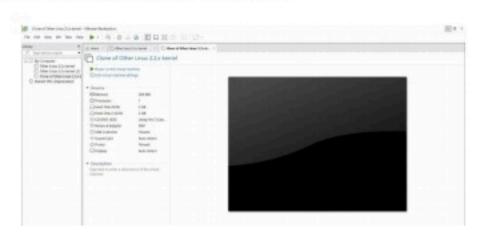
STEP 3: ADD HARDWARE WIZARD AND SELECT SCSI AND CLICK NEXT.

STEP 4: CREATE NEW VIRTUAL DISK.

STEP 5: SELCT THE DISK SIZE AS 2.0. AND SELCT SPLIT VIRTUAL DISK INTOMULTIFILES.

STEP 6: GIVE NAME AND CLICK THE FINISH.

STEP 5: CREATED TINYOS VIRTUAL MACHINE



EXP 9: CREATE A VIRTUAL HARD DISK AND ALLOCATE THE STORAGEUSING V	M WARE
WORKSTATION.	

DATE:

AIM:

To create a virtual hard disk and allocate the storage using vm ware workstation

PROCEDURE:

STEP 1:GOTO VM WARE WORKSTATION.

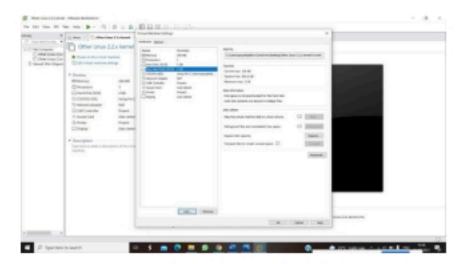
STEP2: RIGHT CLICK THE VM AND GOTO THE SETTINGS.

STEP 3: ADD HARDWARE WIZARD AND SELECT SCSI AND CLICK NEXT.

STEP 4: CREATE NEW VIRTUAL DISK.

STEP 5: SELCT THE DISK SIZE AS 2.0. AND SELCT SPLIT VIRTUAL DISK INTOMULTIFILES.

STEP 6: GIVE NAME AND CLICK THE FINISH.



EXPNO 10: CREATE A SNAPSHOT OF A VM AND TEST IT BY LOADING THE PREVIOUS VERSION/CLONED VM

DATE:

PROCEDURE:

To create a snapshot of a vm and test it by loading the previous version/cloned vm

STEP 1: GOTO VMWARE WORKSTATION.

STEP 2: CREATE FILES ON DESKTOP.

STEP 3: CLICK ON VM AND SELECTS SNAPSHOT-> TAKE SNAPSHOT.

STEP 4: SNAPSHOT IS BEING DONE



EXP NO 7: DEMONSTRATE VIRTUALIZATION BY INSTALLING TYPE-2 HYPERVISOR IN YOUR DEVICE, CREATE AND CONFIGURE VM IMAGE WITH A HOST OPERATING SYSTEM (EITHER WINDOWS/LINUX).

DATE:

AIM:

To demonstrate virtualization by installing type-2 hypervisor in your device, create and configure VM image with a host operating system (either windows/linux).

PROCEDURE:

STEP 1:Dowload VMware workstation and installed as type 2hypervisor.

STEP2:Dowload ubuntu or tiny OS as iso image file.

STEP 4: Do the basic configuration settings.

STEP 5: Created tiny OS virtual machine.

STEP 6: Launch the VM.



EXPNO 8: CREATE A VIRTUAL MACHINE WITH 1 CPU, 2GB RAM AND 15GB STORAGE DISK USING A TYPE 2 VIRTUALIZATION SOFTWARE.

DATE:

AIM:

To create a virtual machine with 1 cpu, 2gb ram and 15gbstorage disk using a type 2 virtualization software.

PROCEDURE:

STEP2:Dowload ubuntu or tiny OS as iso image file.

STEP 1:Dowload VMware workstation and installed as type 2hypervisor.

STEP 3: In VMware workstation->create new VM.

STEP 4: Do the basic configuration settings.

STEP 5: Created tiny OS virtual machine.

STEP 6: Launch the VM.



EXP NO 5: CREATE A SIMPLE CLOUD SOFTWARE APPLICATION FOR LIBRARY BOOK RESERVATION SYSTEM FOR SIMATS LIBRARY USING ANY CLOUD SERVICE PROVIDER TO DEMONSTRATE SAAS

DATE:

AIM:

To Create a simple cloud software application for Library book reservation system for SIMATS library using any Cloud Service Provider to demonstrate SaaS

PROCEDURE:

step1: Go to zoho.com.

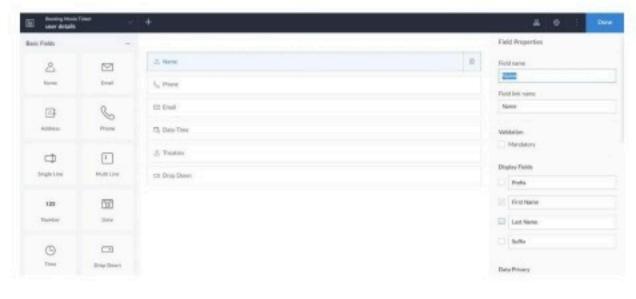
step 2: Log into the zoho.com.

step 3: Select one application step.

step4: Enter application name as library book reservation system.

step 5: Created new application as library book reservation system.

step 6: Select one form



EXP NO 6: CREATE A SIMPLE CLOUD SOFTWARE APPLICATION FOR PRODUCT SELLING USING ANY CLOUD SERVICE PROVIDER TO DEMONSTRATE SAAS.

DATE:

AIM:

To create a simple cloud software application for product selling using any cloud service provider to demonstrate saas.

PROCEDURE:

step1: Go to zoho.com.

step 2: Log into the zoho.com.

step 3: Select one application step.

step4: Enter application name as product selling.

step 5: Created new application as product selling.

step 6: Select one form

EXP NO 2: CREATE A SIMPLE CLOUD SOFTWARE APPLICATION FOR FLIGHT RESERVATION SYSTEM USING ANY CLOUD SERVICE PROVIDER TO DEMONSTRATE SAAS.

DATE:

AIM:

To create a simple cloud software application for flight reservation system using any cloud service provider to demonstrate saas.

PROCEDURE:

step1: Go to zoho.com.

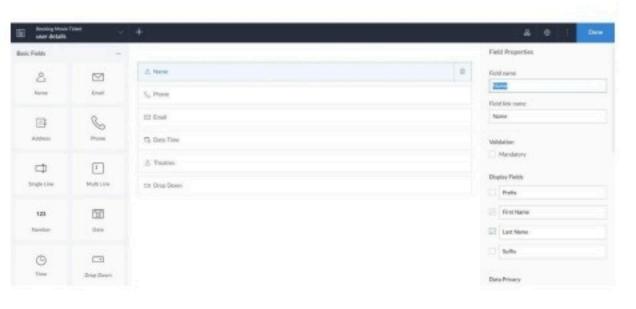
step 2: Log into the zoho.com.

step 3: Select one application step.

step4: Enter application name as flight reservation system.

step 5: Created new application flight reservation system.

step 6: Select one form



EXP NO 3: CREATE A SIMPLE CLOUD SOFTWARE APPLICATION FOR PROPERTY BUYING & RENTAL PROCESS (IN CHENNAI CITY) USING ANY CLOUD SERVICE PROVIDER TO DEMONSTRATE SAAS.

DATE:

AIM:

To Create a simple cloud software application for Property Buying & Rental process (In Chennai city) using any Cloud Service Provider to demonstrate SaaS.

PROCEDURE:

step1: Go to zoho.com.
step 2: Log into the zoho.com.

step 3: Select one application step.

step 5. Select one application step

step 5: Created new application as property buying & rental.

step4: Enter application name as property buying & rental.

step 6: Select one form

EXP NO 4: CREATE A SIMPLE CLOUD SOFTWARE APPLICATION FOR CAR BOOKING RESERVATION SYSTEM USING ANY CLOUD SERVICE PROVIDER TO DEMONSTRATE SAAS.

DATE:

AIM:

To Create a simple cloud software application for Car Booking Reservation System using any Cloud Service Provider to demonstrate SaaS.

PROCEDURE:

step1: Go to zoho.com.

step 2: Log into the zoho.com.

step 3: Select one application step.

step4: Enter application name as Car Booking Reservation System.

step 5: Created new application as Car Booking Reservation System.

step 6: Select one form

EXP NO 1: CREATE A SIMPLE CLOUD SOFTWARE APPLICATION AND PROVIDE IT AS A SERVICE USING ANY CLOUD SERVICE PROVIDER TODEMONSTRATE SOFTWARE AS A SERVICE (SAAS).

DATE:

AIM:

To create a simple cloud software application and provide it as a service using any cloud service provider todemonstrate software as a service (saas).

PROCEDURE:

STEP1: GOTO ZOHO.COM

STEP 2: LOGIN TO THE ZOHO.COM

STEP 3: SELECT ONE APPLICATION

STEP 4: ENTER APPLICATION NAME

STEP 5: CREATED NEW APPLICATION

STEP 6: SELECT ONE FORM

STEP 7: THE SOFTWARE HASE BEEN CREATED.

