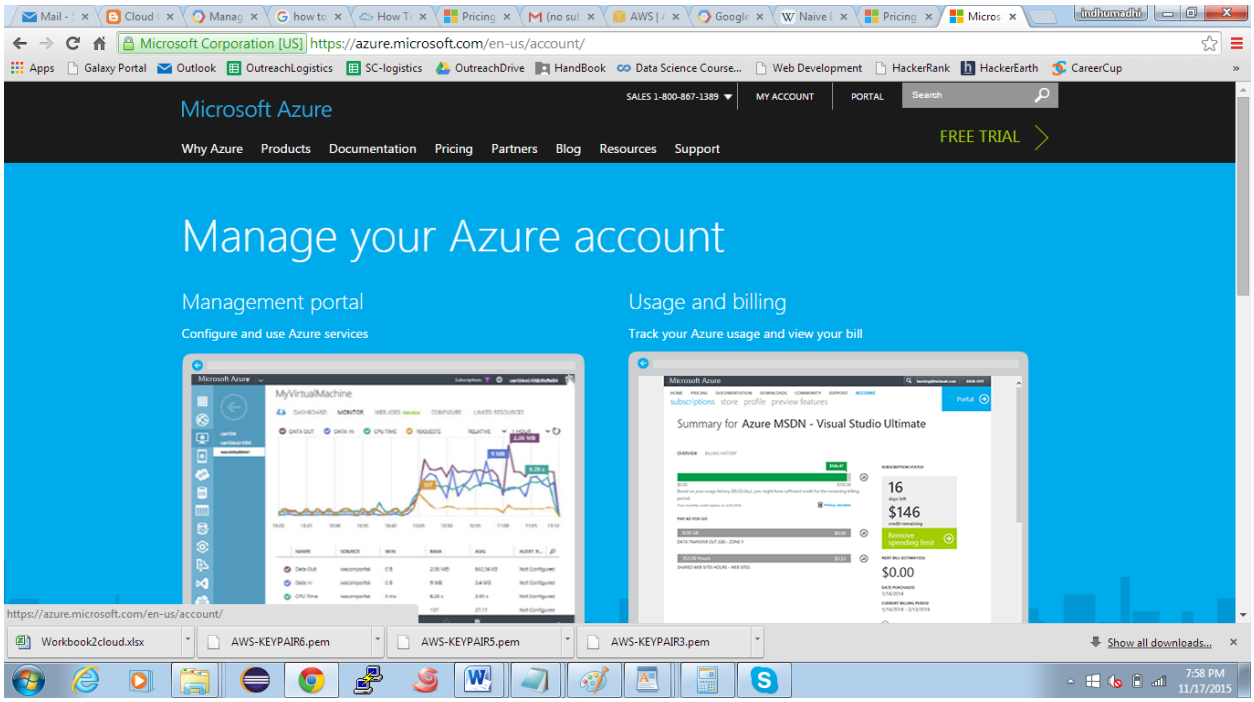
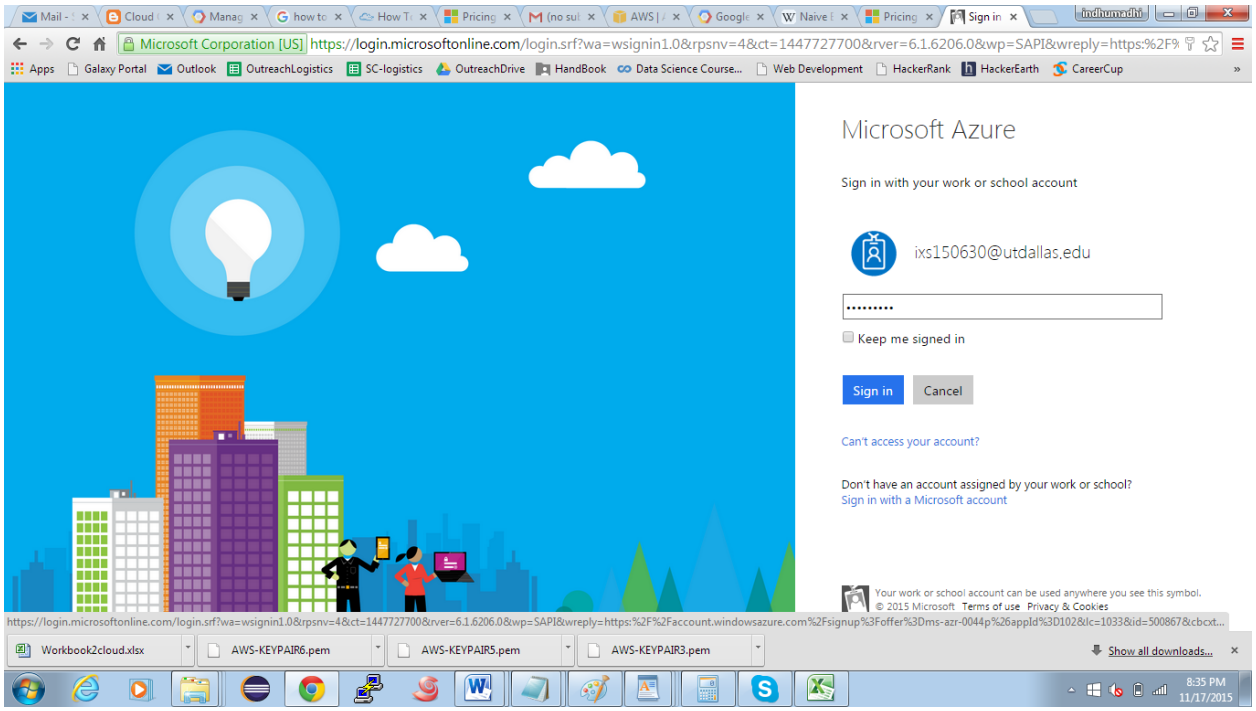
CLOUD PROVIDER USED: MICROSOFT AZURE

YCSB BENCHMARK ANALYSIS BY INDHUMADHI SURYANARAYANAN

1. How to sign up your Cloud provider.

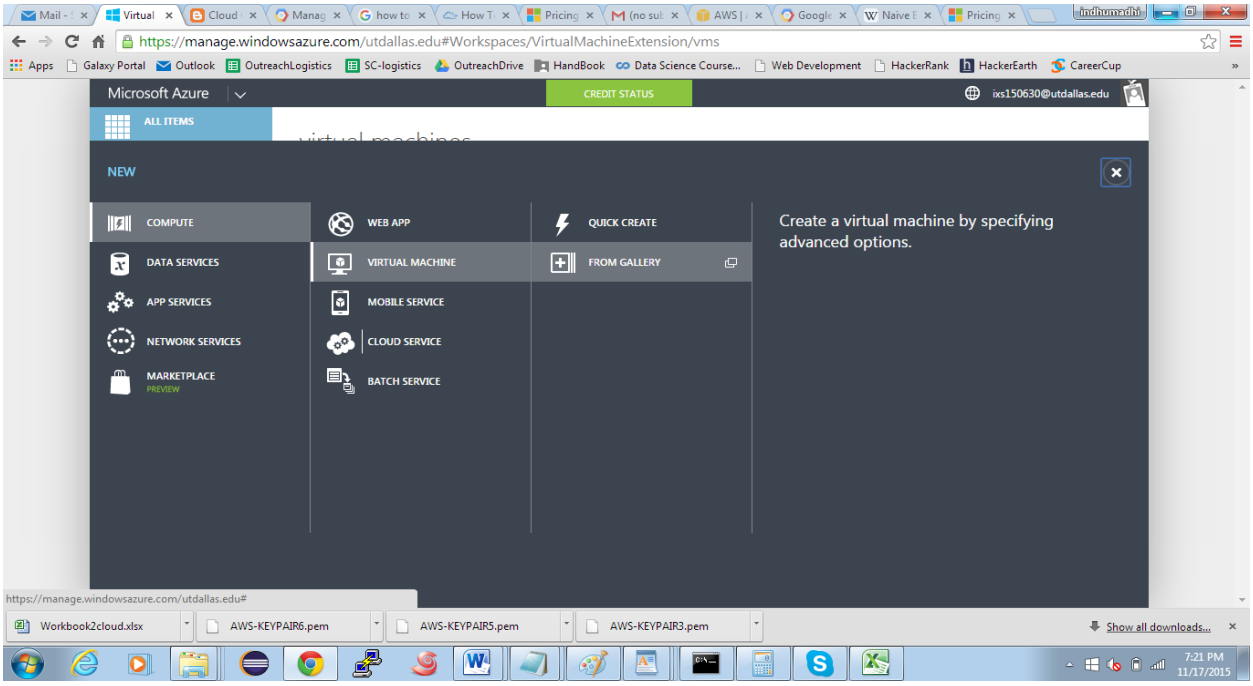
Go to Microsoft Azure link as shown in the figure and click on free trial and sign up using personal information along with giving your account or card details.

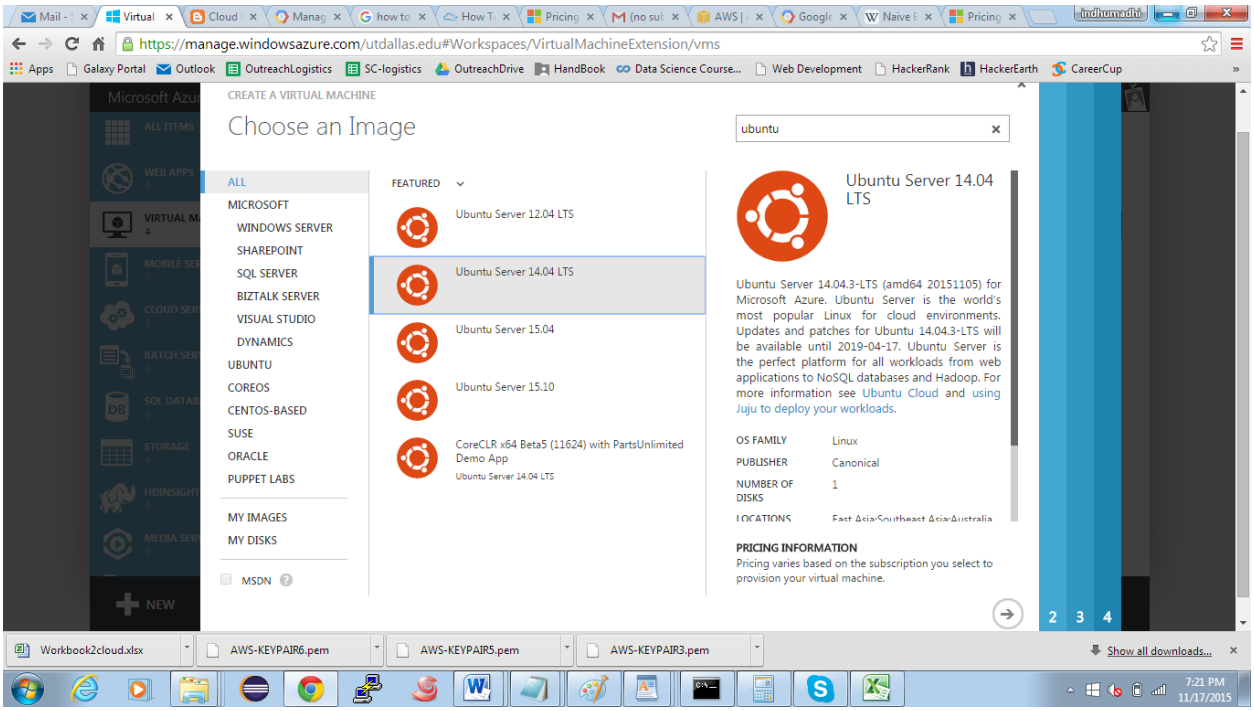


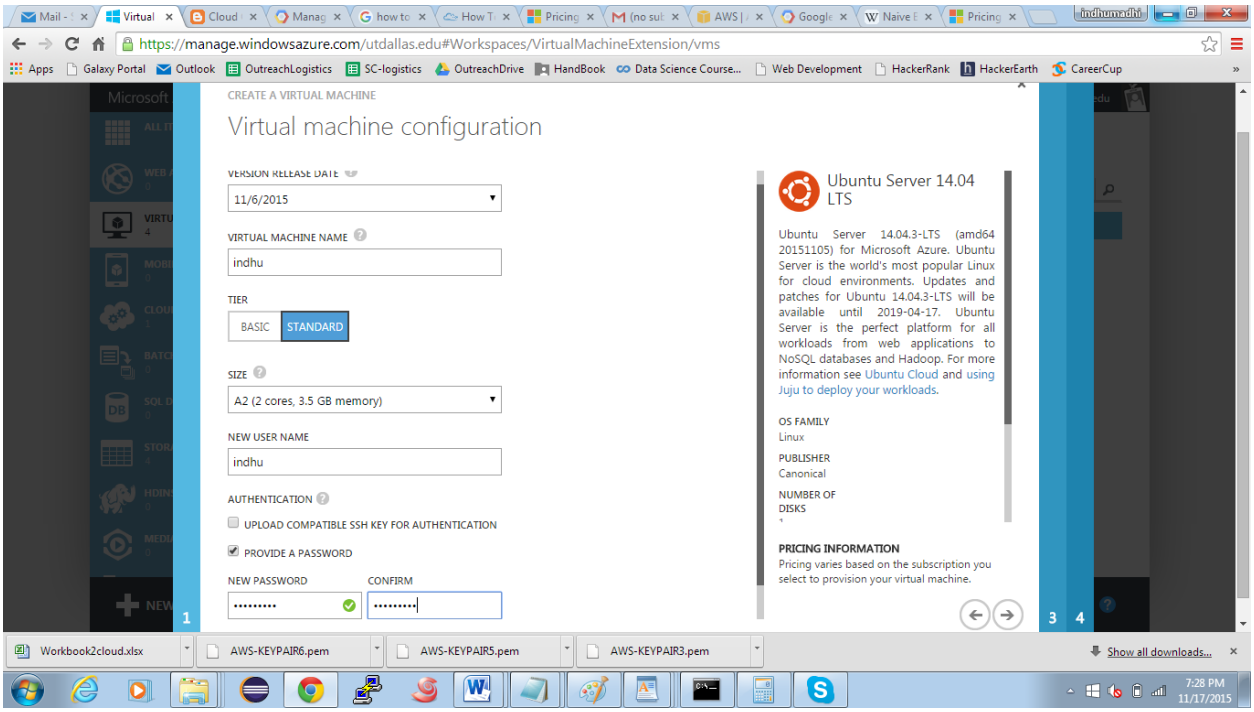


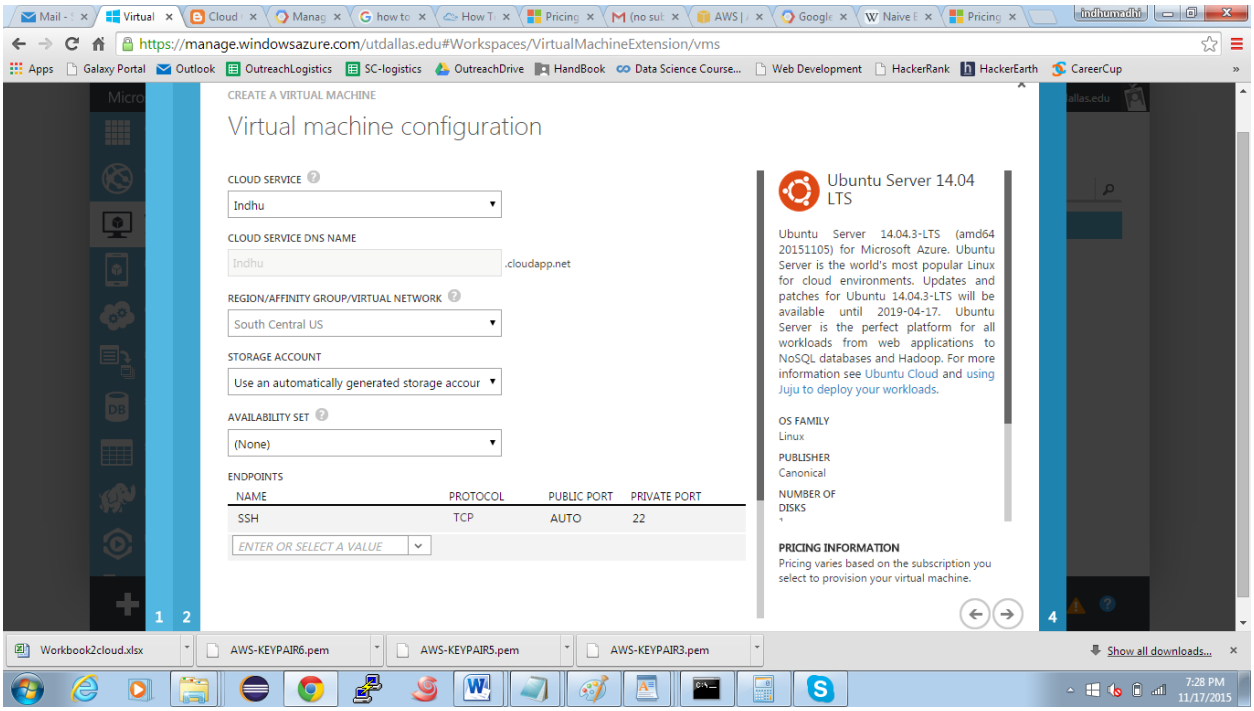
2. How to sign up your Cloud provider.

Given below are the snapshots to create virtual machines, mapping into the same cloud service and creating a separate database for each instance in Microsoft Azure.

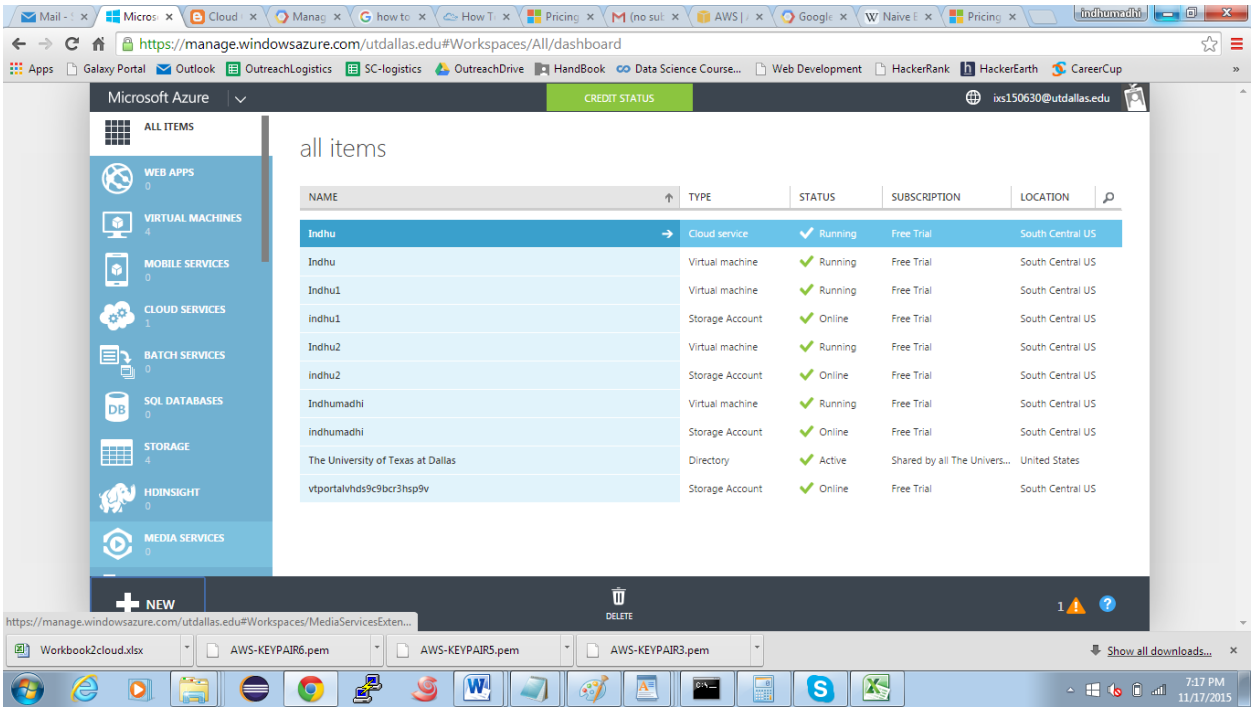



https://manage.windowsazure.com/utdallas.edu#Workspaces/VirtualMachineExtension/vms
CREATE A VIRTUAL MACHINE
Choose an Image
ubuntu
ALL
MICROSOFT
WINDOWS SERVER
SHAREPOINT
SQL SERVER
BIZTALK SERVER
VISUAL STUDIO
DYNAMICS
UBUNTU
COREOS
CENTOS-BASED
SUSE
ORACLE
PUPPET LABS
MY IMAGES
MY DISKS
MSDN
FEATURED
Ubuntu Server 12.04 LTS
Ubuntu Server 14.04 LTS
Ubuntu Server 15.04
Ubuntu Server 15.10
CoreCLR x64 Beta5 (11624) with PartsUnlimited Demo App
Ubuntu Server 14.04 LTS
Ubuntu Server 14.04 LTS
Ubuntu Server 14.04.3-LTS (amd64 20151105) for Microsoft Azure. Ubuntu Server is the world's most popular Linux for cloud environments. Updates and patches for Ubuntu 14.04.3-LTS will be available until 2019-04-17. Ubuntu Server is the perfect platform for all workloads from web applications to NoSQL databases and Hadoop. For more information see Ubuntu Cloud and using Juju to deploy your workloads.
OS FAMILY Linux
PUBLISHER Canonical
NUMBER OF DISKS 1
PRICING INFORMATION
Pricing varies based on the subscription you select to provision your virtual machine.
Workbook2cloud.xlsx
AWS-KEYPAIR6.pem
AWS-KEYPAIR5.pem
AWS-KEYPAIR3.pem
Show all downloads...
7:21 PM
11/17/2015


https://manage.windowsazure.com/utdallas.edu#Workspaces/VirtualMachineExtension/vms
CREATE A VIRTUAL MACHINE
Virtual machine configuration
VERSION RELEASE DATE
11/6/2015
VIRTUAL MACHINE NAME
indhu
TIER
BASIC
STANDARD
SIZE
A2 (2 cores, 3.5 GB memory)
NEW USER NAME
indhu
AUTHENTICATION
UPLOAD COMPATIBLE SSH KEY FOR AUTHENTICATION
PROVIDE A PASSWORD
NEW PASSWORD
CONFIRM
Ubuntu Server 14.04 LTS
Ubuntu Server 14.04.3-LTS (amd64 20151105) for Microsoft Azure. Ubuntu Server is the world's most popular Linux for cloud environments. Updates and patches for Ubuntu 14.04.3-LTS will be available until 2019-04-17. Ubuntu Server is the perfect platform for all workloads from web applications to NoSQL databases and Hadoop. For more information see Ubuntu Cloud and using Juju to deploy your workloads.
OS FAMILY
Linux
PUBLISHER
Canonical
NUMBER OF DISKS
PRICING INFORMATION
Pricing varies based on the subscription you select to provision your virtual machine.
Workbook2cloud.xlsx
AWS-KEYPAIR6.pem
AWS-KEYPAIR5.pem
AWS-KEYPAIR3.pem
Show all downloads...
7:28 PM
11/17/2015



The following in total 4 instances, 4 databases and 1 cloud service was created as shown below.

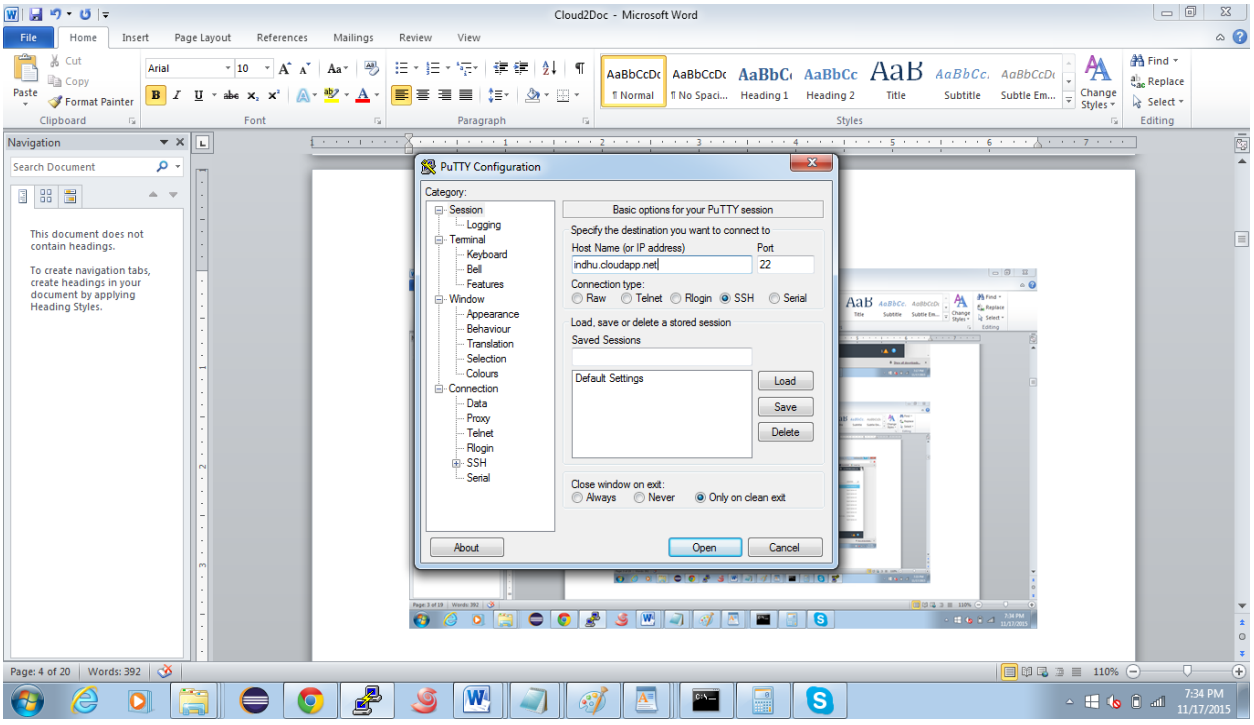


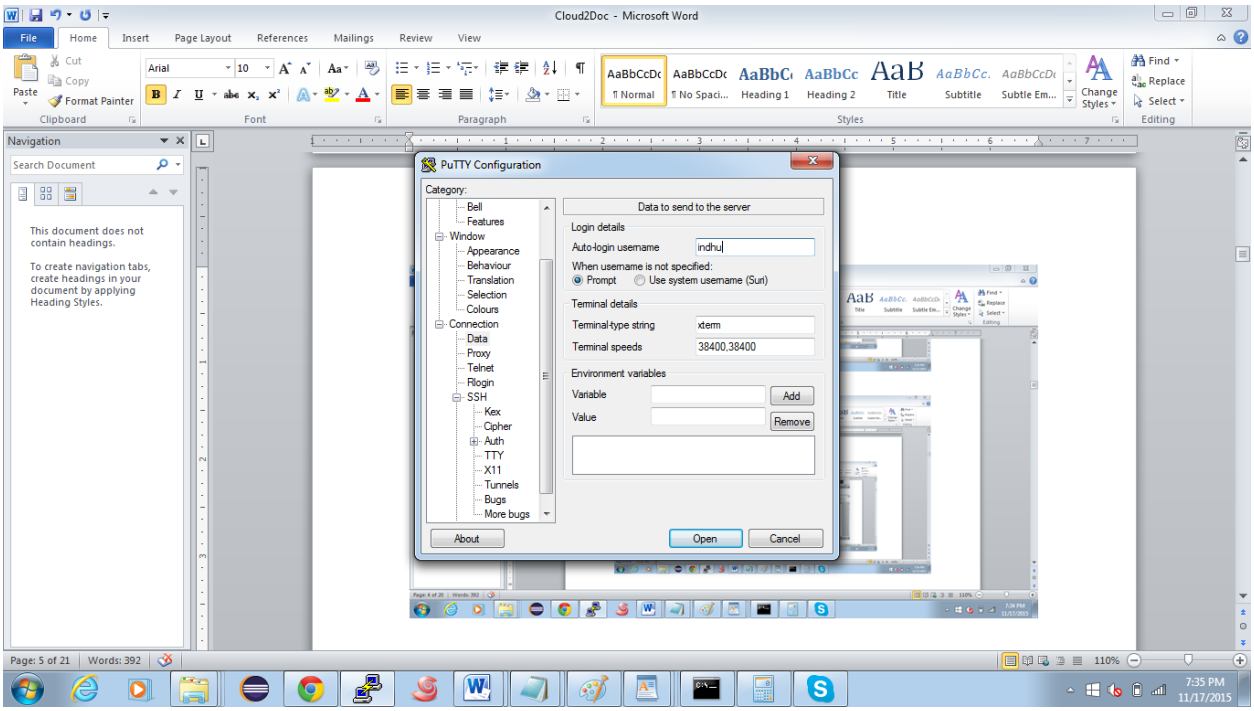
3. VM Instance specification that you have used

Instance	Ubuntu Server 14.04 LTS
Number of cores	2 core
Memory size	3.5 GB
Storage	30 GB
Price	0.12 $

4. How to connect to your instances.

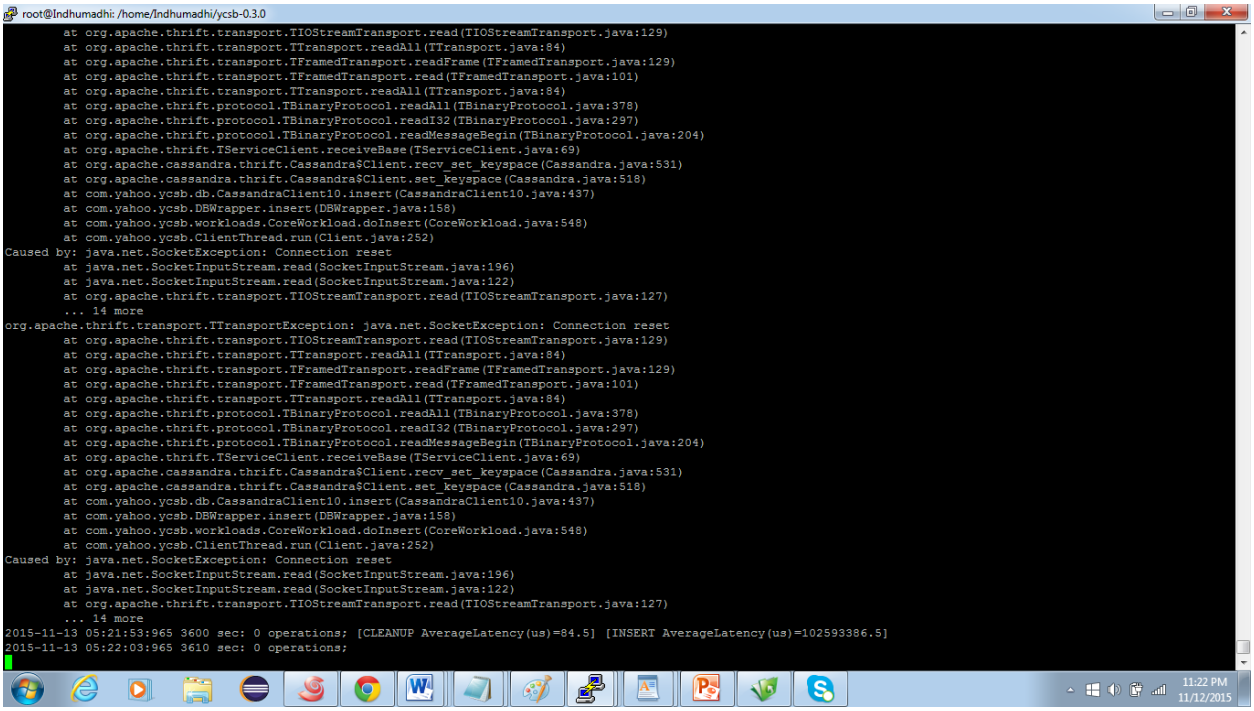
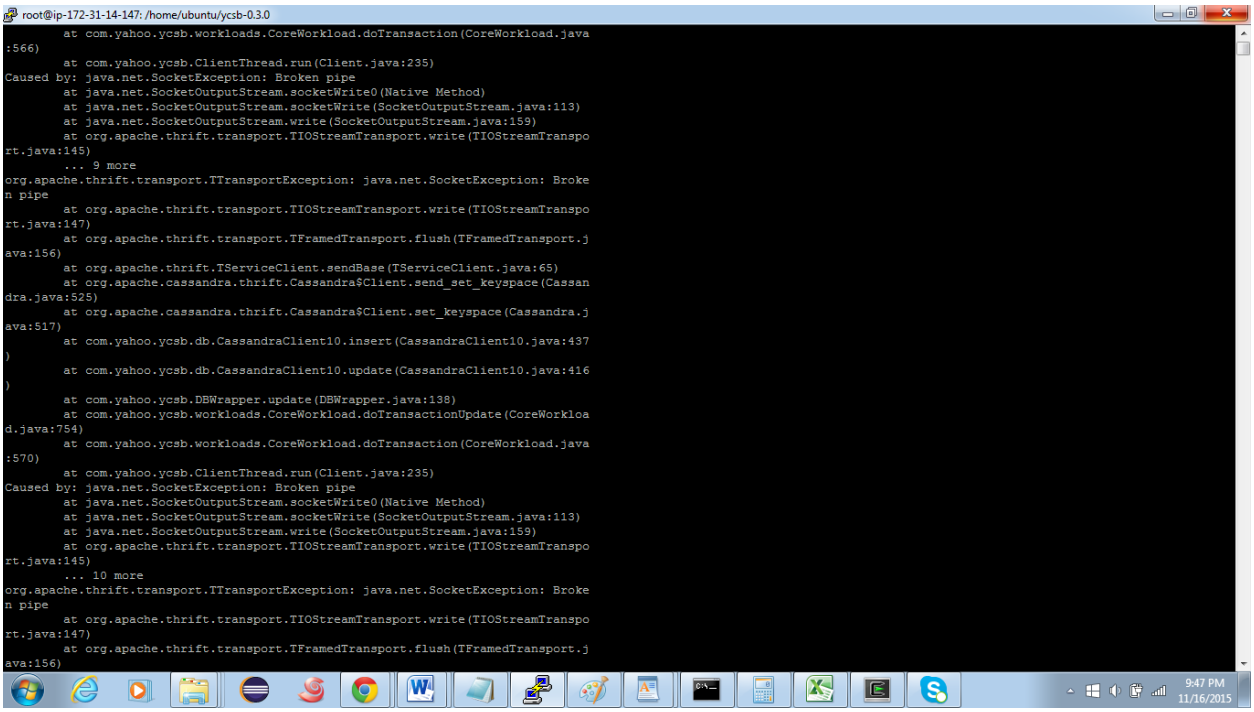
In order to connect to the cloud instance, go to putty and give the details as shown below in the figures and provide the passwords in the putty command prompt.





5. Issues you have met and solutions

The exceptions such as Java.net.Socket Exception, Broken Pipe Exception, DBException-out of storage capacity etc were encountered.

- **For SocketException, rebooting the instance and running the ycsb multiple times solved the problem.**
- **For BrokenPipe problem, the network was disconnected and connected again to solve the problem.**
- **For DBException-out of storage problem, the data Folder into the Cassandra Directory was removed and again the ycsb was able to run successfully. Also, in cqlsh, the usertable.data record was dropped and created again for successful run.**

Please find below some of the screenshot of issues faced.