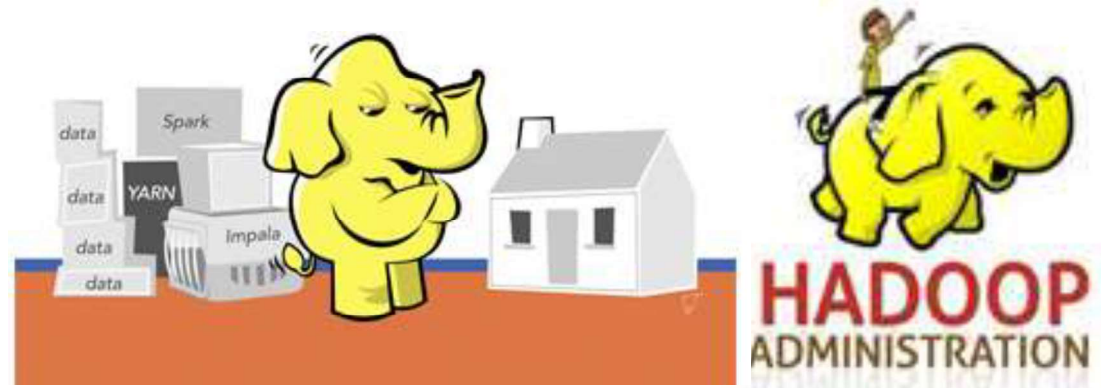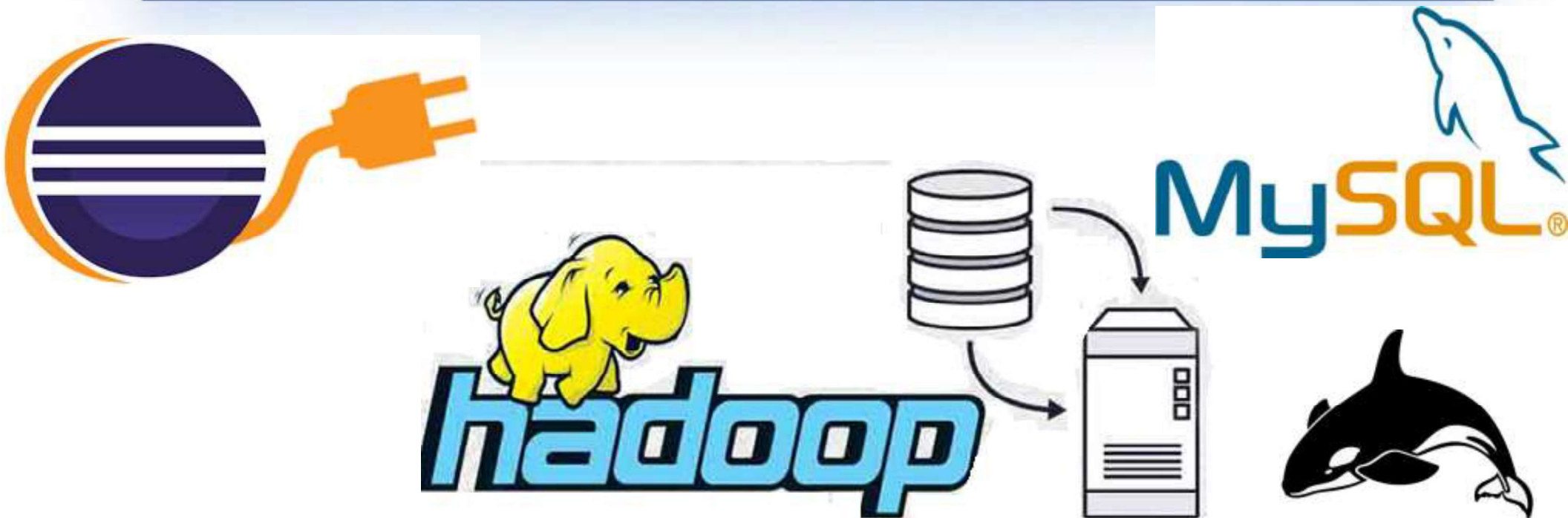# National Institute of Electronics and Information Technology

## Big Data and Hadoop
## Module 2-Installation of Hadoop & MySQL

# Step 1 – Install Java

1. Before starting, it is recommended to update your system packages to the latest version. You can do it with the following command:

```
apt-get update -y
apt-get upgrade -y
```

2. Once your system is updated, restart it to implement the changes.

3. Apache Hadoop is a Java-based application. You shall **install Java 8 only** presently as there are **compatibility issues with other versions**. Use following commands:

```
$ sudo apt-get install openjdk-8-jdk
```

```
$ sudo apt-get install openjdk-8-jre
```

4. Once installed, you can verify the installed version of Java with the following command:

```
java -version
```

5. You should get the following output:

```
openjdk version "1.8.0_252"
OpenJDK Runtime Environment (build 1.8.0_252-8u252-b09-1ubuntu1-b09)
OpenJDK 64-Bit Server VM (build 25.252-b09, mixed mode)
```

1. First, create a new user named hadoop with the following command:

```
adduser  hadoop
```

2. Next, add the hadoop user to the sudo group

**usermod -aG sudo hadoop**

3. Next, login with hadoop user and generate an SSH key pair with the following command:

```
su - hadoop
ssh-keygen -t rsa
```

4. You should get the following output:

```
Generating public/private rsa key pair.
Enter file in which to save the key (/home/hadoop/.ssh/id_rsa):
Created directory '/home/hadoop/.ssh'.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/hadoop/.ssh/id_rsa
Your public key has been saved in /home/hadoop/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:HG2K6x1aCGuJMqRKJb+GKIDRdKCd8LXnGsB7WSxApno hadoop@ubuntu2004
The key's randomart image is:
+---[RSA 3072]----+
|..=..            |
| O.+.o    .      |
|oo*.o + . o      |
|o .o * o +       |
|o+E.= o S        |
|=.+o * o         |
|*.o.= o o        |
|=+ o.. + .       |
|o ..  o .        |
+----[SHA256]-----+
```

3.   Next, add this key to the Authorized ssh keys and give proper permission:

```
cat ~/.ssh/id_rsa.pub >> ~/.ssh/authorized_keys
chmod 0600 ~/.ssh/authorized_keys
```

4. Next, verify the passwordless SSH with the following command:

```
ssh localhost
```

**Ubuntu Server problem <span style="color:red">ssh: connect to host port 22: Connection refused</span>**

**ssh: connect to host localhost port 22: Connection refused**

**<u>Solution:</u> Run following commands**

**$ sudo apt install ssh**

**$ sudo apt install openssh-server**