**Ramaiah Institute of Technology**

**(Autonomous Institute, Affiliated to VTU)**

**Dept of Computer Science and Engineering**

**Course Code: Cloud Computing Lab, Course Code: MCSL23/MCNL23**

1. Configure and launch an EC2 Linux Instance with VPC, Subnet, Internet Gateway, Security group
2. Create a backup of above instance and demonstrate how to launch an instance using an image.
3. Login to Linux EC2 Instance and run a simple PHP Student Information form on Linux machine.
4. Create storage space using S3 Bucket and Demonstrate upload, delete the content from S3 Bucket.
5. Demonstrate Elastic IP concepts in AWS Cloud.
6. Demonstrate installation of WordPress applications.
7. Demonstrate the following with RDS in Amazon Web Services.
   1. create the following tables and Write the following queries

Aircraft (aid: integer, aname: string, cruisingrange: integer)

Certified (eid: integer, aid: integer)

Employees (eid: integer, ename: string, salary: integer)

Write the following queries:

1. Retrieve the eids of pilots certified for some Boeing aircraft.

ii. Retrieve the all certified employees.

1. Demonstrate the Load Balancer in AWS.
2. Demonstrate the following with RDS in Amazon Web Services. Consider the following relational schema.

Emp(eid: integer, ename: string, age: integer, salary: real)

Dept(did: integer, dname: string, budget: real, managerid: integer)

Write the following queries:

1. Print the names and ages of each employee who works in both the Hardware department and the Software department.

ii. Print the department ID “ did” together with the number of employees that work in that department.

1. Demonstrate the following with RDS in Amazon Web Services.
   1. Consider the following relational schema.

Student(snum: integer, sname: string, major: string, level: string, fid: integer) Faculty(fid: integer, fname: string, deptid: integer)

Retrieve all the students who are registered under sj.

Retrive all the faculty who are working in deptid is 10

1. Connecting from EC2 instance to the RDS server in AWS.
2. Demonstrate the following with RDS in Amazon Web Services.
   1. Consider the following schema:

Suppliers(sid: integer, sname: string, address: string)

Parts(pid: integer, pname: string, color: string)

Write the following queries

1. Retrieve the names of suppliers who supply some red part.

ii. Retrieve the sids of suppliers who supply some red or green part.

1. Demonstrating dynamo db database services offered by AWS.
2. Demonstrate the following with RDS in Amazon Web Services

a.Consider the following:

ITEM(Item#, Unit\_price)

SHIPMENT(Order#, Warehouse#, Ship\_date)

Write the following queries in EC2 instance

1. List the Order# and Ship\_date for all orders

ii. List the Item#

1. Demonstrate the usage of Elastic Block Service (EBS) with the EC2 instance
2. Demonstrate RDS in Amazon Web Services using PHP that reads and displays all the parameters from HTML sent with a request
3. Demonstrate project in AWS which is developed using the technology PHP and MySql.

**Software Requirements:**

Eclipse Java EE IDE for Web Developers -> Version: Oxygen.3a Release (4.7.3a)

AWS tool kit -> Version: latest

jar files -> servlet-api.jar, ojdbc14.jar

putty Gen - key generator for putty -> Version: 0.70

MySQL Workbench -> Version: 6.3

Cloud Foundry (cf cli) -> Version: latest