BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI
WORK INTEGRATED LEARNING PROGRAMMES

Cloud Computing (CSI ZG527 / SS ZG527 / SE ZG527)
Second Semester 2021-2022
Assignment

(Total Marks: 5)

Each student is required to do this assignment. **The deadline for this assignment submission is May 08, 2022.** There are three questions in total. This assignment aims to get every student to understand the concepts of Connecting to instances, the development of a simple web application using any one of the cloud computing's **PaaS (Platform as a Service)** models, and solving a word count problem using the **MapReduce programming** model. Each of the questions is provided below:

1. Create a VM on either Google Cloud Platform (GCP)'s Compute or Amazon Web Service (AWS)'s EC2 and do shell login to this VM from your system's terminal or console.

   [1 Mark]

2. Develop and deploy a simple web application-based login form using either Google App Engine or Microsoft Azure or AWS (Amazon Web Service) Elastic Beanstalk. This application should accept the username and password and then display a message "Login Successfully" after successful validation. Otherwise, display "Login failed due to incorrect username and password". This application can be implemented using any programming language of your choice (HTML with Python, Java, etc.).   [2 Marks]

3. Write a MapReduce-based program to display/generate a word count for each unique keyword of any given text document. This program can be implemented either locally on your system or on a virtual machine created using AWS EC2 or Google Cloud Platform's Compute Engine.   [2 Marks]

Submission Instructions:
- Create one main folder that contains three subfolders, which represent the above three questions respectively. Each of the sub-folders should contain the source code, one MS word document capturing the screenshots of the outputs and the observations if any. Each subfolder (if necessary) should also contain a read file specifying instructions to compile and run and shall also specify which program to run first in order to see the expected output from your programs. **Note:** Source code is not applicable for question 1.
- The main folder must contain **one main word file** that must include the **student name, roll no, and email id of each student.**
- Zip the main folder and upload the zip file on BITS elearn portal (https://taxila-aws.bits-pilani.ac.in/) by **May 8, 2022 23.59 pm**

Note: This assignment will be evaluated purely based on the output screenshots and the descriptive information that you provide for each of the given questions. Hence, you are expected to provide more detailed information explaining how you got the outputs for each question in a corresponding word document file.