CI S457/5517 HW3

1. (10 pts) Explain under-provisioning and over-provisioning in traditional datacenters. How does a cloud provide elastic computing?
2. (10 pts) Compare Amazon AWS, Google cloud, and Microsoft Azure cloud in terms of services they provide.
3. (10 pts) How do Amazon AWS and Google Cloud achieve auto-scaling?
4. (10 pts) Explain REST protocol and the operations it provides.
5. (10 pts) How are buckets and containers used in Amazon and Azure clouds?
6. (10 pts) What’s the difference between web and worker roles in Azure cloud?
7. (10 pts) What’s the difference between full virtualization and para-virtualization?
8. (30 points) Using the EC2 you created in HW2, write a program to test whether a given year is a leap year or not and run this program on your EC2. Display your results on the webserver you created in HW2 in the following format for years 1996, 2000, 2006, 2023, and 2024:

“Year xxxx is a leap year” or

“Year xxxx is not a leap year.”

Submit your code, a screenshot to show that you run your code on your EC2 (not your local machine), and a screenshot of the display of the results on your web server.