PG Latihan UTS

1. You want to migrate data from your old database to the cloud. You **do not want** to **manage** the **underlying architecture** or the database application. Which cloud service type should you choose?
   Saas

2. You want to **deploy** and **manage** an **API** using **Cloud Endpoints**. Which application management tasks will Cloud Endpoints help you with?
   Interface definition

3. **Compute Engine** pricing is based on a **daily rate** for the instance.
   False

4. You can use **existing SQL** skills to **query** data in **Cloud Spanner**.
   True

5. You **want** to **edit** the **code** of a sample application from within your Cloud Shell environment. You **do not want** to **launch** a **text based editor** from the Cloud Shell prompt. What tool can you utilize to achieve this?
   The Cloud Shell code editor

6. [LAB - Creating a Virtual Machine] You want to create a virtual machine running the latest version of the SUSE Linux Enterprise Server operating system. **Which** option in the **Google Cloud console** should you **modify** when **creating** the **virtual machine?**
   Boot disk

7. **None** of the pre-defined instance **types fit your application**. What do you do?
   Create a custom virtual machine that fits your needs

8. What is the **largest object** that you can **store** in **Cloud Storage**?
   5 TB

9. Which of the following is the protocol **used by REST APIs**?
   HTTPS

10. You have to implement a solution that allows the Human Resources (HR) system to **reliably notify other departmental** services that a new employee has been hired **without** having to **directly** connect your application **to** all of the **other services**. What Google service should you use?
Pub/Sub

11. What best describes the **purpose** of **quotas**?
Configuration used to prevent billing surprises

12. What is the **purpose** of a **folder**?
Used to organize projects

13. Time-to-market is highly valuable to you and you want to be able to focus on **writing code without** ever having to **touch** a **server**, **cluster**, or **infrastructure**. Which service suits your needs?
App Engine

14. [User Authentication: Identity-Aware Proxy] You are **configuring** the **Identity-Aware Proxy** using the Google Cloud console. This is the **first time** you have **enabled** an **authentication** option for this project. What action must you take?
Configure the OAuth consent screen.

15. There are a number of **best practices** that should be **applied** to **identity** and **access management**. Which of the following does Google recommend?
Use the "principle of least privilege" when distributing permissions

16. [LAB - App Engine: Qwik Start - Python] You are testing an application that you are developing for deployment on Google App Engine locally using the Google Cloud development server (dev_appserver.py). You make a change to the welcome message that is displayed in your application's main.py file and save it. **What action** must you now take in order **to view the change**?
Reload your web browser

17. You need a **fully managed NoSQL** database solution for large-scale, low-latency data analytic applications. The **database** must be able to **scale** to **hundreds** of **petabytes**. Which solution should you deploy?
Cloud Bigtable

18. **Managing** Google **Cloud users** through **Google Groups allows** an **administrator** to **manage team identities** centrally.
    False

19. Google Cloud provides resources in multi-regions, regions, and zones. What best **describes** a **zone**?
    One or more data centers

20. You are looking for a **managed API service** to **provide** an **API frontend** to your legacy systems. Which of these services would meet your needs?
    Apigee API Management

21. Projects form part of the Google Cloud resources hierarchy. Which of the following is **true concerning projects**?
    All resources must be associated with a project

22. You want to **map users** and **groups from** your **Microsoft** Active Directory domain **to** a **Cloud Identity** domain. What action should you take to achieve this?
    Sync users and groups using Cloud Directory Sync

23. **Admin** is an example of a **basic role**?
    False

24. How would you **configure** the **Cloud SDK** to work on your laptop?
    Run the gcloud init command

25. You **require** a fully managed **NoSQL** database **to store user profile** information for your application. Which solution should you deploy?
    Datastore

26. **Cloud Bigtable provides** a **NoSQL** based managed service option. Which one of the following is a **valid use case** for this service?
    A backend for an Internet of Things (IoT) system

27. In what **format** will a majority of the **APIs return data** in?
    JSON

28. You have changed the name of your project. You **want** to **change** the **name** of the project ID as well, but are **not able** to do so. Why is this?
    The project ID and project number are fixed.

29. You want to **automatically shutdown** resources in a project **if** the **budget exceeds** a specified amount. What actions can you take to accomplish this?
    Define an alert at the billing account level.

30. What are the types of **message delivery** supported with **Pub/Sub**?
    Pushed/Pull

31. You are onboarding a new co-worker. You want them to familiarize themselves with Google Cloud but **not start** any **resources** which could **incur** a **cost**. What action can you take?
    Create a project that does not link to a billing account

32. You have non-relational data and **want** a **serverless database without** having to **worry** about **nodes** or **cluster management**. Which service would best suit your needs?
    Datastore

33. [LAB - Cloud Storage: Qwik Start - CLI/SDK] You have executed the command 'gsutil acl ch -u AllUsers:R gs://bucket1/ada.jpg' in Cloud Shell to make the file available to anyone. What **visual indicator** in the Storage section of the Google Cloud console **allows** you to **verify** that the **permission level has** been **set**?
    You see AllUsers under permissions

Essay Latihan UTS

1. Jelaskan minimal 2 manfaat penggunaan sand box dalam pengembangkan aplikasi di lingkungan cloud platform! Berikan contoh untuk setiap manfaat yang anda jelaskan!

   a. **Pengujian yang aman dan terisolasi**.
   Manfaat = mengurangi risiko gangguan, developer dapat mengidentifikasi dan memperbaiki masalah sebelum dirilis.
   Contoh = sebelum fitur dirilis ke produksi, developer dapat menguji fiturnya terlebih dahulu di sandbox, sehingga tidak mengganggu sistem atau infrastruktur yang lain.

   b. **Untuk belajar dan eksperimen**.
   Manfaat = dapat beradaptasi, mendorong inovasi, meningkatkan skill.
   Contoh = developer dapat belajar dan bereksperimen dengan teknologi atau arsitektur baru di sandbox untuk mencegah merusak sistem yang sudah ada

   c. **Pengembangan yang cepat dan fleksibel**.
   Manfaat = meningkatkan produktivitas, mengurangi biaya.
   Contoh = developer dapat dengan mudah membuat dan menghapus instance sandbox. Mencoba berbagai konfigurasi dan teknologi baru tanpa risiko besar

   d. **Simulasi lingkungan produksi**.
   Manfaat = meningkatkan percaya diri, mengurangi risiko gagal.
   Contoh = Sandbox dikonfigurasi untuk simulasi lingkungan produksi yang lengkap, termasuk beban kerja, lalu lintas, dan ketersediaan resources

2. Jelaskan minimal 2 cara berbagi pakai layanan/ data antar aplikasi pada lingkungan GCP! Berikan contoh untuk setiap cara yang anda jelaskan!

    a. **Cloud Storage**.

       Cara = membuat bucket, memberikan izin access, mengakses data.

       Contoh = aplikasi web dan mobile simpan gambar produk di Cloud Storage, sistem rekomendasi ngumpulin data user dan simpan di Cloud Storage

    b. **Cloud SQL**.

       Cara = membuat database, memberikan izin access, mengakses data.

       Contoh = E-commerce berbagi data produk, customer, pesanan melalui database Cloud SQL

    c. **Cloud Pub/Sub.**

       Cara = publisher kirim data ke topik Pub/Sub, subscriber subscribe topik tersebut dan menerima data.

       Contoh = HR memberitahu pengumuman melalui Pub/Sub dan semua yang subscribe menerima pengumuman tersebut

    d. **Cloud BigQuery.**

       Cara = app upload dataset ke BigQuery, app lain akses dataset pake SQL untuk melakukan query atau analisis.

       Contoh = app analitik web simpan log activity di BigQuery. Marketing dan data scientist mengakses data yang sama di BigQuery dan analisis tren atau kampanye pemasaran

Kuis Modul 1. So, What's the Cloud Anyway?

1. Where are **Google Cloud resources deployed**?
   Zone

2. Which is a **fundamental attribute** of **cloud computing**?
   Customers get access to computing resources over the internet, from anywhere.

3. What is the **fully automated**, **elastic third-wave** cloud that **consists** of a **combination** of **automated services** and **scalable** data?
   Container-based architecture

4. Which service **provides raw compute, storage, and network capabilities, organized virtually** into resources that are similar to physical data centers?
   IaaS

Kuis Modul 2. Start with A Platform

1. What is the **purpose** of **APIs** offered by various Google Cloud services?
   APIs allow code to be written to control Google Cloud services.

2. **Which** project **identifier** does **not** need to be globally **unique**?
   Project name

3. Which **command line tool** is part of the Cloud SDK?
   gsutil

4. In the Google Cloud resource hierarchy, into **which entity** are **resources organized**?
   Projects

5. Which billing tool is **designed to prevent** the **over-consumption** of resources due to an error or a malicious attack?
   Quotas

Kuis Modul 3. Use Google Cloud to Build Your Apps

1. Which of these is a managed compute platform that lets you **run stateless containers** through web requests or Pub/Sub events?
   Cloud Run

2. Which of these is a **lightweight**, **fully managed serverless** execution environment for building and connecting cloud services?
   Cloud Functions

3. Which **compute service** would be **considered IaaS**?
   Compute Engine

4. Which of these is a managed environment for **deploying containerized apps**?
   Google Kubernetes Engine

5. What is the Compute Engine feature that **allows VMs to be added** to or **subtracted** from an **application** based on load metrics?
   Autoscaling

6. Which App Engine environment is **based** on **preconfigured container instances**?
   Standard environment

Kuis Modul 4. Where do I Store This Stuff?

1. Which **storage service** is best suited to **unstructured data**?
   Cloud Storage

2. You are looking for an **unstructured storage** solution **for archiving files** that might **never** be **accessed** again. Which Cloud Storage class is the best option?
   Archive Storage

3. Google Cloud offers **two managed relational database services**. What are they?
   Cloud SQL, Cloud Spanner

4. Which storage solution is a **petabyte** scale, NoSQL database?
   Bigtable

Kuis Modul 5. There's An API for That

1. Which statement about Pub/Sub is true?
   Pub/Sub's APIs are open

2. Which platform for developing and managing API proxies has a specific focus on **business** problems, like **rate limiting, quotas**, and **analytics**?
   Apigee API Management

3. Which API management system **supports applications running** in **App Engine, Google Kubernetes Engine,** and **Compute Engine**?
   Cloud Endpoints

4. What does API stand for?
   Application Programming Interface

Kuis Modul 6. You Can't Secure the Cloud, Right?

1. When a customer **moves** an **application to Google Cloud**, which one of the following does the **customer remain responsible** for?
   Data Security

2. Which **IAM role** is the **most broad** in scope?
   Basic

3. At which **level** of Google Cloud's infrastructure security will you find **intrusion detection**?
   The operational security level

4. With **which encryption** option does a customer encrypt data **before sending** it to **Google Cloud**?
   Client-side encryption