ST10447819

CLDV6211

GitHub Link: https://github.com/IIEMSA/part-1-poe-Muthambi-Mbulungeni.git

What is an ERD?

An Entity-Relationship Diagram (ERD) is a visual representation of entities (such as tables) and the relationships between them in a database (Coronel & Morris, 2016). It helps developers and stakeholders understand how data is structured and connected.

Explain the difference between deploying on-premises and in the cloud:

On-Premises Deployment:

- The company owns and manages all the hardware (servers, networking, storage).
- Everything is hosted locally in a physical location (like in a company's server room).
- The IT team is responsible for setup, maintenance, backups, and security.
- Requires a lot of up-front cost (hardware, software licenses, etc).
- Provides more control, but also more responsibility (Microsoft, 2023a).

Cloud Deployment:

- The application runs on remote servers hosted by a cloud provider like Microsoft Azure.
- You don't have to worry about physical servers or infrastructure.
- You pay as you go—based on the resources you use (e.g., CPU, storage).
- The cloud provider handles most maintenance, scaling, and backups.
- It's faster to deploy, easier to scale, and more flexible (Microsoft, 2023a; Mell & Grance, 2011).

2. Identify key differences between Azure hosting models:

Azure offers different hosting models depending on how much control or management you want:

IaaS (Infrastructure as a Service):

- Example: Azure Virtual Machines
- You manage the OS, software, and apps.
- Azure provides the hardware and networking.
- Most flexible, but more setup needed (Microsoft, 2023b).

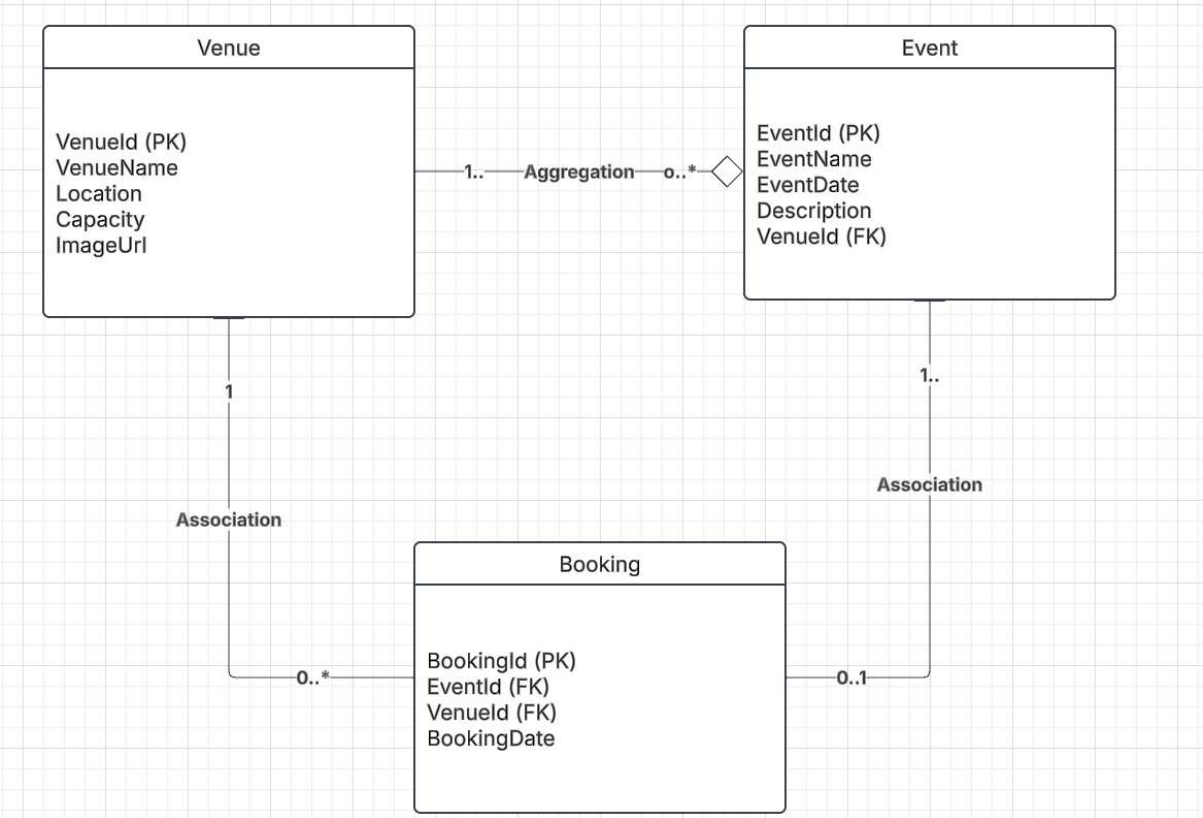
PaaS (Platform as a Service):

- Example: Azure App Service (used for hosting your ASP.NET MVC app)
- Azure manages most things: OS, updates, and runtime.
- You just deploy your app.
- Faster to develop and maintain (Microsoft, 2023b).

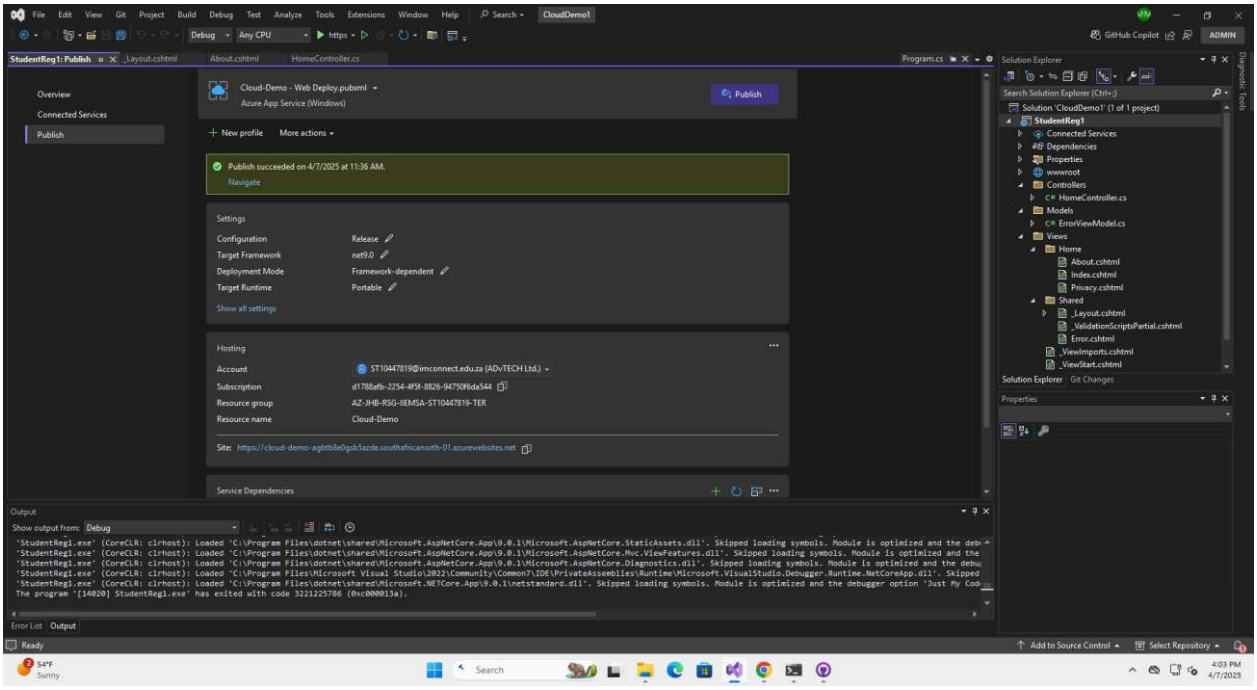
SaaS (Software as a Service):

- Example: Office 365, Outlook
- Fully managed by Microsoft.
- You just use the software through a browser or app (Microsoft, 2023b).

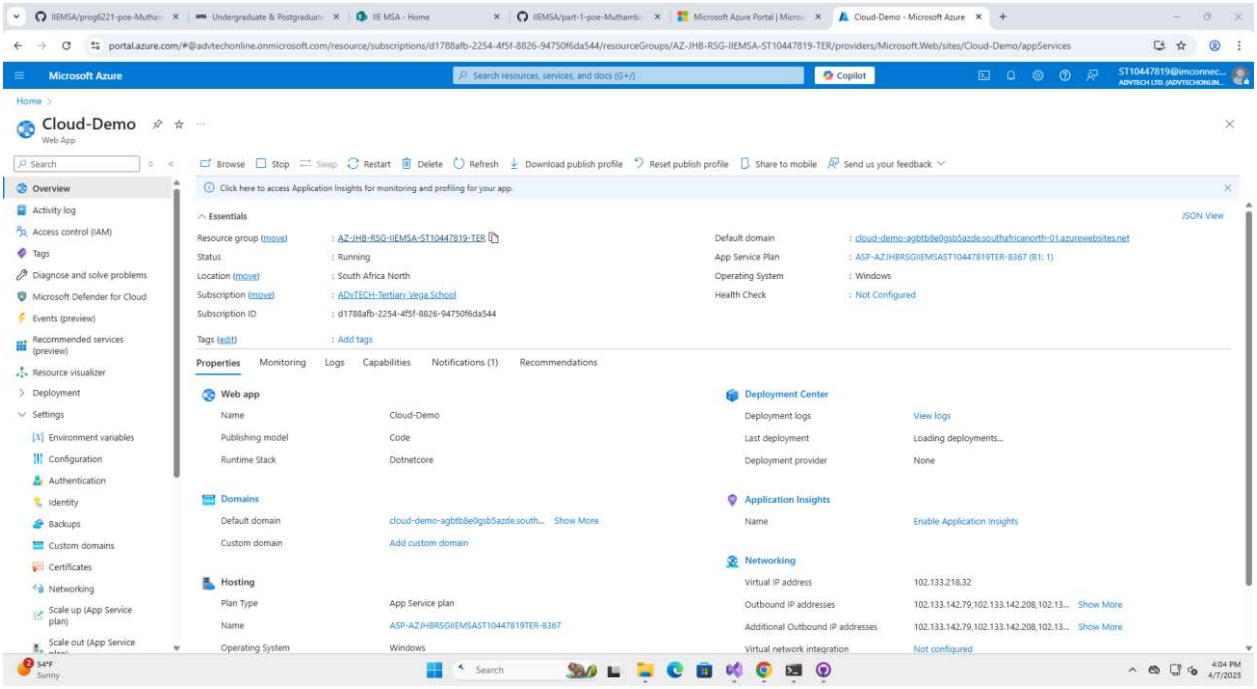
ERD Diagram


Venue
VenueId (PK)
VenueName
Location
Capacity
ImageUrl
1..
Aggregation
o..*
Event
EventId (PK)
EventName
EventDate
Description
VenueId (FK)
1
Association
0..*
1..
Association
0..1
Booking
BookingId (PK)
EventId (FK)
VenueId (FK)
BookingDate

Screenshot for StudentReg1-Figure-1:

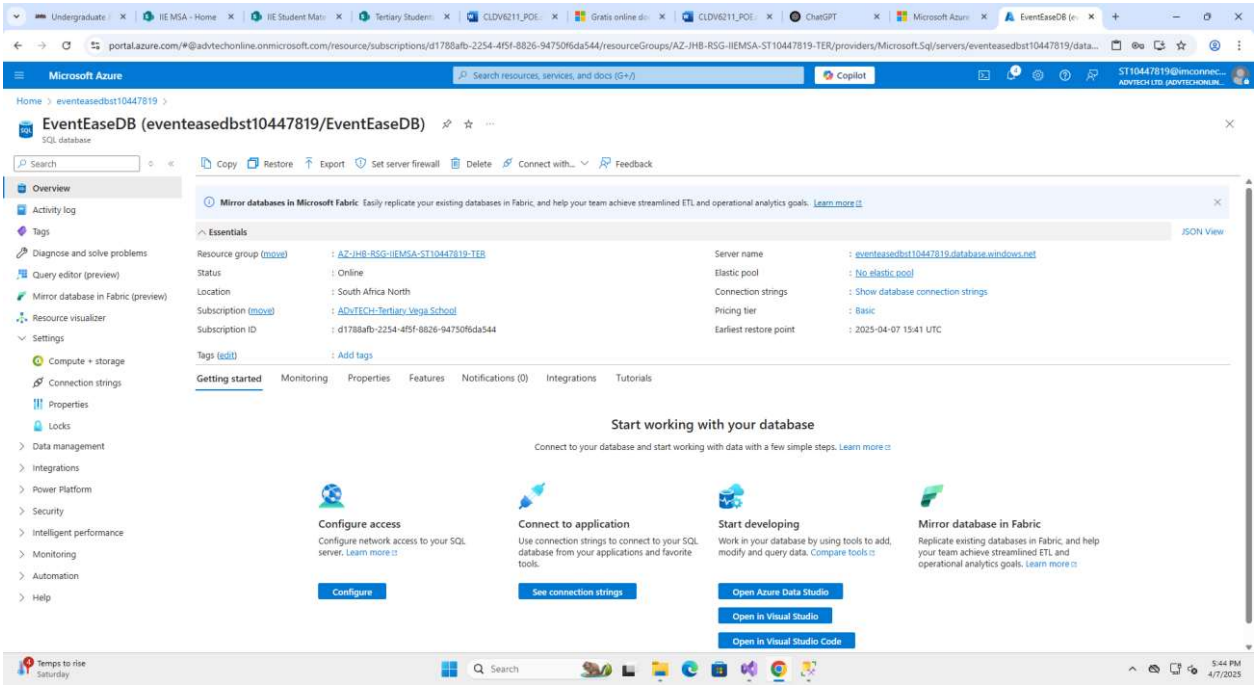


Screenshot for StudentReg1-Figure-2:



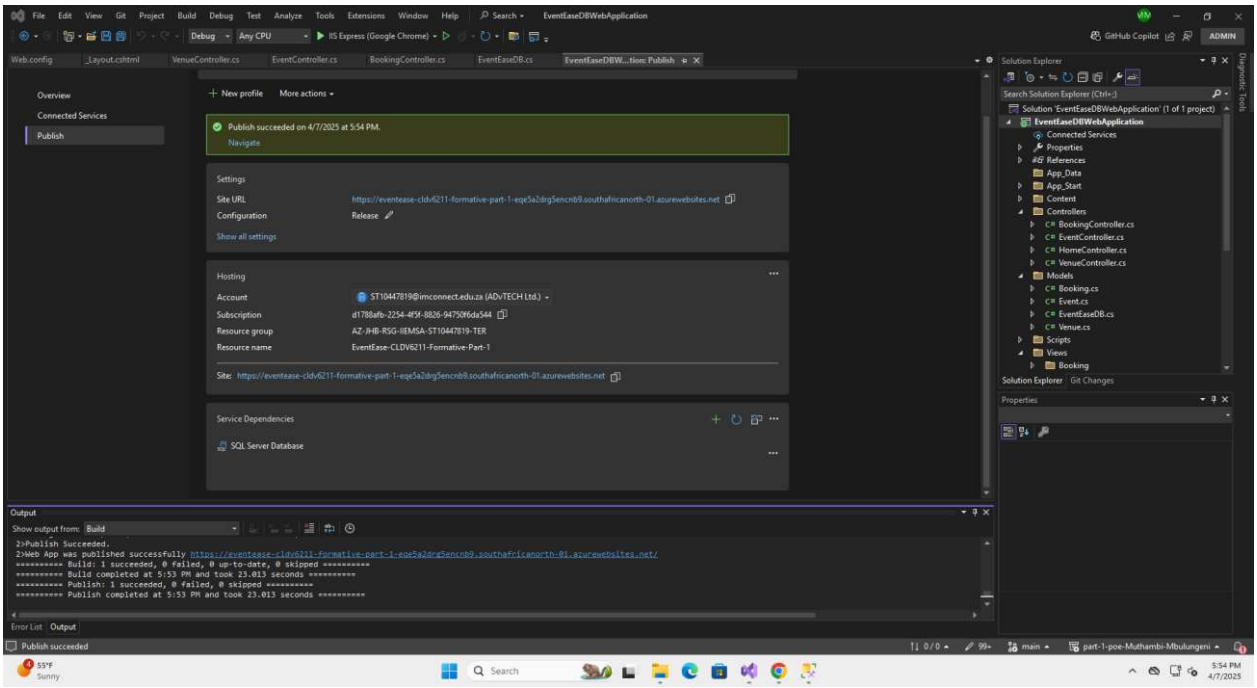
Link to azure web application: cloud-demo-agbtb8e0gsb5azde.southafricanorth-01.azurewebsites.net

Screenshot for EventEaseDBWebApplication-Figure-1:

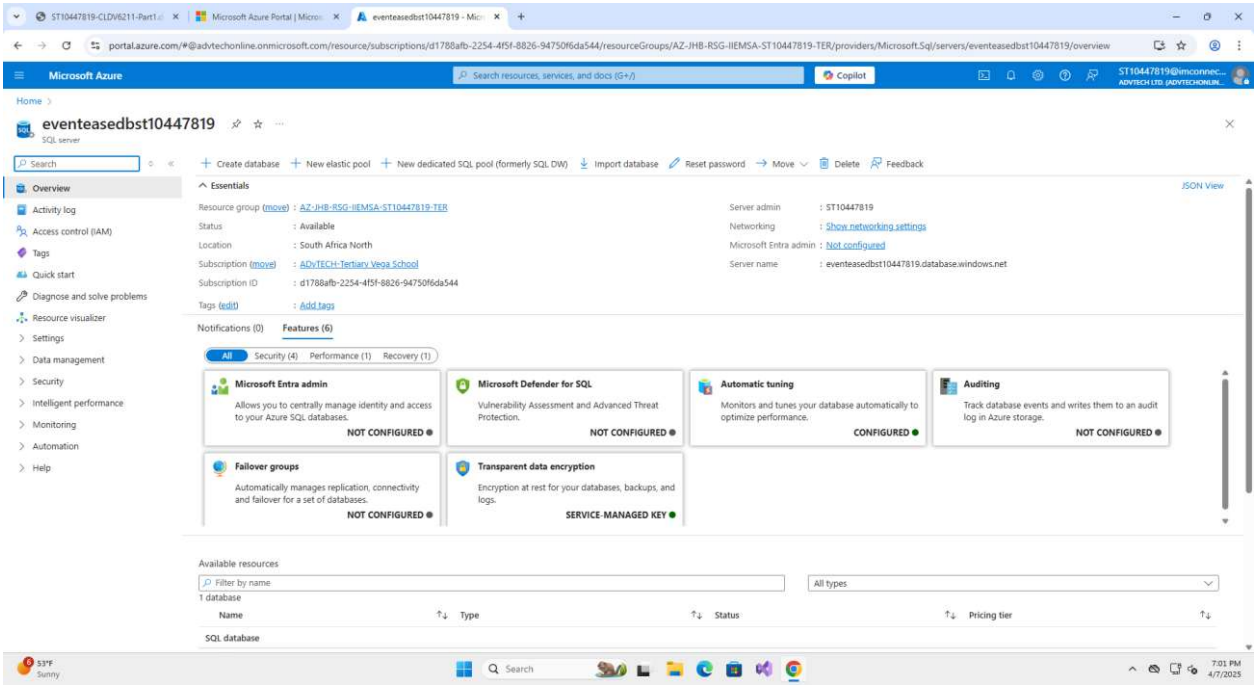


Link to web azure application: eventease-cldv6211-formative-part-1-eqe5a2drg5encnb9.southafricanorth-01.azurewebsites.net

Screenshot for EventEaseDBWebApplication-Figure-2:



Screenshot for EventEaseDBWebApplication-Figure-3:



Link to Azure sql database: eventeasedbst10447819.database.windows.net

References

Coronel, C. & Morris, S. (2016) Database Systems: Design, Implementation, & Management. 12th ed. Boston: Cengage Learning.

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Microsoft (2023b) What is Azure? Microsoft Azure. Available at: https://azure.microsoft.com/en-us/resources/cloud-computing-dictionary/what-is-azure (Accessed: 7 April 2025).

Mell, P. & Grance, T. (2011) The NIST Definition of Cloud Computing. National Institute of Standards and Technology. Available at: https://nvlpubs.nist.gov/nistpubs/Legacy/SP/nistspecialpublication800-145.pdf (Accessed: 7 April 2025).