CLOUD BASED PLATFORM AS A SERVICES OF PANORAMIC APPROACH OF GRAPHICAL 3DWIREFRAME

S.Satyanarayana[1], N.Venkata Madhu Bindu[2]

[1]Associate professor, [2]Researcher in GCCT, Department of CSE,
E-Mail:s.satyans1@kluniversity.in, svmadhu.sms@gmail.com
Koneru Lakshmaiah Education Foundation(KLUniversity),Vaddeswaram, India.

Abstract

In this paper to derive a PANORAMIC APPROACH OF GRAPHICAL 3DWireFrame by using Cloud based plat form as a services of R Programme predictive Analytics tool designed for solving Wire framing is one of the method of geometric modelling system. In this paper to discuss with Basics of cloud computing and Basics of 3DWireFrame and Solving Approach of GRAPHICAL 3DWireFrame using cloud based plat form as a services of R based predictive Analytics tool.

Keywords: cloud computing, PaaS, R programming, predictive Analytics tool, 3DWireFrame

Introduction
1.wire-frame model[1,2,3,4,5]

A wire-frame model is a visual presentation of a three-dimensional (3D) or physical object used in 3D computer graphics. It is created by specifying each edge of the physical object where two mathematically continuous smooth surfaces meet, or by connecting an object's constituent vertices using straight lines or curves. The object is projected onto a display screen by drawing lines at the location of each edge. The term wire frame comes from designers using metal wire to represent the three-dimensional shape of solid objects. 3D wire frame allows to construct and manipulate solids and solid surfaces. The 3D solid modelling technique efficiently draws higher quality representations of solids than the conventional line drawing.

Using a wire-frame model allows visualization of the underlying design structure of a 3D model. Traditional two-dimensional views and drawings can be created by appropriate rotation of the object and selection of hidden line removal via cutting planes.Since wire-frame renderings are relatively simple and fast to calculate, they are often used in cases where a high screen frame rate is needed (for instance, when working with a particularly complex 3D model, or in real-time systems that model exterior phenomena). When greater graphical detail is desired, surface textures can be added automatically after completion of the initial rendering of the wire frame. This allows the designer to quickly review chansolids or rotate the object to new desired views without long delays associated with more realistic rendering.

The wire frame format is also well suited and widely used in programming tool paths for direct numerical control (DNC) machine tools.

2. Cloud Computing Definition[6]

Cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or

service provider interaction. This cloud model is composed of five essential characteristics(On-demand self-service, Broad network access., Resource pooling, Rapid elasticity, Measured service), three service models(Software as a Service (SaaS). Platform as a Service (PaaS). Infrastructure as a Service (IaaS)) and four deployment models(Private cloud, Community cloud, Public cloud, Hybrid cloud).

3. PaaS [7]

Platform as a service (PaaS) is a category of cloud computing services that provides a computing platform and a solution stack as a service. Along with software as a service (SaaS) and infrastructure as a service (IaaS), it is a service model of cloud computing. In this model, the consumer creates the software using tools and/or libraries from the provider. The consumer also controls software deployment and configuration settings. The provider provides the networks, servers, storage, and other services that are required to host the consumer's application. PaaS offerings facilitate the deployment of applications without the cost and complexity of buying and managing the underlying hardware and software and provisioning hosting capabilities. There are various types of PaaS vendors; however, all offer application hosting and a deployment environment, along with various integrated services. Services offer varying levels of scalability and maintenance PaaS offerings may also include facilities for application design, application development, testing, and deployment as well as services such as team collaboration, web service integration, and marshalling, database integration, security, scalability, storage, persistence, state management, application versioning, application instrumentation, and developer community facilitation. Besides the service engineering aspects, PaaS offerings include mechanisms for service management, such as monitoring, workflow management, discovery, reservation, etc..

4.Types of PaaS

4.1Add-on development facilities
These facilities allow customization of existing software-as-a-service (SaaS) applications, and in some ways are the equivalent of macro language customization facilities provided with packaged software applications such as Lotus Notes, or Microsoft Word. Often these require PaaS developers and their users to purchase subscriptions to the co-resident SaaS application.

4.2Stand alone development environments
Stand-alone PaaS environments do not include technical, licensing or financial dependencies on specific SaaS applications or web services, and are intended to provide a generalized development environment.

4.3Application delivery-only environments
Delivery-only PaaS offerings do not include development, debugging and test capabilities as part of the service, though they may be supplied offline (via an Eclipse plugin for example). The services provided generally focus on security and on-demand scalability.

4.4Open platform as a service
This type of PaaS does not include hosting as such, rather it provides open source software to allow a PaaS provider to run applications. For example, AppScale allows a user to deploy some applications written for Google App Engine to their own servers, providing datastore access from a standard SQL or NoSQL database. Some open platforms let the developer use any programming language, any database, any operating system, any server, etc. to deploy their applications.

4.5Mobile PaaS (mPaaS)
The Yankee Group recently identified mobile PaaS (mPaas) as one of its themes for 2014, naming a number of providers including Kinvey, AnyPresence, FeedHenry, FatFractal and Point.io.

5. Methods for creating 3D wireframe

1. Extrusion is a technique for creating a 3D wire-frame model by copying a 2D profile and extending it to a depth defined by the operator. The result is a 3D wireframe of the profile.
2. Rotation produces wire-frame models by rotating a cross section or profile of the part about an axis. It is similar to extrusion except it is swept about an axis.
3. Extrusion with scale technique consists of defining the depth along with the facility of enlarging scale uniformly.
4. Using primitive shapes to build models.

5.1 Build Stunning 3D Graphs Using The Cloud And Wireframe Functions Using Cloud Based Platform As A Services
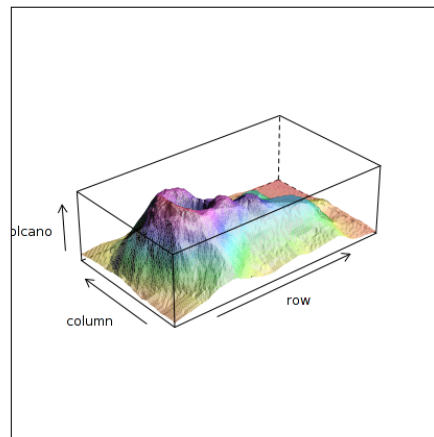**Cloud R Script:**

```
library(lattice)
wireframe(volcano, shade = TRUE, aspect = c(60/91, 0.1), light.source =c(10,0,10))
output:
```
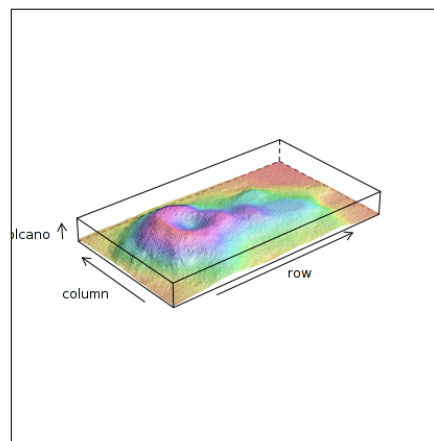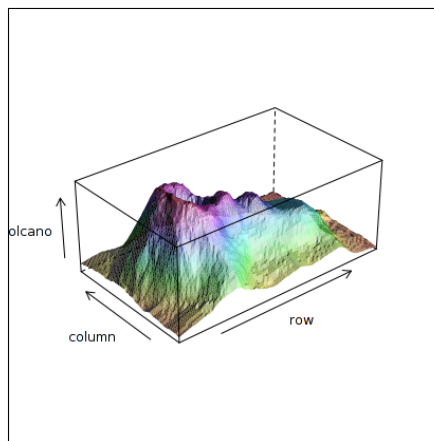


```
library(lattice)
wireframe(volcano, shade = TRUE, aspect = c(60/91, 0.2), light.source =c(10,0,10))
output:
```
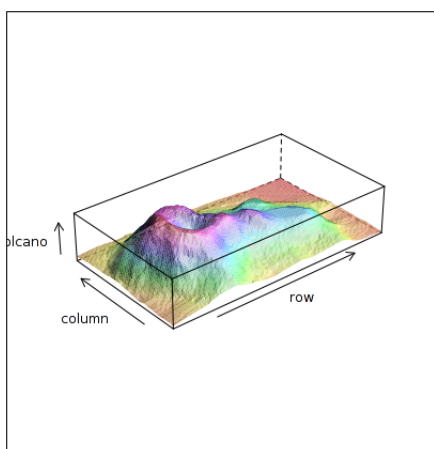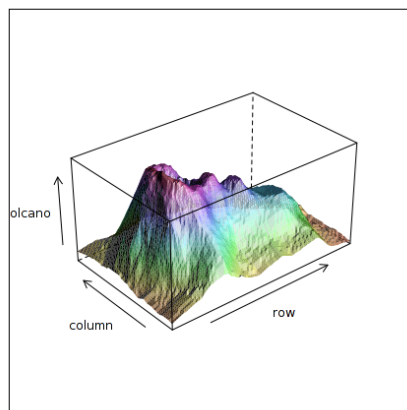


```
library(lattice)
wireframe(volcano, shade = TRUE, aspect = c(60/91, 0.3), light.source =c(10,0,10))
output:
```
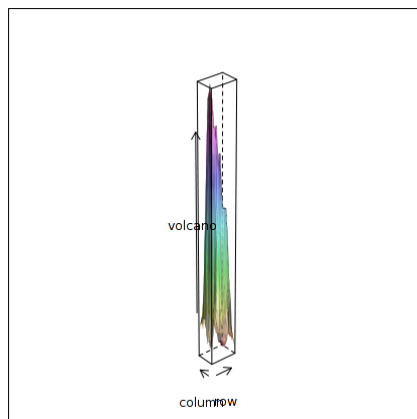
library(lattice)
wireframe(volcano, shade = TRUE, aspect = c(60/91, 0.4), light.source =c(10,0,10))
output:

library(lattice)
wireframe(volcano, shade = TRUE, aspect = c(60/91,0.5), light.source =c(10,0,10))
output:

library(lattice)
wireframe(volcano, shade = TRUE, aspect = c(60/91,10.0), light.source =c(10,0,10))

output:

Conclusion
This Results are formed less complexity by using this tool.

Acknowledgements

References

1. Nasifoglu, Yelda. "Renaissance wireframe". Architectural Intentions from Vitruvius to the Renaissance Studio Project for ARCH 531. McGill University. Retrieved 11 March 2013.
2. G. J. Agin and T. O. Binford. Computer description of curved objects. IEEE Trans. Comput., 25(4):439–449, 1976.
3. P. Yan, S. M. Khan, and M. Shah. 3D model based objectclass detection in an arbitrary view. In ICCV, 2007.
4. B. Pepik, M. Stark, P. Gehler, and B. Schiele. Teaching 3D geometry to deformable part models. InCVPR, 2012.
5. J. Liebelt and C. Schmid. Multi-view object class detection with a 3D geometric model. InCVPR, 2010.
6. S.Satyanarayana,"CloudComputing:SAAS", GESJ:Computer Science and Telecommunications, Vol. No. 4(36),pp. 76-79, 2012
7. Boniface, M.,etc..Platform-as-a-Service Architecture for Real-Time Quality of Service Management in Clouds, Internet and Web Applications and Services (ICIW), 2010 Fifth International Conference ,PP(155 - 160).