Assignment 1.

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JULIUS MWANGI. BIT 2204.

# Difference between the 7-layer OSI reference model and TCP/IP model.(300 words)?

OSI model is developed by ISO (International Standard Organization) and has 7 layers, whereas TCP Model is developed by ARPANET (Advanced Research Project Agency Network) and has 4 layers.

Open system interconnection (OSI mdel) is a conceptual model that characteristics and standardizes the communication function of a computing system .That means it’s a conceptual framework ,using which the functioning of a network can be described, while TCP/IP model is a communication protocol suite using which network devices can be connected on the internet.

OSI is a generic, protocol independent standard. It is acting as an interaction gateway between the network and the final-user. TCP/IP model depends on standard protocols about which the computer network has created. It is a connection protocol that assigns the network of hosts over the internet.

It provides both connection and connectionless oriented transmission in the network layer; however, only connection-oriented transmission in the transport layer. It provides connectionless transmission in the network layer and supports connecting and connectionless-oriented transmission in the transport layer.

OSI model defines the services, protocols, and interfaces as well as provides a proper distinction between them. It is protocol independent therefore provides standardization to the devices like router, motherboard, switches, and other hardware devices,while In the TCP/IP model, services, protocols, and interfaces are not properly separated. It is protocol dependent.

* To define the functionalities of upper layers, the OSI model uses three separate layers (Application, Presentation, and Session) while the TCP/IP model uses a single layer (Application).

,OSI model is a broader framework that defines seven layers to understand networking concepts ,while TCP is a specific protocol that operates within Transport layer to facilitate reliable data transmission between devices.TCP is part of the TCP/IP protocol suite ,which is widely used for networking and forms basis of the internet.