Salesforce is the world's #1 <u>customer relationship management</u> (CRM) platform. We help your marketing, sales, commerce, service and IT teams work as one from anywhere — so you can keep your customers happy everywhere.

Salesforce unites your marketing, sales, commerce, service, and IT teams from anywhere with Customer 360 — one integrated CRM platform that powers our entire suite of connected apps. With Customer 360, you can focus your employees on what's important right now: stabilising your business, reopening, and getting back to delivering exceptional customer experiences.

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<u>Customer relationship management (CRM)</u> is a technology for managing all your company's relationships and interactions with customers and potential customers. The goal is simple: Improve business relationships. A CRM system helps companies stay connected to customers, streamline processes, and improve profitability.

When people talk about CRM, they are usually referring to a CRM system, a tool that helps with contact management, sales management, productivity, and more.

A CRM solution helps you focus on your organisation's relationships with individual people — including customers, service users, colleagues, or suppliers — throughout your lifecycle with them, including finding new customers, winning their business, and providing support and additional services throughout the relationship.

A warehouse management system (WMS) is a software solution that offers visibility into a business' entire inventory and manages supply chain fulfillment operations from the distribution center to the store shelf.

Warehouse Management (WMS) solutions additionally enable companies to maximize their labor and space utilization and equipment investments by coordinating and optimizing resource usage and material flows. Specifically, WMS systems are designed to support the needs of an entire global supply chain, including distribution, manufacturing, asset-intensive, and service businesses.

Apex is a strongly typed, object-oriented programming language that allows developers to execute flow and transaction control statements on Salesforce servers in conjunction with calls to the API. Using syntax that looks like Java and acts like database stored procedures, Apex enables developers to add business logic to most system events, including button clicks, related record updates, and Visualforce pages. Apex code can be initiated by Web service requests and from triggers on objects.

A trigger is a piece of code that can execute objects before or after specific data manipulation language events occurred

Web services are application components that are designed to support interoperable machine tomachine interaction over a network. This interoperability is gained through a set of XML based open standards, such as the Web Services Description Language (WSDL), the Simple Object Access Protocol (SOAP), and Universal Description, Discovery, and Integration (UDDI). These standards provide a common and interoperable approach for defining, publishing, and using web services.

You can either deploy your web service in a web container or in an EJB container. This depends on your choice of implementation. If you are creating a Java EE application, use a web container in any case, because you can put EJBs directly in a web application.

After you deploy a web service to a server, you can use the IDE to open the server's test client, if the server has a test client. The GlassFish and WebLogic servers provide test clients.

Virtual Box is a cross-platform virtualization application. What does that mean? For one thing, it installs on your existing Intel or AMD-based computers, whether they are running Windows, Mac, Linux or Solaris operating systems. Secondly, it extends the capabilities of your existing computer so that it can run multiple operating systems (inside multiple virtual machines) at the same time.

Host operating system (host OS).

This is the operating system of the physical computer on which Virtual Box was installed. There are versions of Virtual Box for Windows, Mac OS X, Linux and Solaris hosts.

Guest operating system (guest OS).

This is the operating system that is running inside the virtual machine. Theoretically, Virtual Box can run any x86 operating system (DOS, Windows, OS/2, FreeBSD, Open BSD), but to achieve near-native performance of the guest code on your machine, we had to go through a lot of optimizations that are specific to certain operating systems. So while your favorite operating system may run as a guest, we officially support and optimize for a select few (which, however, include the most common ones).

Virtual machine (VM).

This is the special environment that Virtual Box creates for your guest operating system while it is running. In other words, you run your guest operating system "in" a VM. Normally, a VM will be shown as a window on your computers desktop, but depending on which of the various frontends of VirtualBox you use, it can be displayed in full screen mode or remotely on another computer. In a more abstract way, internally, VirtualBox thinks of a VM as a set of parameters that determine its behavior. They include hardware settings (how much memory the VM should have, what hard disks VirtualBox should virtualize through which container files, what CDs are mounted etc.) as well as state information (whether the VM is currently running, saved, its snapshots etc.). These settings are mirrored in the VirtualBox Manager window as well as the VBoxManage command line program.

Guest Additions.

This refers to special software packages which are shipped with VirtualBox but designed to be installed inside a VM to improve performance of the guest OS and to add extra features.

OVF is a cross-platform standard supported by many virtualization products which allows for creating ready-made virtual machines that can then be imported into a virtualizer such as VirtualBox

The ultimate benefit of cloud computing, and AWS, is the ability to leverage a new business model and turn capital infrastructure expenses into variable costs. Businesses no longer need to plan and procure servers and other IT resources weeks or months inadvance. Using AWS, businesses can take advantage of Amazon's expertise and economies of scale to access resources when their business needs them, delivering results faster and at a lower cost.

Why Amazon Web Services?

Performance advantage and cost competitiveness

Greater durability and availability

Less operational friction

Strong data security

pinMode(2, OUTPUT) – Before you can use one of Arduino's pins, you need to tell Arduino Uno R3 whether it is an INPUT or OUTPUT. We use a built-in "function" called pinMode() to do this.

digitalWrite(2, HIGH) – When you are using a pin as an OUTPUT, you can command it to be HIGH (output 5 volts), or LOW (output 0 volts).

MQTT stands for **Message Queuing Telemetry Transport**. MQTT is a machine to machine internet of things connectivity protocol. It is an extremely lightweight and publish-subscribe messaging transport protocol. This protocol is useful for the connection with the remote location where the bandwidth is a premium. These characteristics make it useful in various situations, including constant environment such as for communication machine to machine and internet of things contexts. It is a publish and subscribe system where we can publish and receive the messages as a client. It makes it easy for communication between multiple devices. It is a simple messaging protocol designed for the constrained devices and with low bandwidth, so it's a perfect solution for the internet of things applications.

Characteristics of MQTT

The MQTT has some unique features which are hardly found in other protocols. Some of the features of an MQTT are given below:

 It is a machine to machine protocol, i.e., it provides communication between the devices.

- It is designed as a simple and lightweight messaging protocol that uses a publish/subscribe system to exchange the information between the client and the server.
- o It does not require that both the client and the server establish a connection at the same time.
- o It provides faster data transmission, like how WhatsApp/messenger provides a faster delivery. It's a real-time messaging protocol.
- It allows the clients to subscribe to the narrow selection of topics so that they can receive the information they are looking for.