Salesforce GROW

Module : Introduction to Apex

OurUniversity
EFMD CLIP ACCREDITED

Objectives

By the end of this session, you should be able to:

Get an introduction to Apex and it's benefits, compression with other programming languages, how it works with the Force.com IDE and relationship between Apex & Metadata.

Learn the different data types available in Apex, including the loops, conditionals, collection types and the syntax for basic logic structures.

Learn the Object-Oriented Programming in Apex like Classes, interfaces, attributes, methods, keywords, access modifies, Constructors, Objects

Learn how the Force.com platform handles sObject relationships, retrieve & submit data to the Force.com database and discover the basics of data sets in the cloud.

Learn about the different types of Apex triggers, context, variables, creation and execution of triggers, syntax.

Learn the Apex error & exception handling framework and various debugging tools for Apex.

Introduction to Apex

Capgemini

Apex

Apex is an object-oriented, on-demand programming language.

Object-oriented

Objects are discrete "bundles" of code modeled after things in the real world.

On-demand

Functionality that you need is available in the cloud, and you can consume it when you need.

Benefits Of Apex

Apex:

- Is Java-like and built on the Force.com platform:
  - It is multitenant, scalable, secure, proven, and trusted, running natively on Salesforce servers.
  - The code that you write plugs right into other platform features.
- Runs in the cloud and does not require any hardware or software to be installed.
- Enables developers to execute business logic while saving records.
- Automatically works with the new Salesforce releases.
- Has a built-in framework for testing and deployment.

Traditional Code versus Apex

Comparison of Apex with Java

Commonalities	Differences
▪ Both have classes, inheritance, polymorphism, and other common OOP features. ▪ Both have extremely similar syntax and notation. ▪ Both are compiled, strongly-typed, and transactional.	▪ Apex runs in a multitenant environment. ▪ Apex is case-insensitive. ▪ Apex is on-demand and is compiled and executed in the cloud. ▪ Apex requires unit testing for deployment into a production environment. ▪ Apex is not a general purpose programming language, but is instead a proprietary language used for specific business logic functions.

Relationship with Apex and Metadata

Apex:

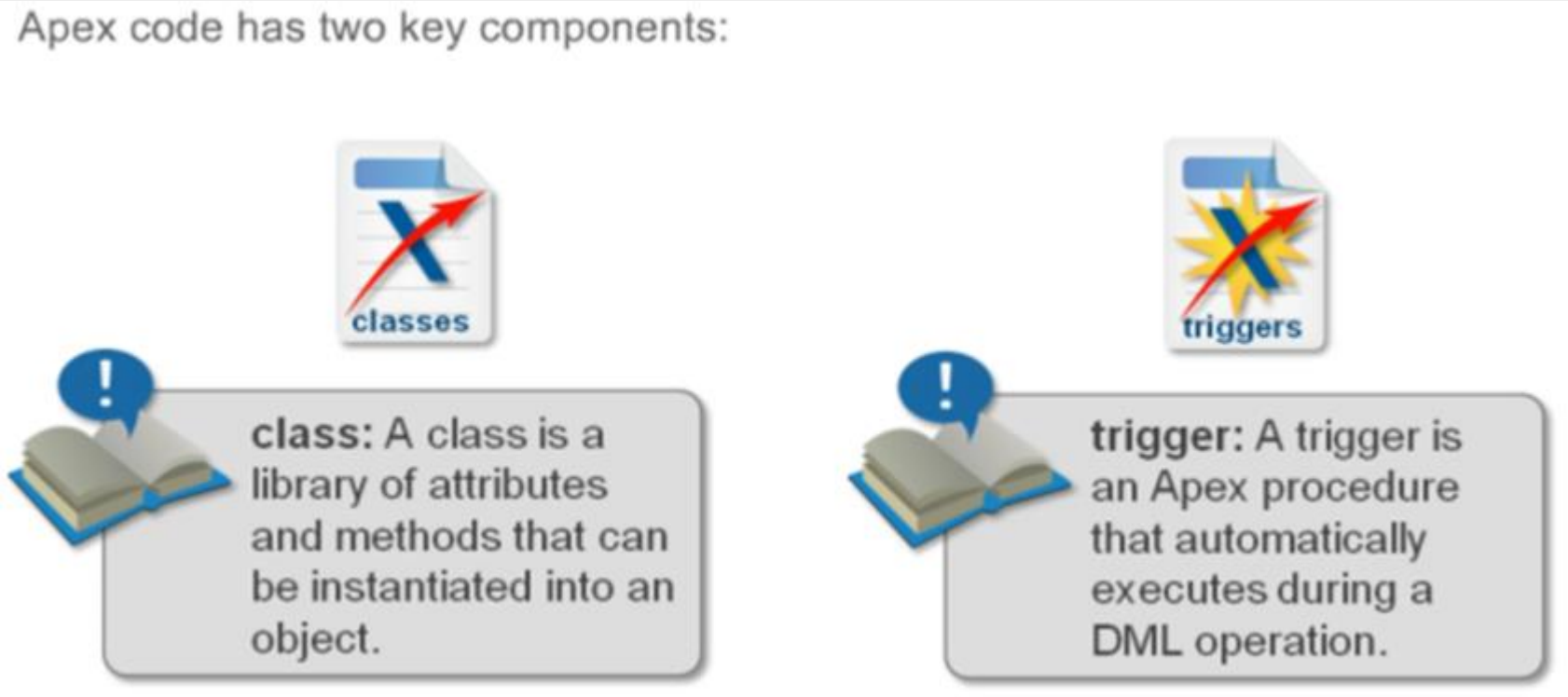
- Is a proprietary language that is strongly-typed to Salesforce metadata.
- Is aware of metadata.
- Will automatically work with future versions of Salesforce applications.
- Is not technically automatically upgraded with each new release.
- Is saved with a specific API version, which:
  - Supports backward compatibility of code.

Unable to Complete the Requested Change

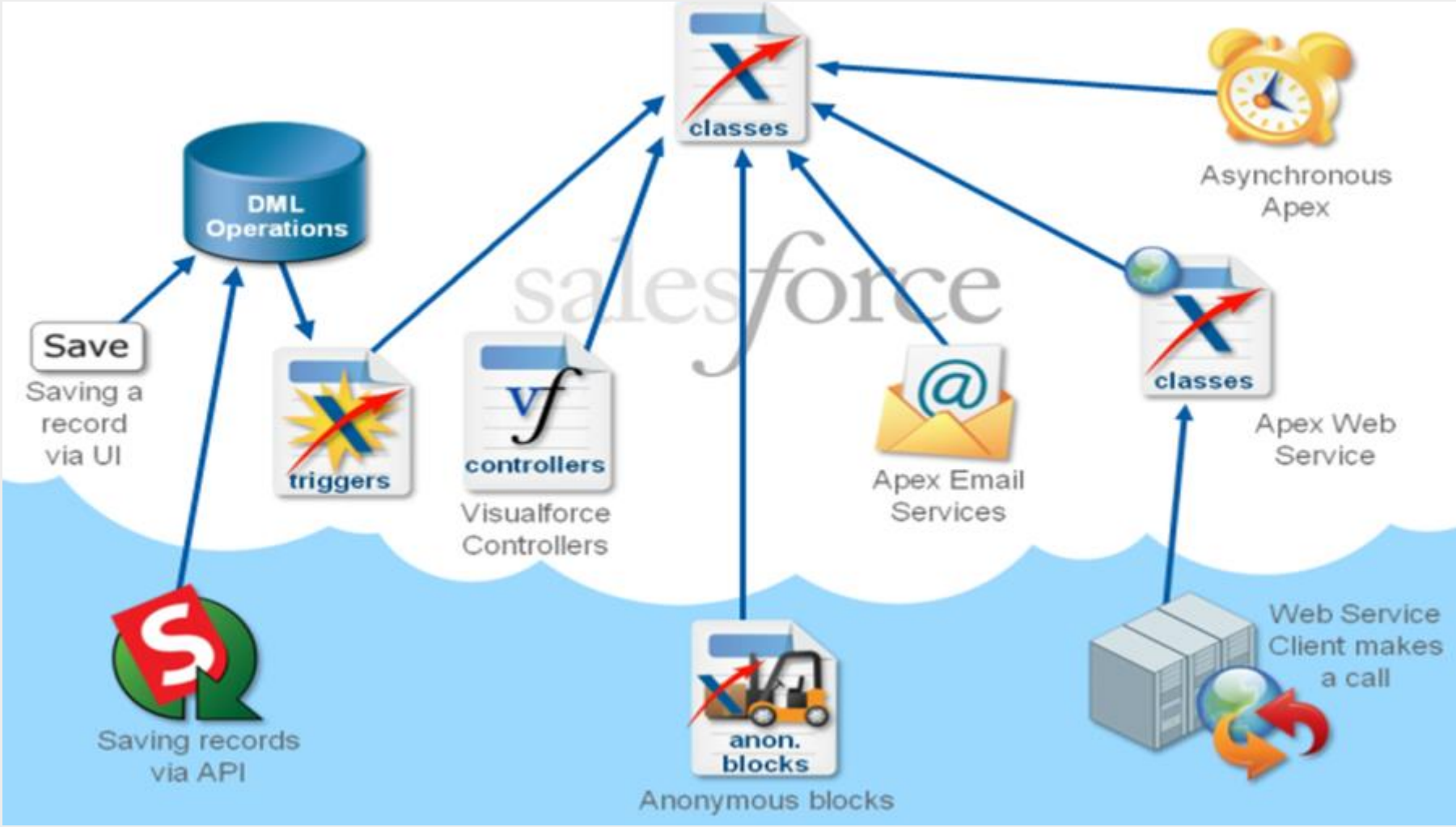
Your changes could not be completed for the following reasons:

Reason	Section
This custom field is referenced elsewhere in salesforce.com.	Apex Class

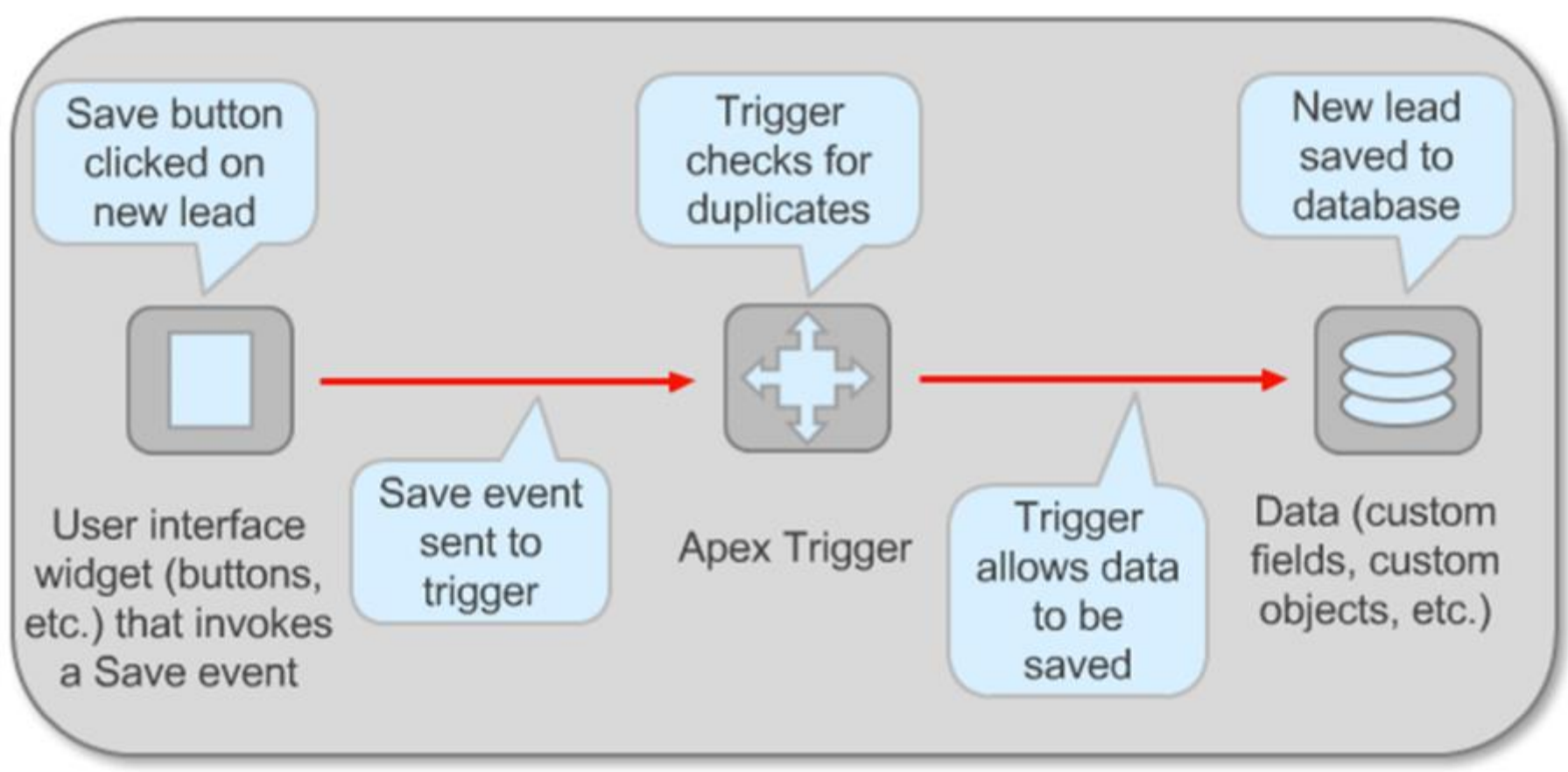
Apex Classes and Triggers



Invoking Apex



Apex Example – Lead Duplicate Check



Alternatives

In Salesforce UI

- Apex Editor for a programmable UI Component
- Developer Console can be used to write and execute code from within your app

Force.com IDE

- Apex and Visualforce code is stored in files locally
- Code can be synced to a Salesforce Org
- Code and Metadata can be deployed between org's
- Code-Completion features for faster coding
- Use Schema Explorer to browse objects and fields

Hands-on Exercise

Trailhead:
https://developer.salesforce.com/trailhead/module/apex_database

Introduction to Apex Exercise Guide

- Exercise 0-2: Creating a Sandbox Organization
- Exercise 1-1: Retrieving the Force.com (Apex) Developer's Guide
- Exercise 1-2: Installing and Configuring the Force.com IDE
- Exercise 1-3: Creating a Force.com IDE Project
- Exercise 1-4: Examining a Hello World *Example*

https://lms.cfs-api.com/v1/content/9e9329c9-ba79-4eb5-b12f-51bf371368bb/presentation_content/external_files/introductiontoapexexercises.pdf

- Use your training org "Apex" for the exercises
- 1-2 Will need to download and run Eclipse Juno/Kepler & download current Java SDK from https://developer.salesforce.com/page/Force.com_IDE_Installation