Practical - 03.

- **AIM :** Creating an application in SalesForce.com using Apex programming language.

- **Objective:** 1) To learn Sales force cloud.
  2) To study apex programming language.

- **THEORY :** What is Apex ?

- Apex is a programming language developed by the salesforce.com. As per the official definition, Apex is a strongly typed, object-oriented programming language that allows developers to execute flow and transaction control statements on platform server in conjunction with calls to force.com API.

- It has a java like syntax and acts like database stored procedures. It enables developers to add business logic to mast system events including button clicks, related, record updates and visual force pages.

- Apex code can be initiated by web service request and from triggers on objects.

* **Features of Apex as a language** -
1. Integrated.
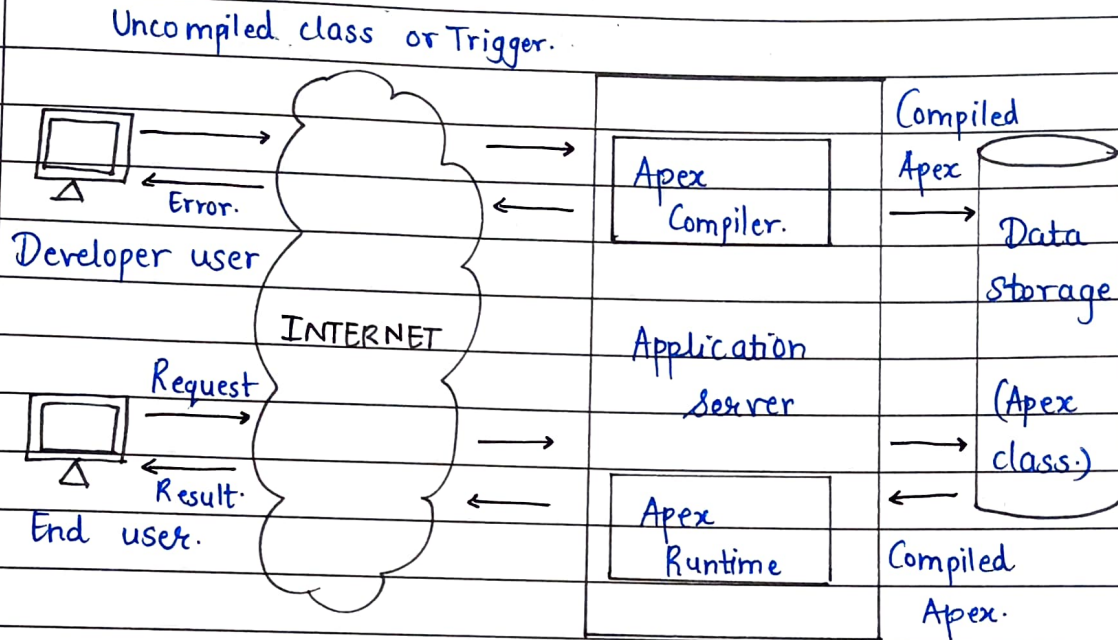2. Java like syntax, easy to use.

Working structure of Apex.

Uncompiled class or Trigger.

Force.com Platform.

3. Strongly integrated with data.
4. Strongly typed
5. Multitenant Environment.
6. Upgrades automatically.
7. Easy Testing.

- ### When should developer choose Apex?

→ Apex should be used when we are not able to implement the complex business functionality using the prebuilt and existing out of the box functionalities. Before below are the cases where we need to use apex over salesforce configuration.

* **Working Structure of Apex -**

(1). **Flow of Actions:**

(a) **Developer Action -**
- When a developer writes and saves apex code to the platform, the platform application server first compiles the code into a set of instructions that can be understood by the Apex runtime interpreter and then saves those instructions as metadata.

(b). **End user action -**
- When end user triggers the execution of Apex, by clicking a button or accessing a visual force page, the platform application server retrieves the compiled instructions from the metadata and sends them through the runtime interpreter before returning result.

(2). **Understanding the apex syntax -**

Apex code typically contains many things that we might be familiar with from other programming languages.

1. Variable declaration.
2. SQL Query.

3. Loop statement
4. Flow control statement.
5. DML statements.

- **Apex code development tools** —

In all the editions we can use any of the following three tools to develop the code.

1. Force.com developer console.
2. Force.com IDE.
3. Code editor in the salesforce User Interface.

* **Conclusion :** Hence we learnt to create an application in salesforce using apex programming language.

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