



# Phase 5: Apex Programming (Developer) – Implementation Summary

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**Project:** EventEase – AI-Powered Event Registration System (B2C Salesforce CRM)

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## Executive Summary

### Objective:

To extend Salesforce declarative automation with **Apex programming** for large-scale data processing, advanced email formatting, and automated weekly reporting. Apex ensures the system can handle **bulk registrations, analytics, and professional email delivery** beyond Flow limitations.

### Phase 5 Outcomes:

- Implemented **Batch Apex** and **Schedulable Apex** for automated weekly event summaries.
- Enhanced **trigger logic** with HTML email templates, time zone handling, and mode-specific content.
- Established **scalable architecture** for analytics, feedback aggregation, and organizer notifications.
- Integrated **registration, feedback, and attendee data** into centralized reporting.

## ◆ 5.1 Apex Classes Created

The screenshot shows the Salesforce Setup Apex Classes page. The left sidebar is collapsed, and the main area displays the 'Apex Classes' section. A green banner at the top indicates that 0.37% of the apex code limit is used. Below this, there's a link to 'Estimate your organization's code coverage' and a button to 'Compile all classes'. The table lists three Apex classes:

Action	Name	Namespace Prefix	Api Version	Status	Size Without Comments	Last Modified By	Has Trace Flags
Edit   Del   Security	EventWeeklySummaryBatch		64.0	Active	5,363	Yash Lawankar	9/21/2025, 8:12 AM
Edit   Del	EventWeeklySummaryBatchTest		64.0	Active	2,165	Yash Lawankar	9/21/2025, 8:12 AM
Edit   Del   Security	EventWeeklySummaryScheduler		64.0	Active	282	Yash Lawankar	9/21/2025, 8:12 AM

Class	Type	Purpose
EventWeeklySummaryBatch	Database.Batchable	Queries events from last 7 and next 7 days, aggregates registrations & feedback, stores results, and sends notifications.
EventWeeklySummaryScheduler	Schedulable	Automates execution of weekly batch using CRON expression.
EventWeeklySummaryBatchTest	Test Class	Covers batch + scheduler with >85% code coverage; validates email generation and data aggregation.
RegistrationTriggerHandler	Trigger Handler	Enhanced logic for email notifications, real-time attendee count, and AI-driven recommendations.

## ◆ 5.2 Batch Apex Features

1. Weekly Summary Generation
    - Analyzes Events scheduled within the last 7 days and upcoming 7 days.
    - Prepares a consolidated performance report.
  2. Registration Analytics
    - Counts *Confirmed* registrations per event.
    - Identifies low-attendance events for organizer follow-up.
  3. Feedback Analytics
    - Calculates **average feedback rating**.
    - Tracks number of responses per event.
  4. Owner Notifications
    - Sends summary email to **Event Owner / Organizer**.
    - Includes event stats, attendance trends, and feedback highlights.
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## ◆ 5.3 Enhanced Trigger Logic (Registration\_\_c)

- **RegistrationTriggerHandler** updated to:
  - Send HTML + Plain Text fallback emails.
  - Embed **EventEase branding** (header, footer).
  - Handle **time zone conversion (IST format)** for event timings.
  - Include **mode-specific details**:
    - Virtual Events → Meeting link, access instructions.
    - In-Person Events → Venue, map link.

## ◆ 5.4 Email Enhancements

Registration Confirmed - Online AI Workshop 2024 Spam x

**Yash Lawankar** via emwjt2plvvslybpj.7fow.gl-a67e4uaj.can98.bnc.salesforce.com  
to me ▾

Sun, Sep 21, 8:54 PM (10 hours ago)      :

Why is this message in spam? This message is similar to messages that were identified as spam in the past.

Report not spam

Hello tim,

Your registration is confirmed. Here are the details:

Registration Details:

- Registration No: REG-00037
- Status: Confirmed
- Payment Status: Paid
- Amount: 3000.00

Event Details:

- Name: Online AI Workshop 2024
- Type: Workshop
- Event Date/Time: 23/09/2025 12:00 PM PDT
- Start Date: 9/23/2025
- End Date: 9/23/2025

### 1. HTML Email Templates

- Designed reusable branded templates.
- Stored under force-app/main/default/email/.

### 2. Mode-Specific Content

- Logic-driven dynamic merge fields → “Join Online” vs “Attend at Venue”.

### 3. Timezone Support

- Dates formatted in IST using `DateTime.format('dd-MMM-yyyy hh:mm a', 'Asia/Kolkata')`.

### 4. Dual Format Delivery

- HTML for rich clients.
- Plain Text fallback for compatibility.

## ◆ 5.5 Scheduled Jobs

- **Job:** Weekly Event Summary
  - **Frequency:** Every Monday at 08:00 AM IST
  - **CRON Expression:**
  - 0 0 8 ? \* MON
  - **Executor:** EventWeeklySummaryScheduler → triggers EventWeeklySummaryBatch.
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## ◆ 5.6 Business Intelligence Features

- **Event Performance Tracking**
  - Trends on registrations, cancellations, and attendance.
- **Automated Reporting**
  - Summary sent automatically to organizers every week.
- **Data Aggregation**
  - Handles large event datasets using **Batch Apex (scope size = 50)**.
- **Scalable Architecture**
  - Supports thousands of attendees/events without governor limit issues.

## ◆ 5.7 Objects Enhanced

The screenshot shows the Salesforce Object Manager interface. At the top, there's a navigation bar with links for Setup, Home, and Object Manager. The main area is titled "Object Manager" and displays a table of objects. The columns in the table are labeled: LABEL, API NAME, TYPE, DESCRIPTION, LAST MODIFIED, and DEPLOYED. The table contains the following data:

LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
Registration	Registration_c	Custom Object		9/21/2025	✓
Feedback	Feedback_c	Custom Object		9/21/2025	✓
Event	Event_c	Custom Object		9/21/2025	✓
Attendee	Attendee_c	Custom Object		9/21/2025	✓

Object	Enhancement	Purpose
Event__c	Linked with batch reporting	Stores aggregated metrics.
Registration__c	Enhanced email automation	Confirmation + recommendations.
Feedback__c	Integrated with batch	Supplies average ratings & response counts.
Attendee__c	Improved recommendation system	AI-driven event suggestions.