

QR Attendance Architecture

Teacher Interface
(Web Browser)

HTTPS (CloudFront URL)

CloudFront
(Content Delivery
Network)

S3 Bucket URL

S3 Bucket
(teacher.html/attendance.
html)

QR Link opens attendance.html

API Gateway

Lambda: generate_session
(POST /session/generate)

read/write

DynamoDB Table:
Session (Session Info,
Tokens, Timestamp)

Lambda: mark_attendance
(POST /attendance/mark)

read/write

DynamoDB Table:
Students (enrolledClasses,
studentID)

Lambda: get_attendance
(GET /attendance/report)

read/query

DynamoDB Table:
Attendance (Attendance
ID/Session ID, classId,
timestamp)

On successful attendance

SNS Publish

SNS Topic
(attendance-alerts)

Email subscription

Teacher Email

All lambdas use:
- Cloudwatch logs for logging/monitoring