University of the Philippines Los Baños
Institute of Computer Science

OSES CONNECT

A Centralized Attendance Management System for Ortiz-Saranay Elementary School

CMSC 190 - 2
SP2 PRESENTATION

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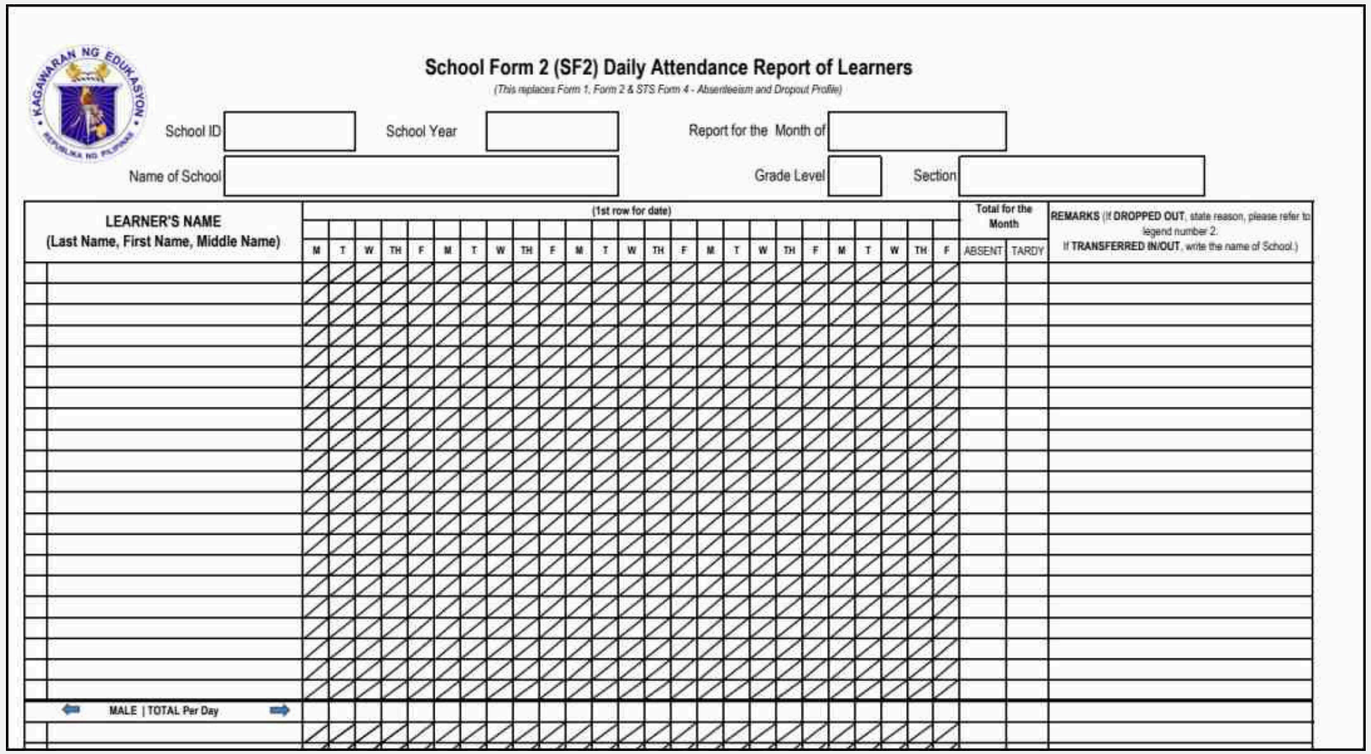
OUTLINE OF PRESENTATION

- Introduction
- Objectives of the Study
- Significance of the Study
- Scope and Limitation
- Materials and Methods
- Results and Discussion
- Conclusion
- Recommendations

BACKGROUND OF THE STUDY

- Traditional methods of attendance management
- School Form 2 (SF2) and Daily Time Record (DTR)
- Parental involvement
- Predicting absenteeism

FORMS USED



School Form 2 (SF2) Daily Attendance Report of Learners

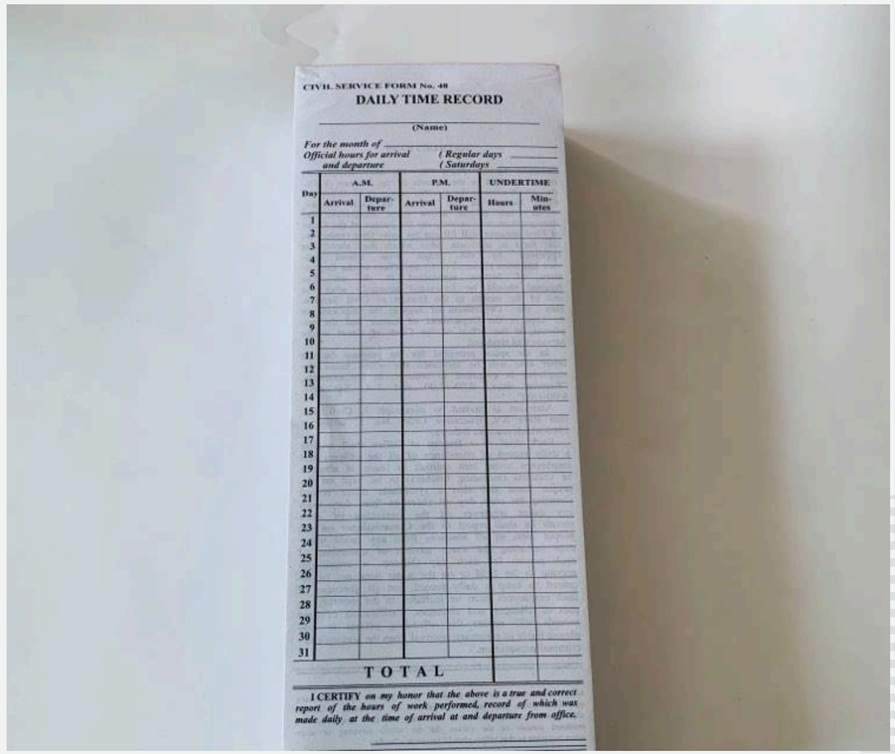
(This replaces Form 1, Form 2 & STS Form 4 - Absenteeism and Dropout Profile)

School ID | School Year | Report for the Month of

Name of School | Grade Level | Section

LEARNER'S NAME (Last Name, First Name, Middle Name)	(1st row for date)																									Total for the Month		REMARKS (If **DROPPED OUT**, state reason, please refer to legend number 2. If **TRANSFERRED IN/OUT**, write the name of School.)
	M	T	W	TH	F	M	T	W	TH	F	M	T	W	TH	F	M	T	W	TH	F	M	T	W	TH	F	ABSENT	TARDY	
MALE | TOTAL Per Day																												

SF2



CIVIL SERVICE FORM No. 48

DAILY TIME RECORD

(Name)

For the month of

Official hours for arrival and departure *(Regular days* *(Saturdays*

Day	A.M.		P.M.		UNDERTIME	
	Arrival	Depar-ture	Arrival	Depar-ture	Hours	Min-utes
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
TOTAL						

I CERTIFY *on my honor that the above is a true and correct report of the hours of work performed, record of which was made daily at the time of arrival at and departure from office.*

DTR

OBJECTIVES OF THE STUDY

- Design a centralized database for student and teacher attendance records.
- Implement QR code-based attendance tracking.
- Establish automated parental notifications via email and Short Message Service (SMS).
- Develop a reporting module to generate reports (Daily Time Record and School Form 2).
- Incorporate a Markov Chain model for absenteeism prediction.

SIGNIFICANCE OF THE STUDY

- Low-cost and easy attendance management
- Reports generation
- Increased parental involvement
- Proactive absenteeism management
- Security and accessibility

SCOPE AND LIMITATIONS

- Developed for Ortiz-Saranay Elementary School
- Centralizes K-6 and teacher attendance processes
- Access limited to authorized school personnel
- Uses QR codes for attendance tracking
- Employs KeyCloak for access management
- Requires device, internet, browser, and camera

MATERIALS & METHODS

SYSTEM REQUIREMENTS

TECHNOLOGIES

- ANGULAR
- GraphQL
- spring boot
- KEYCLOAK
- supabase
- Cloudinary
- httpSMS

DEPLOYMENT

- Vercel
- Render

USER TYPES

ADMINISTRATORS

TEACHERS

SYSTEM FEATURES

- Section Management
- Profile Information Management
- Attendance Management
- Reports Generation
- Attendance Forecast
- Audit Trail

ORTIZ-SARANAY ELEMENTARY SCHOOL

WELCOME TO OSES CONNECT:

Centralized Attendance Management System

OSES

Saturday - May 11, 2024

02:12:23 PM

LOGIN

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RESULTS & DISCUSSION

STATEMENTS	SD	D	N	A	SA	T
1. I think that I would like to use this system frequently	0	0	0	2	14	16
2. I found this system unnecessarily complex	11	2	0	1	2	16
3. I thought this system was easy to use	0	1	0	4	11	16
4. I think that I would need the support of a technical person to be able to use this system	7	0	4	2	3	16
5. I found the various functions in this system were well integrated	0	0	0	3	13	16
6. I thought there was too much inconsistency in this system	12	3	1	0	0	16
7. I would imagine that most people would learn to use this system very quickly	0	0	1	2	13	16
8. I found this system very cumbersome to use	13	2	0	1	0	16
9. I felt very confident using this system	0	0	0	3	13	16
10. I needed to learn a lot of things before I could get going with this system	5	3	2	2	4	16

RESULTS & DISCUSSION

- https://oses-connect.vercel.app/
- System Usability Scale (SUS) score of 84.844
- Positive user feedback
- Principal's endorsement for system adoption in the upcoming school year

CONCLUSION

- Successful implementation, deployment, and testing of OSES Connect
- High user satisfaction and usability
- Comprehensive attendance tracking for both teachers and students
- Automatic generation of Daily Time Record (DTR) and School Form 2 (SF2) reports
- Notification feature for parents to monitor their child's attendance
- Proactive measures against potential attendance issues

RECOMMENDATIONS

- More responsive user interface for all devices
- Image cropping feature in profile management
- Implement batch processes
- Increase the state space to enhance the Markov Chain model