

2013 臺灣國際科學展覽會

優勝作品專輯(國外作品)

作品編號	110021
參展科別	電腦科學科
作品名稱	ELECTRONIC STUDENT-TEACHER POLL ATTANDANCE SYSTEM
得獎獎項	四等獎

國 家	Turkey
就讀學校	IZMIR KARATAS HIGH SCHOOL
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ABSTRACT OF EXHIBIT

TAIWAN INTERNATIONAL SCIENCE FAIR

1. Purpose of the research

Our goal is to make roll call systems at schools technological. While Rolling Call system is getting technological capacities some useful outcomes occur as well like; To remove the cost for class books by abolishing the class books used for roll call.

To eliminate mistakes with the usage of class book. (The numbers written incorrectly)

To save again a large amount of waste paper. (The short messages will be send to the parents instead of mailing the letters to the their adresses once a week about their students' absance.)

To improve communication among school and parents ,by this way to prevent various kinds of problems arising from absenteeism.

To make teachers school boards more efficently and motivated besides their affairs will get easier as well.

To save time of school managers. (They have no Works like saving the absenteeisms into e-school network because everything including all the absenteeism info will be carried into the system automatically)

To save time of each lesson the teachers will not loose time for the roll call ,so they will be able to devote their time to their students and training.

-Technological polling mechanism will contribute to education, this contribution will make all the students and teachers happy because all the teachers carry concern whether their curriculum will be finished or not through this system recording all the rests of teachers because of illnesses and some national celebrations.

2. Procedures

PC operating systems used are WIN98/2000/2003/XP/VISTA/WIN7

The database of the system shall be written in T-SQL and the management tool for the database shall be SQL Server 2008 Express Edition.

Database:

Database is the collection of ordered information. As the meaning of the word is not limited to the ordered information kept in the digital disks and servers, it is generally used in this meaning. In computer terminology, it means systematically accessible, manageable, updateable, movable set of information having meaningful relations between them. Another definition is that it is the data stack kept systematically which can be processed by the programs systematically.

Data Modeling

This definition is called as Schema. Schema shows how the data definitions to be used in the database shall be modeled. This is called Data Model and the process is called Data Modeling. The most common one is the Relational Model. In Layman's terms, data is kept in tables in these models. Rows of the table define the records and the columns define the type of these information pieces forming these records. Other models (such as System Model or Network Model) set up clearer relations.

Database Software

The name of the software which keeps the data in a systematic way. Many software may store data. The difference is that database can change this information in an effective and quick way. Database is the hearth of information system and gains value with and effective usage. It is essential to reach the information when required. If you think about a library having all the books with the same cover, you may guess how much work library users will have to do. A database is a perfect content system of a library and also the library itself. Relational Database Management Systems – RDBMS are the systems in which large amount of data can be stored securely, information can be kept in integrity, more than one user can reach data simultaneously and fast access possibilities to the information are possible.

Database administration

Today, database systems forms the basis of the computer systems used in a wide range including banking, automotive industry, health information systems, company management, telecommunication systems, and air transport. Database keeps the information physically and also has a logical system. As the database installation, configuration, design, querying, security and inspection became complicated, database management concept emerged. A database manager undertakes the logical data modeling, physical database designing, physical creation of database, writing queries,

installation and settings, security management and settings, database management and maintenance, database auditing and shrinking works.

F11 is a new fingerprint reader access control system. Advanced fingerprint algorithm provides a reliable, accurate and excellent matching speed and unparalleled performance. The basis of the fastest growing commercial fingerprint matching algorithm and the control of high-performance, high-image quality optical fingerprint head is the biggest characteristic of F11. Whether the reader with an independent third-party Wiegand installation or use the control panel 26, are stable. When it is used as a standalone access control when the card is registered by the administrator user. You can use TCP / IP and RS2323/485 communications in different networks. TCP / IP communications can make the machines and data transfer between computers easily completed within a few seconds.

Features:

- * Use durable, highly accurate control of optical fingerprint in the head.
- * Touch verification.
- * 1500 fingerprints capacity, 10,000 card capacity
- * Fingerprint or card authentication
- * Optional integrated Smart Card functionality
- * Built-in serial and Ethernet ports
- * Anti-tamper switch and alarm output
- * Out requests and alarm connections
- * One-touch real-time data output and non-host third party applications
- * Sound and light tips and did not pass through

3. Data

THE ANNUAL TOTAL NUMBER OF PAPERS SPENT FOR ABSENTEEISM LETTER SENT ACCORDING TO THE STATISTICS FROM TEN SCHOOLS IN İZMİR, IN THE 2010–2011 TEACHING YEAR			
SCHOOL NAME	THE NUMBER OF PUPIL	THE NUMBER OF ABSENTEEISM LETTER SENT	THE NUMBER OF PAPERS SPENT
İZMİR SELMA YİĞİTALP ANADOLU HIGH SCHOOL	650	1500	1500
İZMİR KARATAŞ LİSESİ	1560	3700	3700
İZMİR HACIŞAKİR ECZACIBAŞI SCHOOL	720	120	120
İZMİR ÖZEL TÜRK KOLEJİ	850	3500	3500
İZMİR FATMA SAYGIN ANADOLU HIGH SCHOOL	740	3200	3200
İZMİR 85. YIL ANADOLU HIGH SCHOOL	850	3800	3800
İZMİR KARŞIYAKA HIGH SCHOOL	700	2400	2400
İZMİR BUCA ANADOLU SCHOOL	750	3100	3100
İZMİR BUCA TİCARET ANADOLU SCHOOL	1200	3900	3900
İZMİR BUCA 23 NİSAN SCHOOL	820	300	300
	TOTAL PRESSED PAPER= 22.320		

**COST REPORT FOR THE PAPER AND CLASS BOOKS KEPT FOR THE
STUDENT ABSENCE IN**

2010-2011 EDUCATION YEAR FOR THE IZMIR KARATAS HIGH SCHOOL

ANNUAL CLASS BOOK COSTS:				
		PRINTING COST FOR 1 CLASS BOOK	TOTAL	
COST OF 30 CLASS BOOKS FOR THE MORNING STUDENTS		5.00 TL	30X5.00 =150.00 TL	
COST OF 30 CLASS BOOKS FOR THE AFTERNOON STUDENTS		5.00 TL	30X5.00 =150.00 TL	
		NET TOTAL	300.00 TL	
PAPER COST FOR THE ANNUAL STUDENT ABSENCE COSTS:				
STUDENT NUMBER IN THE SCHOOL	NUMBER OF ABSENCE REPORTS SENT TO THE ADDRESS IN ONE YEAR	YEARLY PAPER TONER PRINTING COST	COST OF 1 PIECE OF PAPER	COST OF SENDING 1 POST
1560	3700	850.00 TL	0.10 TL	1.30 TL
		TOTAL: 850.00 TL	TOTAL:0.10X3 700= 370.00 TL	TOTAL:1.30X3 700=4.810.00 TL
		NET TOTAL:	6.030.00 TL	
DEVICE COST MOUNTED ON 1 CLASS:				
NUMBER OF MOUNTED DEVICES	COST OF 1 DEVICE	TOTAL		
15	350.00 TL	5.250.00 TL		
	NET TOTAL:	5.250.00 TL		
	NET TOTAL FOR THE	6.330.00 TL		

	ANNUAL COSTS			
	COST OF DEVICES TO BE MOUNTED IN 1 CLASS	5.250.00 TL		

THE NUMBER OF TREES SPENT PER PERSON IN THE WORLD	7	49 Billion Per Year
THE NUMBER OF TREES CUT FOR CIGARETTE PAPER IN A YEAR	100 BILLION	THIS MEANS DESERTIFICATION OF 16 BILLION HECTARES
THE AMOUNT OF 1 TONNE PAPER RECYCLING PER YEAR AND RECOVERY QUANTITY IN OUR COUNTRY (dollars)	APPROXIMATELY 700-1000 USD	
IN A YEAR APPROXIMATELY PAPER CONSUMPTION IN ISTANBUL ONLY (TONNE)	450.000 TONNE	

4. Conclusions

When we approach this project with a plain logic, that is, if the school book will be gone on using with the cost to spend for only one device, the expenditure will rise higher.

It mustn't be forgotten that the life of this device has 12 year life. That means reducing all the works of administrators and teachers and abolishing all the unnecessary expenditures related to the classical roll call systems.

And this means economizing the process of roll call in behalf of students as well.

The student will be able to control their own absenteeism.

All the subjects processed can be followed at the school statistically.

If we could recover the trees with 450 000 tonnes in Turkey, the wooden area of 38 million m² would not disappear.

評語

1. A very complete project. It is environmentally friendly and has been deployed in many classes.
2. Please conduct “research” to understand (obtain feedback) the usefulness/ ease- to use/ future improvement directions.