

CHAPTER 4

RESULTS AND DISCUSSION

4.1 Introduction

As mentioned in the previous chapter, this project consist two parts to accomplish the project. There are software and hardware parts. Software is the part that used VB 6.0 to communicate with the hardware. The hardware is the circuit that used as the detector. Both parts will be uniting to achieve the Baby Monitoring System in Nursery.

Here, the result for both parts will be shows part by part to see the outcome of the project. However, the both parts need to be joining together as mentioned to see how the project is function at the nursery as intended.

4.2 Software Result

Software result is come from the VB 6.0 that used to communicate with the detector circuit. Here, the result will be explained in detail with the form made by the software. The form is actually the page that will link from one form to another form in the system.



Figure 4.1 : Opening Form

Figure 4.1 shows the opening form for the Baby Monitoring System in Nursery. At first when the user open the system in the nursery, opening form will appear and loading. The loading will just take a few second. This form is the introduction form when entering the system. It shows the system is loading and then it will enter to the sign in form.

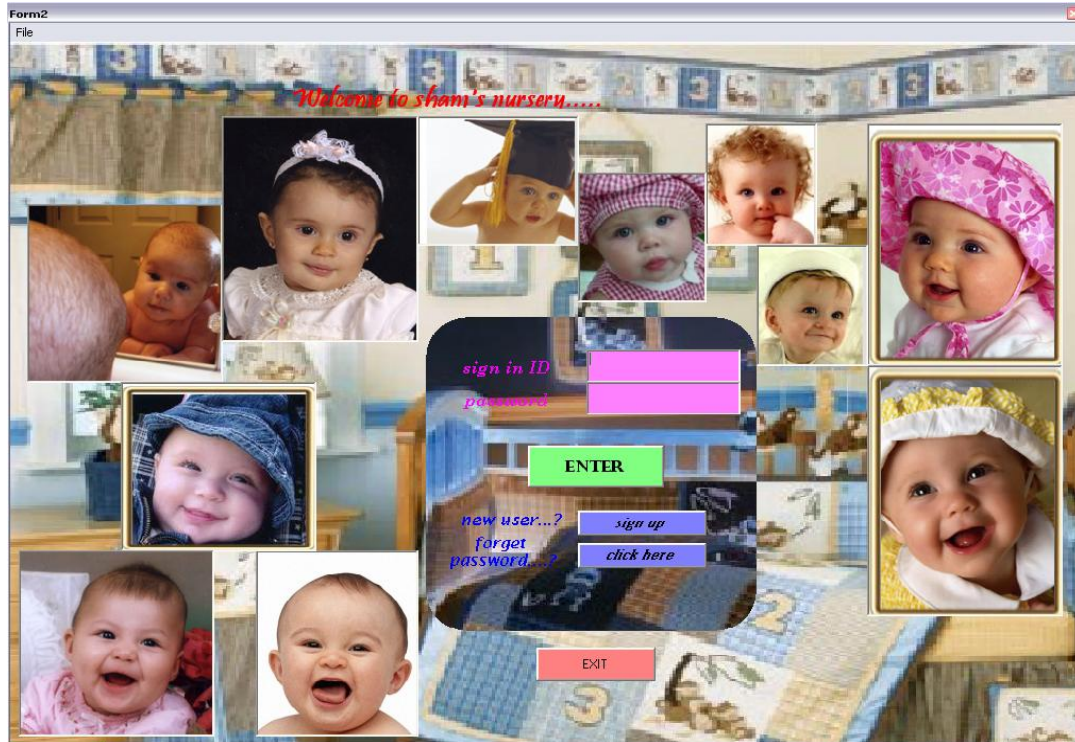


Figure 4.2 : Sign in ID Form

Figure 4.2 shows the sign in ID form. The baby sitter need to sign in first to entering the whole system. This sign in form need the baby sitter to enter their baby sitter ID and the password. If the password is not match, the system would not allow the user to use the system. However, I the baby sitter forget their password they can click on the forget password button to get back their password.

If the user or baby sitter is a new comer and does not have an account ID, they need to sign up first at the sign in form by clicking at the sign up button. If the baby sitter wants to quit the signing, they can just click the exit button. Then, the system will close.

Form3

please fill in the detail...

SIGN IN FORM

SIGN IN ID	<input type="text"/>
PASSWORD	<input type="text"/>
VERIFY PASSWORD	<input type="text"/>
FIRSTNAME	<input type="text"/>
LASTNAME	<input type="text"/>
SECRET QUESTION	<input type="text"/>
ANSWER	<input type="text"/>

SAVE

BAK TO SIGN IN PAGE

Figure 4.3 : Sign Up Form

Figure 4.3 shows the sign in form. This form is the form that the baby sitter needs to fill in if they do not have an account ID. They need to fill in the detail to create the new ID. After fill in the detail, click the save button to create the new ID and then they need to go back to the sign in page to enter the system.

Sometime as a human being it is normal when the password is forgotten for the ID. This is will not be a problem to the baby sitter. They will get back their password. Baby sitter just need to click to the forget password button to get their password back.

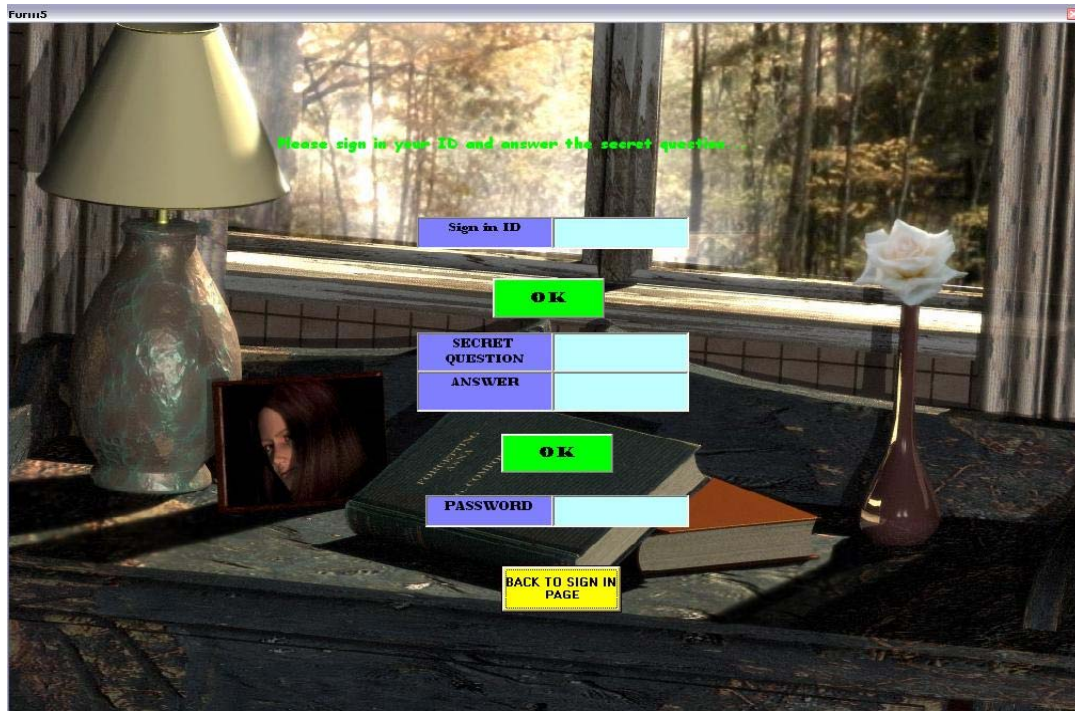


Figure 4.4 : Forget Password Form

Figure 4.4 shows the forget password form. The baby sitter need to key in first their ID and then click the OK button. Then, the secret question will appear at the form. The secret question is the question that they fill in when sign up the form to create their new ID.

Only the baby sitter that fill in the detail to create their new ID on the sign up form know the secret question and the answer. When the baby sitter answer the correct question and click the OK button, the password will appear on the form. Then, to get to the sign in form just click the back to the sign in form button.



Figure 4.5 : Main Page Form

When the baby sitter can easily access the system without any problem, that mean the sign in ID and the password is correct. The main page of the system then will appear. Main page is the page that suppose the baby sitter what will they do. Figure 4.5 shows the main page of the system. Here, there are five buttons that will allow the baby sitter to do. The buttons are :

- i. Go to Nursery
- ii. Account Setting
- iii. Babies Checklist
- iv. Internet
- v. Exit

The main function of the system is to make sure the baby is safe in the nursery. So, for that the baby sitter will go to the nursery's view by clicking the go the nursery's button. Then the nursery's view will appear.

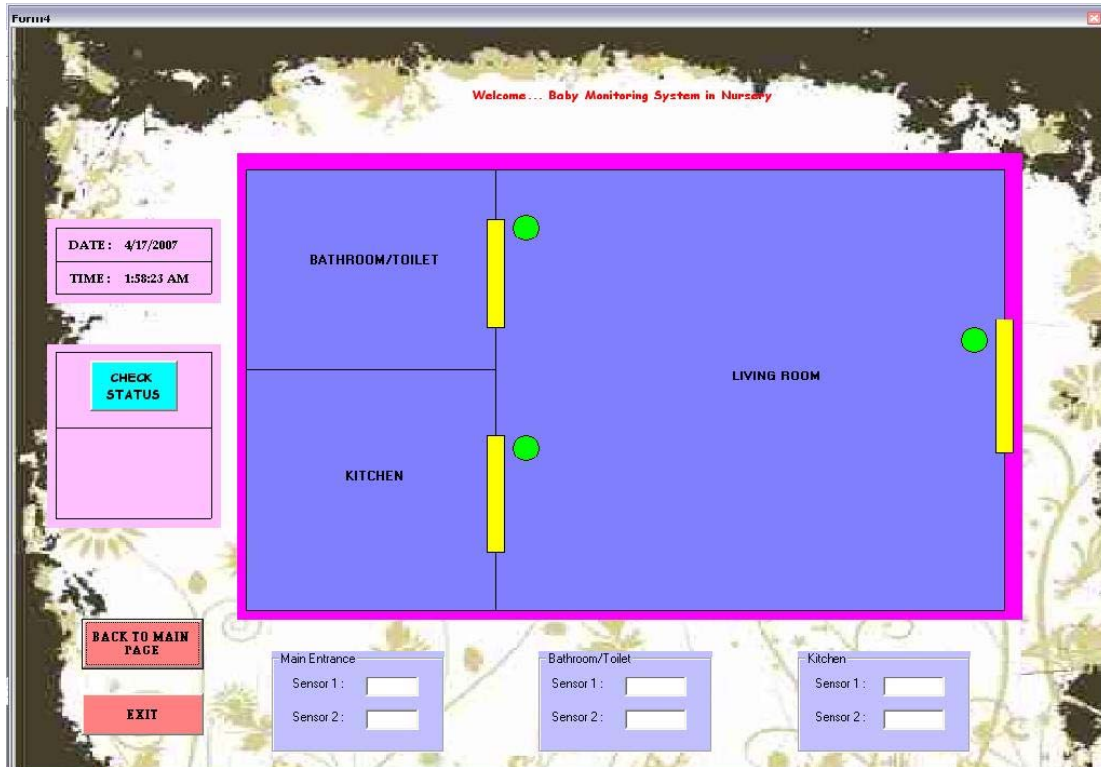


Figure 4.6 : Nursery's View Form

Figure 4.6 shows the Nursery's view form. The nursery's view is just the 2D view from the top of the nursery. It is used as a mapping in the nursery. The baby sitter will check the status of the nursery either there is a problem in the nursery or not by clicking the check status's button at the form. This form will only function when the detector circuit is connected to the system.

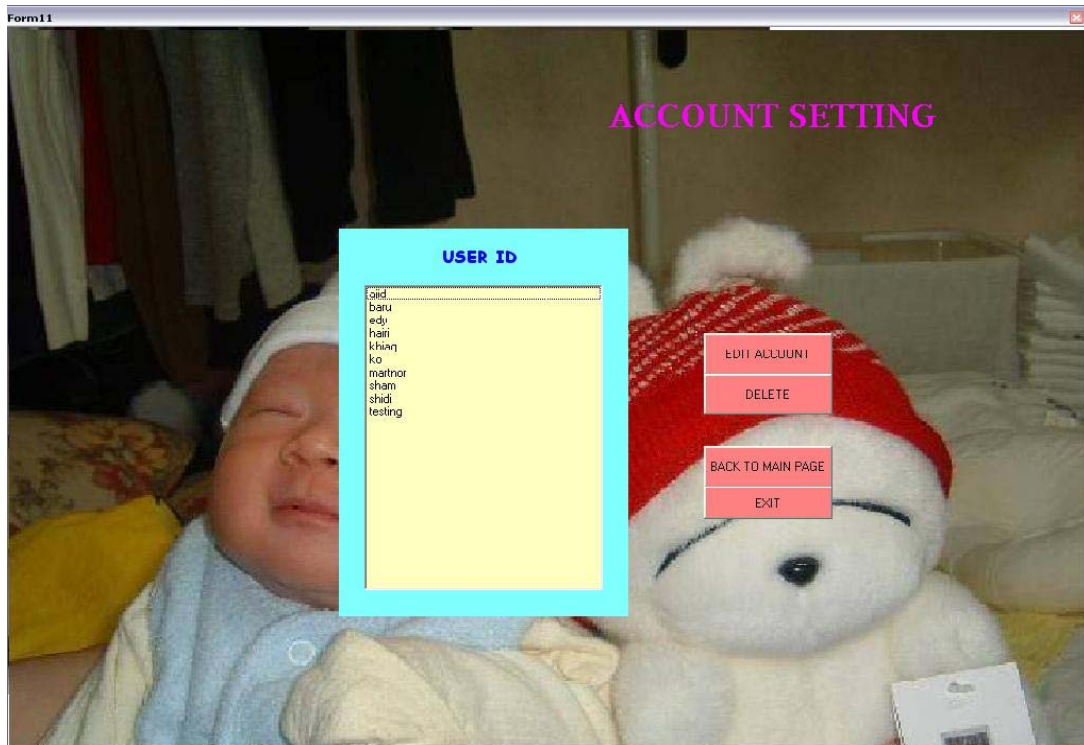


Figure 4.7 : Account Setting Form

Account setting is one of the functions at the main page by clicking the account setting's button. This page allow user to view the entire user ID in the system. Figure 4.7 shows the account setting form. Here, the baby sitter can edit their account by clicking at the edit account button. They can also delete their account from the system if necessary.

Then, if they do nothing at this form they can go back to the main page by clicking the back to main page button or they can just quit by clicking the exit button.

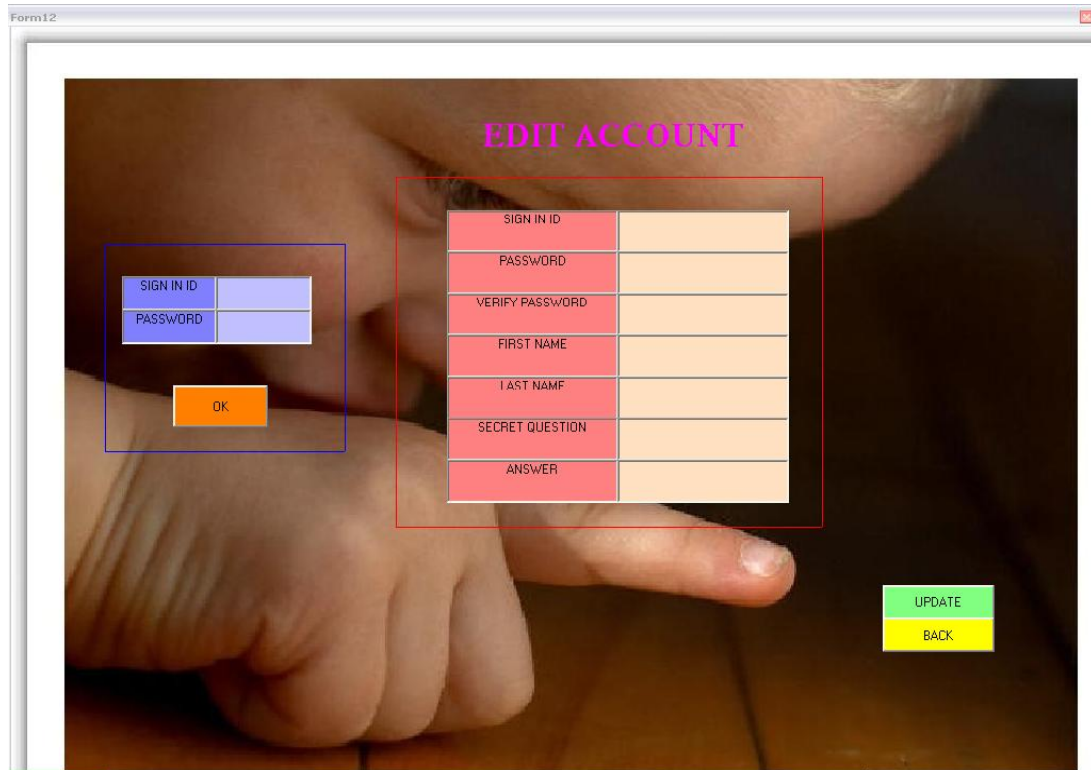


Figure 4.8 : Edit Account Form

Figure 4.8 shows the edit account form. Here, the baby sitter need to key in their ID and password to edit their account first. After key in the ID and the password the detail of information of the baby sitter will appear. They can edit their account here. Actually, this form is used to change the baby sitter password.

After edit the account, click the update button to update the information that was edited. Then, if they want to go back to the main page just click the back button.

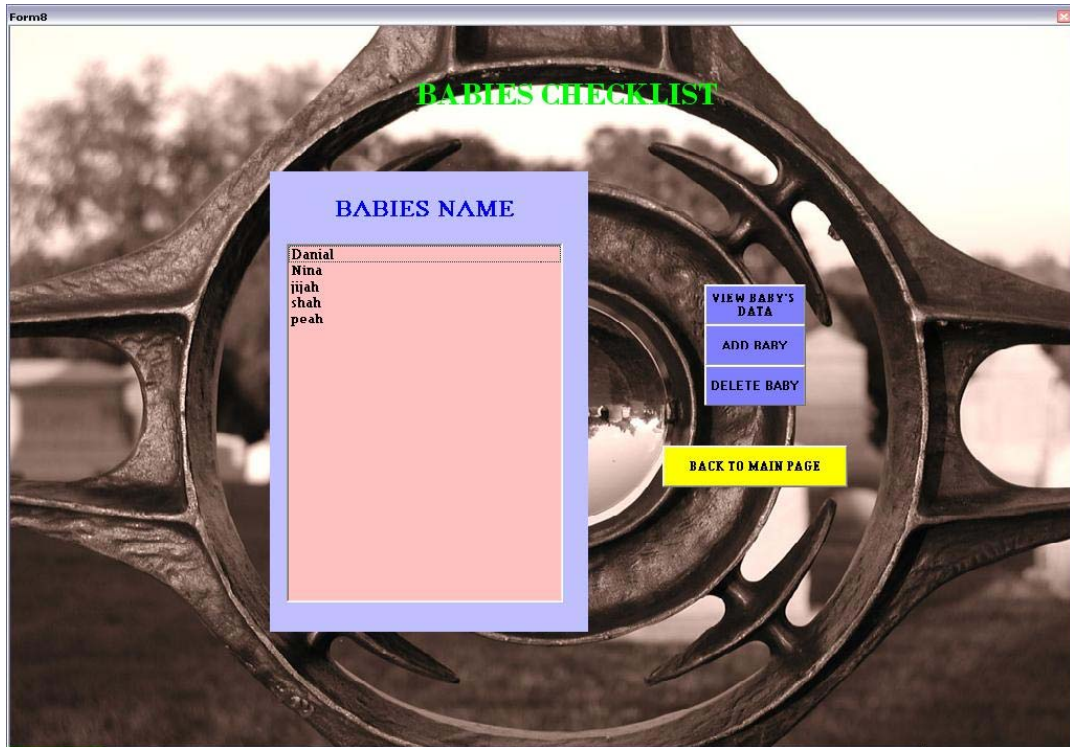


Figure 4.9 : Babies Checklist Form

Figure 4.9 shows the babies checklist form. It is also one of the functions at the main page. Here, the form will view the entire babies name in the nursery. Then, all details about the babies can be easily got from the view baby's data button. If there have new baby come to the nursery, baby sitter will register the baby here on the system by clicking the add baby's button. Here also, the baby sitter can also delete the baby's data in the system if necessary.

The screenshot shows a software window titled 'Form7' with a dark blue background. At the top center, the text 'BABIES DATABASE' is displayed in pink. Below this is a toolbar with various icons. The main content area features a table with the following data:

BABY'S NAME :	Daniel
REGISTRATION NO :	070001
CERTIFICATE OF BIRTHS NO :	F123
GENDER :	male
FATHER'S NAME :	Ahmad
MOTHER'S NAME :	Khatijah
ADDRESS :	Kg Wai, KP
PARENT'S CONTACT NO :	012-1234567

On the left side, there is a green input field labeled 'BABY'S NAME' containing the text 'Daniel', with a yellow 'OK' button below it. On the right side, there is a yellow 'BACK' button.

Figure 4.10 : Babies Database Form

Figure 4.10 shows the babies database form. This form will show the detail information about the baby. This form will appear when the baby sitter clicks the view baby data button at the babies checklist form. The baby sitter need to key in the baby's name to view the information about the babies in the nursery.

The most important is the parent's contact number. If there have any problem, the baby sitter can quickly contact the baby's parent by referring to this form.

Form10

ADD BABY'S FORM

BABY'S NAME	
REGISTRATION NO	
CERTIFICATE OF BIRTH'S NO	
GENDER	
FATHER'S NAME	
MOTHER'S NAME	
ADDRESS	
PARENT'S CONTACT NO	

ADD BABY

BACK TO MAIN PAGE

Figure 4.11: Add Baby Form

Figure 4.11 shows the add baby form. This form will be used if there is a new baby come to the nursery. The baby sitter will completed the form by fill in all detail needed in the form. After fill in the detail, the baby sitter need to click at the add baby button and then all the detail will be recorded in the database of the system. Then, to go to the main page just click the back to main page button.

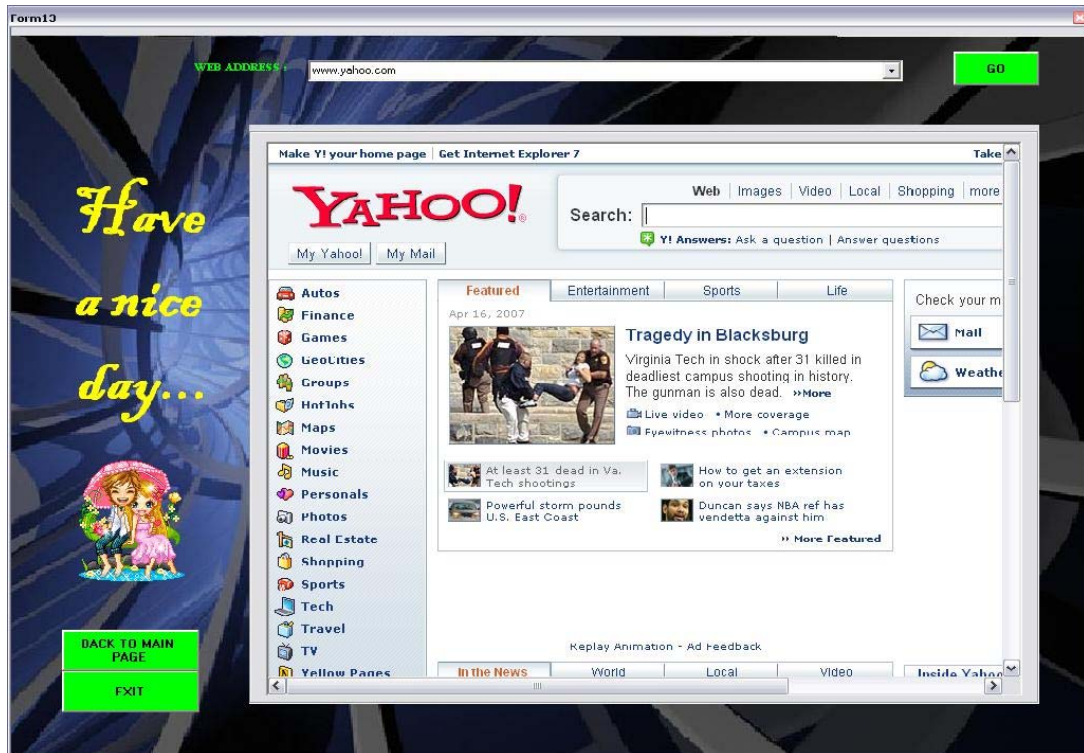


Figure 4.12 : Internet Form

Figure 4.12 shows the internet form. This form is the last function at the main page form by clicking the internet button. This form will allow the baby sitter to surf the internet without closing the system. The system can work even though the baby sitter accesses the internet. The baby sitter just needs to enter the web address that want to surf.

4.3 Hardware Result

Hardware part is the part that detector will detect the baby at the nursery. The sensor is placed on the door or at the entrance. Figure 4.13 shows the detector set that will be placed on the door. LED will light up when there is there is a baby pass by the sensor.

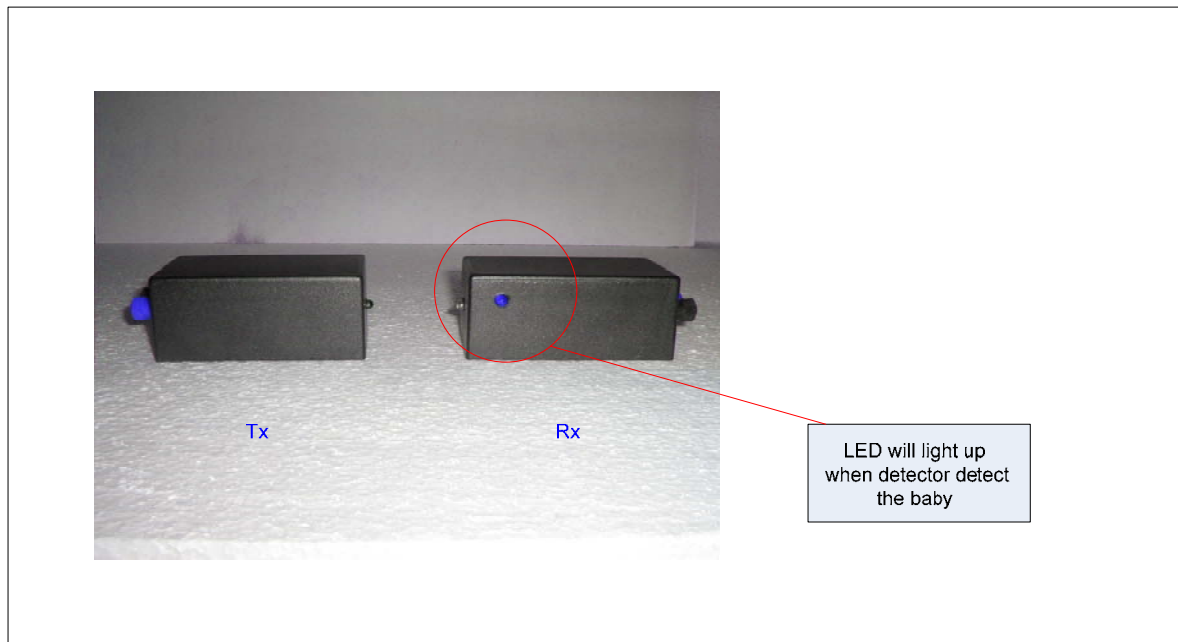


Figure 4.13 : Detector Set

Figure 4.14 shows the sensor placing. Here, two sensors are used. This is because the system will only function and alert when only sensor 1 is detect the baby. If sensor 2 is also detected, the system will not alert.

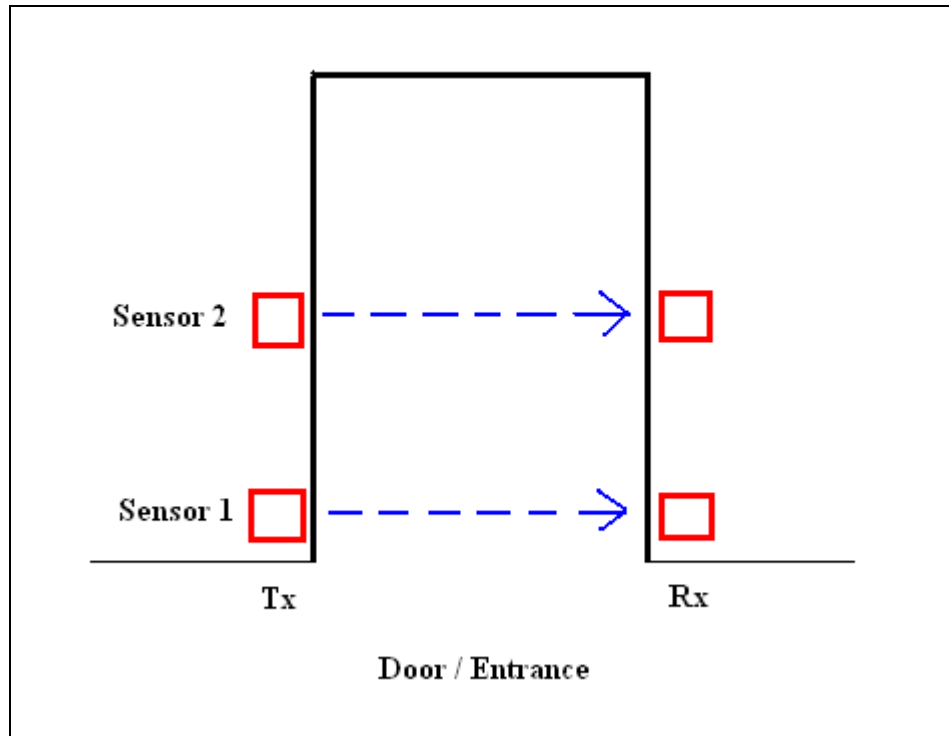


Figure 4.14 : Sensor Placing

Figure 4.14 shows the sensor placing at the door. The sensors are placed in two levels to differentiate the difference between the babies and adult. When the baby pass by the sensor, only sensor 1 will detect. The reason why only the sensor 1 is detected because the baby is shorter than adults. When an adult pass by the sensor, both sensor will detect. At this time, the system will not alert. The main idea of the project is achieved which is the system will only alert the baby sitter when only sensor 1 is detected. So, the system will not be a problem if an adult is entering or out of the nursery.

4.4 Overall Result

In order to make the detector communicate with the software. Both of them are connect together with the parallel port. Parallel port will receive the signal from the detector and the software (VB 6.0) will read the signal at the parallel port.

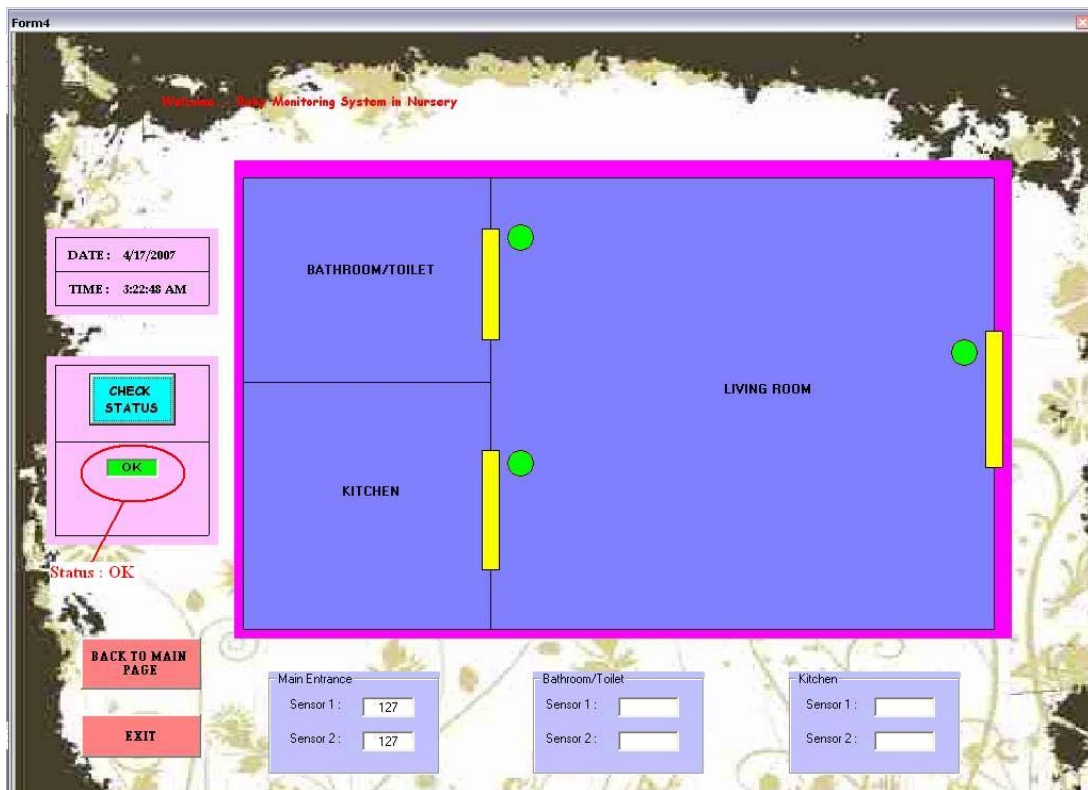


Figure 4.15 : Nursery Status : OK

Figure 4.15 shows the status of the nursery in normal situation which is the detector does not detect any baby. This means that the baby is safe at the time being. When there is normal situation, the OK status will visible, which mean the detector does not detect any babies who are out of safety area.

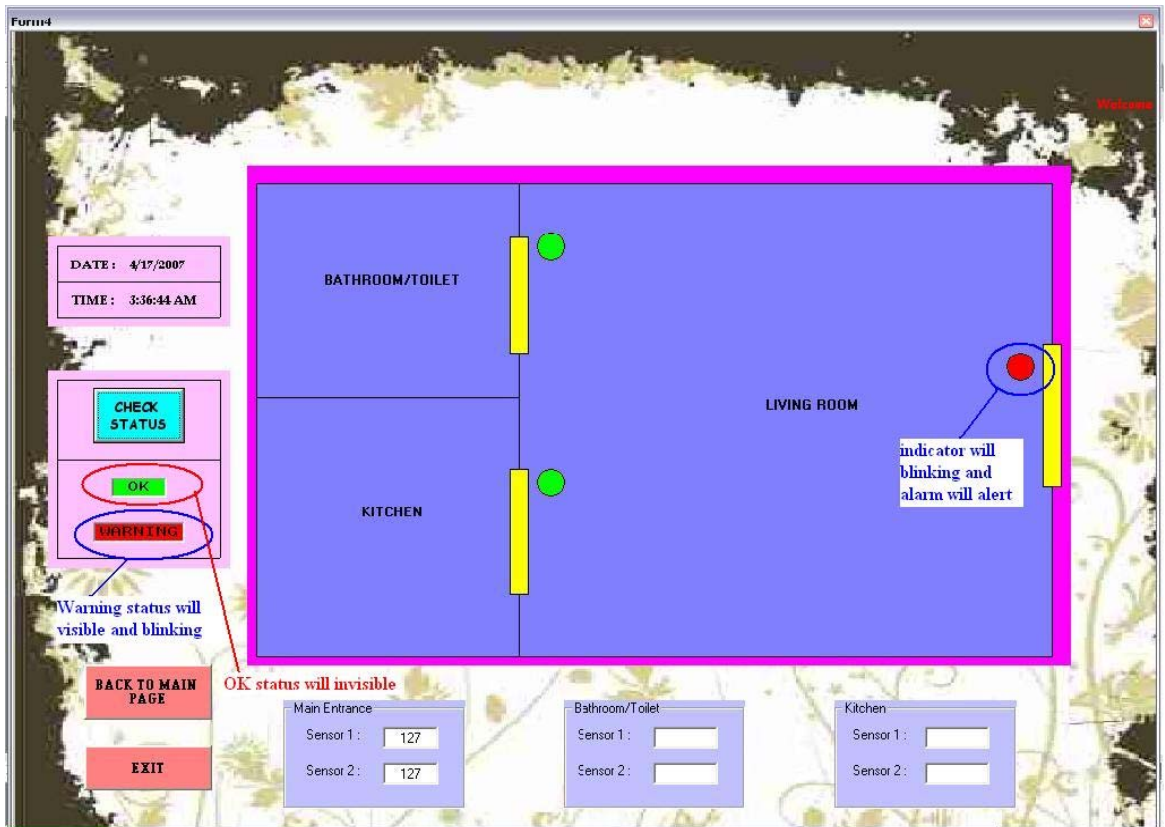


Figure 4.16 : Nursery Status : Warning

Figure 4.16 shows the situation where the detector detects the baby. When the detector detects the baby, the form will display the information and the indicator will blinking with an alarm alerted. The blinking indicator indicates where the situation is happen. Then, the baby sitter will take an immediate action based on the display.



Figure 4.17 : Complete Configuration for Baby Monitoring System in Nursery

4.5 Discussion

The research, study and theories that learned are really help to make sure the achievement of the Baby Monitoring System in Nursery success as planned. At first, there is always being a problem to start the project. With the high patience and tolerance the project was successfully done.

Start with the circuit finding there are a lot of circuits that can be found in the websites and reading. The circuit for the project must match with the requirement that need to interface with the parallel port. The component for the circuit is the factor that the circuit can easily be function properly. Actually, the component for the circuit is simple and easily can be found at the market except for the IR diode. This is because there is several type of IR diode in the market. It is important to make sure the IR diode is match with the circuit, so the IR diode must be tested to make sure it match with the circuit used.

Interfacing the parallel port with VB 6.0 is the method that used in the system. Parallel port that used in this project will cut off the cost in the project. This is because the computer can read the signal from the external circuit through the parallel port without the used of interface device. It is also easy to use. Compared to the serial port there will be an addition by adding the controller board with the computer. This is the disadvantages in using serial port.

There are totally 25 pins at the parallel port and all the pins have their own function. The pins are divided into three groups. It is called data line, status line and control line. Parallel port can only receive maximum 5V from the output of the circuit and if the voltage is more than that it will cause a problem to the computer. It is important to know the circuit that want to interface with the parallel port produce an output 5V or less. This is why the circuit is modified by applying voltage divider to reduce the output voltage at the circuit.

The issue on how the detector can only detect the baby is answered by using two sensors on the door. The level of the sensors is placed in difference level. Sensor 2 will be placed higher than sensor 1, so that the baby can only be detected by sensor 1. The system will only activate when sensor 1 is detect. If both of the sensors are detect, it means an adult pass by the sensor and nothing happen at the display unit. The Baby Monitoring System in Nursery need a password to access the system because it provide the security for the nursery. Only the baby sitter in the nursery with their own ID and password is allowed accessing the system.