

CHAPTER 4

RESULT & DISCUSSION

4.1 Visual Basic.NET Interface

The entrance interface that the parking attendance uses to view and select the desired parking space is programmed in VB.NET. This graphic-friendly language allows me to mask function calls and command lines with colorful buttons, so the full functionality of a rigorous computer program is readily available to any common user at the click on a mouse.

The screen shots of the interface shown below. The maps were created in Paint based on the floor plans of the model parking garage. Filled parking spots are crossed out with a red line. Available parking spaces are marked with either the 'Handicapped Image' for handicapped or 'P' otherwise. The parking spots are assigned identification numbers based on their closeness to the elevator. For example, in real garage, parking spaces 0-2 are reserved for the physically disabled, since these spaces are next to the elevator on each floor. Spot 11 is the furthest spot on the 3rd floor, thus least likely to be picked. Following this numbered priority scheme, the VB.NET program recommends the most logically optimal parking space or the smallest numerical value in this case. The recommended spot is boxed, and the parking attendance may move the cursor freely to select a spot. Simple and clear screens inform the parking attendance when the system is updating or paused for printing.

The VB.NET program has to interface with the parking attendance. The program sends and receives information from the network. The exchange of data is depicted in a flowchart as shown in methodology.

When the parking attendance has chosen a particular parking spot, the VB.NET program sends this information to the next interface. At the same time, the program retrieves the return directions from a table look-up and sends them to a printer via a parallel port to print. The system checks the status of the selected spot and the availability of the path leading to it. Then, the VB.NET program informs the driver to follow the green lights and loops back to its idle screen until the next car arrives. Below is step for parking attendance using Smart Parking system using VB.NET.

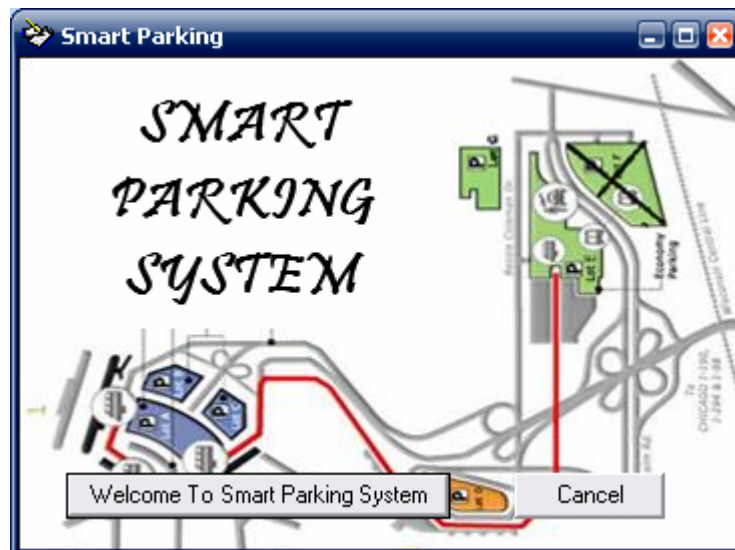


Figure 4.1: Smart Parking System

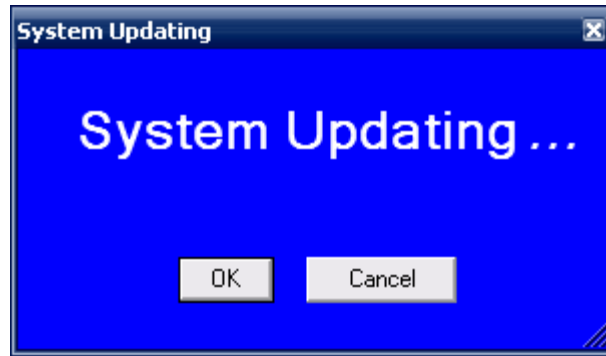


Figure 4.2: System Updating

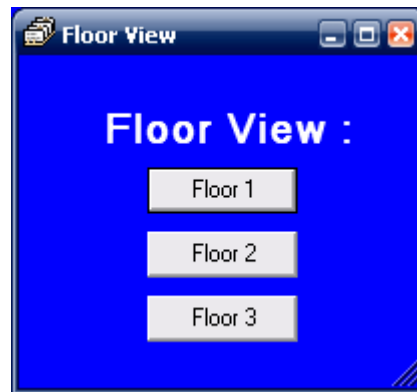


Figure 4.3: Choose Floor View



Figure 4.4: Floor 1 Parking Lot



Figure 4.5: Floor 2 Parking Lot



Figure 4.6: Floor 3 Parking Lot



Figure 4.7: Dialog box appear when clicking 'Handicapped Image' at the Floor Parking Lots.



Figure 4.8: Dialog box appear when clicking 'P' at the Floor Parking Lots.



Figure 4.9: Dialog box appear when clicking 'Had been Parking Image' at the Floor Parking Lots



Figure 4.10: Enter Car No and Time In

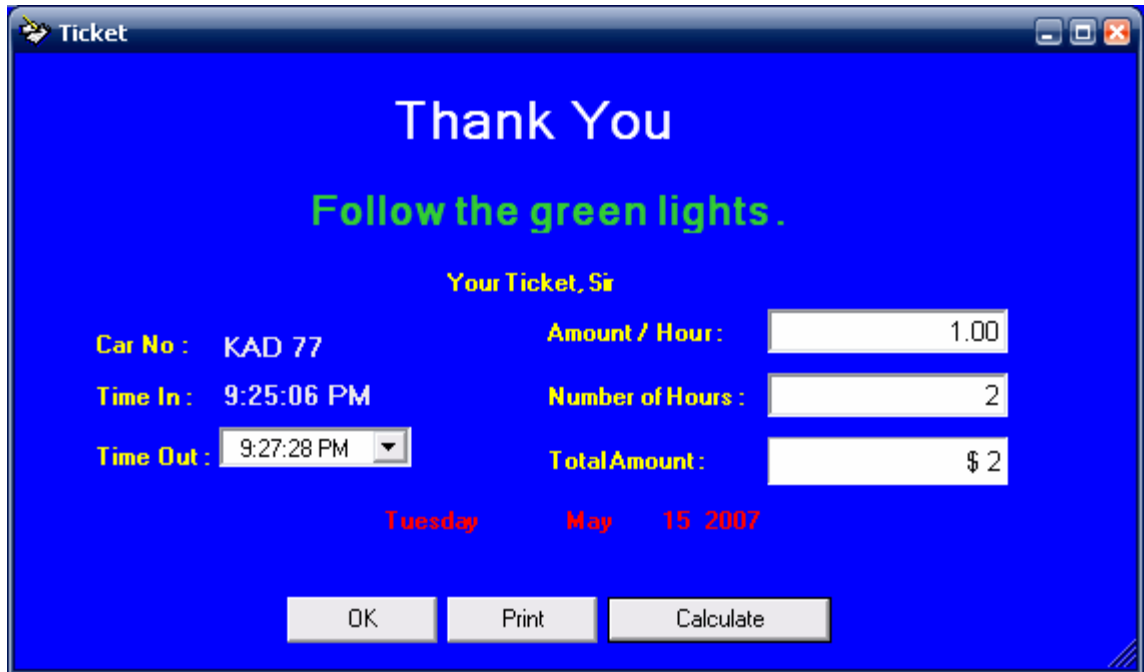


Figure 4.11: Return Ticket & Parking Amount

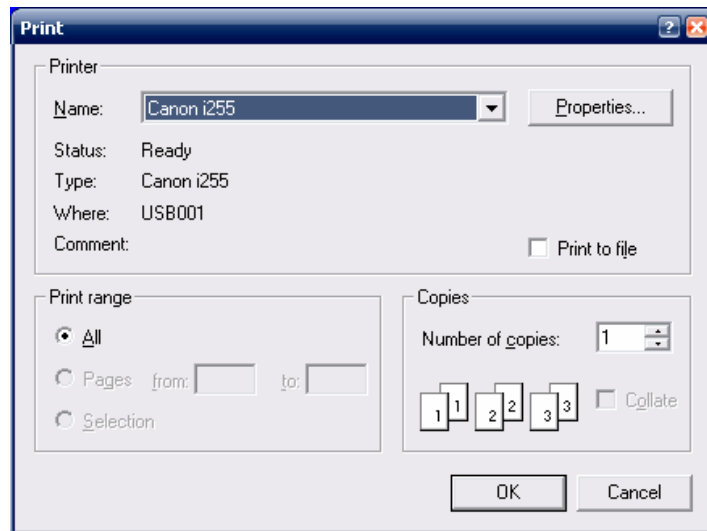
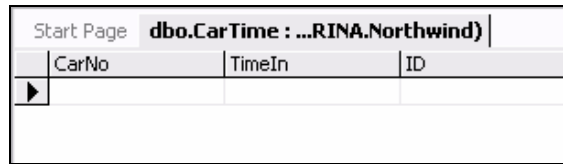


Figure 4.12: Print Dialog Box appear after click button print

4.2 Managing Microsoft SQL Server in VB.NET

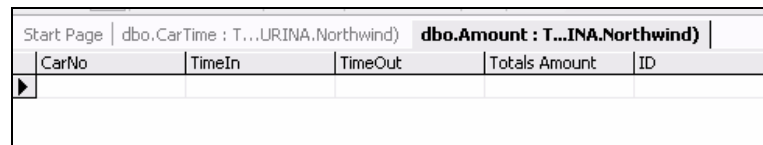
The database of this program is one of the most critical and sensitive things. The construction of the tables and the amount of data will either make or break the entire application. Because of the number of car parking in an urban area, this database will be quite large. Below is the structure of the database.



The screenshot shows a table named 'dbo.CarTime' with three columns: 'CarNo', 'TimeIn', and 'ID'. The table is currently empty.

CarNo	TimeIn	ID
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Figure 4.13: dbo.CarTime: Table



The screenshot shows a table named 'dbo.Amount' with five columns: 'CarNo', 'TimeIn', 'TimeOut', 'Totals Amount', and 'ID'. The table is currently empty.

CarNo	TimeIn	TimeOut	Totals Amount	ID
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Figure 4.14: dbo.Amount: Table

Totals Amount is the exact coordinates of the parking system, which will be used to calculate the amount parking per hour. The TimeIn and TimeOut will be used to calculate which of the time parking per lots. The CarNo is there to indicate if that parking lot is currently available and the ID is just used for reference on the database system. These databases sends back the minimal amount of data to the laptop.