

Part 1

Code:

```
using System;
using System.Collections.Generic;
using System.Data.OleDb;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Assignment06
{
    class Program
    {
        static void Main(string[] args)
        {
            // Create the connection object
            OleDbConnection conn = new OleDbConnection();

            // Set the connection string
            conn.ConnectionString = @"Provider=Microsoft.ACE.OLEDB.12.0;Data
Source=C:\Users\Uver\Documents\NUIG\Semester 2\CT546 .NET Programming\Assignment
06\Assignment06\Assignment06\ParkingDB.accdb;
Persist Security Info=False;";

            // Open a connection
            conn.Open();

            // Create a command object
            OleDbCommand command = new OleDbCommand();

            // Connect the connection to the command object
            command.Connection = conn;

            // A function for printing the DB
            selectAllPrinter(command);

            //Change commandText for insert, execute and print
            command.CommandText = "INSERT into ParkingTable values (4, 'Nissan Micra',
'98LS4482', 'John Smith', 5)";
            Console.WriteLine("Inserted: " + command.ExecuteNonQuery() + " record");
            selectAllPrinter(command);

            //Change commandText for update, execute and print
            command.CommandText = "UPDATE ParkingTable SET Vehicle_Model='Subaru
Legacy', Registration='05C90876' where Student_ID=4";
            Console.WriteLine("Inserted: " + command.ExecuteNonQuery() + " record");
            selectAllPrinter(command);

            //Delete the 4th inserted record so the program is ready to go the next
time
            command.CommandText = "DELETE FROM ParkingTable where Student_ID=4";
            Console.WriteLine("Deleted: " + command.ExecuteNonQuery() + " record");

            // Close the connection
            conn.Close();
        }
    }
}
```

```

        Console.ReadKey();
    }

    static void selectAllPrinter(OleDbCommand command)
    {
        command.CommandText = "SELECT * FROM ParkingTable";
        OleDbDataReader reader = command.ExecuteReader();
        // Print the contents of the reader
        while (reader.Read())
        {
            Console.WriteLine(reader[0].ToString() + "\t" +
                reader[1].ToString() + "\t" +
                reader[2].ToString() + "\t" +
                reader[3].ToString() + "\t" +
                reader[4].ToString());
        }
        reader.Close();
    }
}

```

Brief explanation:

- OleDbConnection object required to connect to an Access DB
- Connection string is required to specify data source and type
- The driver for the access db was a bit tricky, I had to uninstall the 64bit version and install the 32bit for to get the **Microsoft.ACE.OLEDB.12.0** working
 - A Command object is created and linked to the connection
- I wanted to print the contents of the db multiple times so I made a printer function
- The printer function sets the command text to a select all command and the execute reader command returns a reader object which is used to print the fields, then the reader is closed
 - I suspected the reader object only lives for the duration of the method, but seems like a good idea to explicitly close it.
- The command object can be reused for an insert command which is executed as non query.
 - The db is reprinted
 - Command object is reused for an update
- Command object is used to delete the inserted row and reset the db

Screen Shots:

```
Select C:\Users\Uver\Documents\NUIG\Semester 2\CT546 .NET Programming\Assignment 06\Assignment06\Assignment06\bin\Debu...
1      VW Golf 151G1234      Mary Murphy      1
2      Ford Mondeo  161D1329      Tom Hynes      4
3      Toyota Auris  181M03432      Alice Daly     10
Inserted: 1 record
1      VW Golf 151G1234      Mary Murphy      1
2      Ford Mondeo  161D1329      Tom Hynes      4
3      Toyota Auris  181M03432      Alice Daly     10
4      Nissan Micra  98LS4482      John Smith      5
Inserted: 1 record
1      VW Golf 151G1234      Mary Murphy      1
2      Ford Mondeo  161D1329      Tom Hynes      4
3      Toyota Auris  181M03432      Alice Daly     10
4      Subaru Legacy 05C90876      John Smith      5
Deleted: 1 record
```

****Copy and paste the above table for any successive parts to the assignment.**

****When complete save the document as a pdf and submit in a zipped folder with all your code.**