Microsoft Visual C

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01/January/12

NAVITAIRE

An Accenture Company

Case Study

Module Objectives

At the end of this module, you should be able to:

- Explain how this project will be used throughout the course
- Describe the roles and responsibilities of an Application Developer
- Understand case study requirements
- Describe the criteria upon which you will be evaluated

Project Overview

- The application

  An console-based application that provides basic functionality for customer information maintenance.

- The application users

  Sales Clerk

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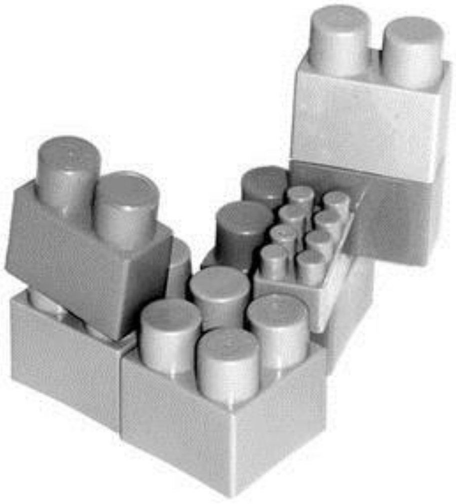
Roles and Responsibilities

- Code application modules based on specifications
- Debug assigned application modules, if necessary
- Participate in the integration of the application
- Inform supervisor of potential delays in reaching milestones and detail the reasons why



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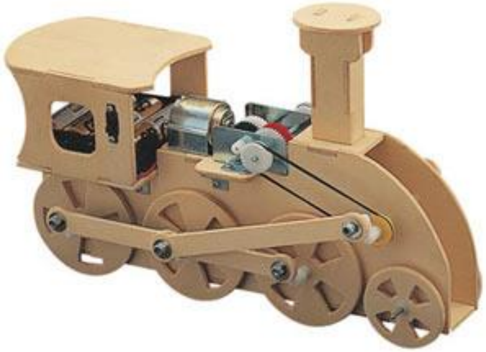
Functional Description (1 of 3)

- The application enables the user to add/view customer demographics. To successfully add customer demographics information, the user should fill out all of the required fields. This form displays the Customer menu to perform the following:

  1. List all customer
  2. Search Customer
  3. Search Customer by Name
  4. Add Customer
  5. Exit

Functional Description (2 of 3)

- If the user selects the first option, the application displays the all customer data that’s stored in a text file.
- If the user selects the second option, the application prompts the user to enter the customer id. If customer id exist, the application then displays customer data.
- If the user selects the third option, the application prompts the user to enter customer name. The application then searches customer data stored in a text file. If name is equal to customer’s first name or last name, the application then displays customer data.



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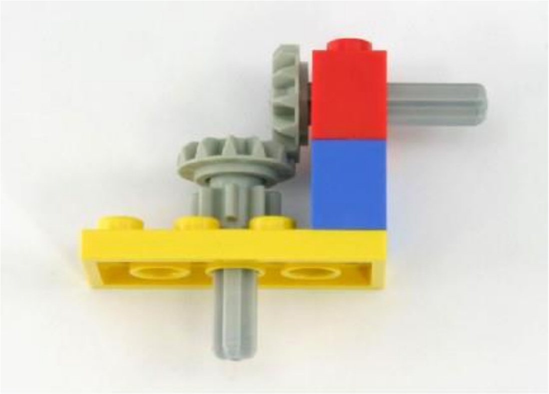
Functional Description (3 of 3)

- If no customer is found when searching by customer id or name, the application displays an error message.
- If the user selects the fourth option, the application then prompt the user to enter customer data and saves that data to the text file.
- The application should validate if the customer id already exists before saving customer data in a text file.
- If the user selects the fifth option, the application displays a goodbye message and exits.



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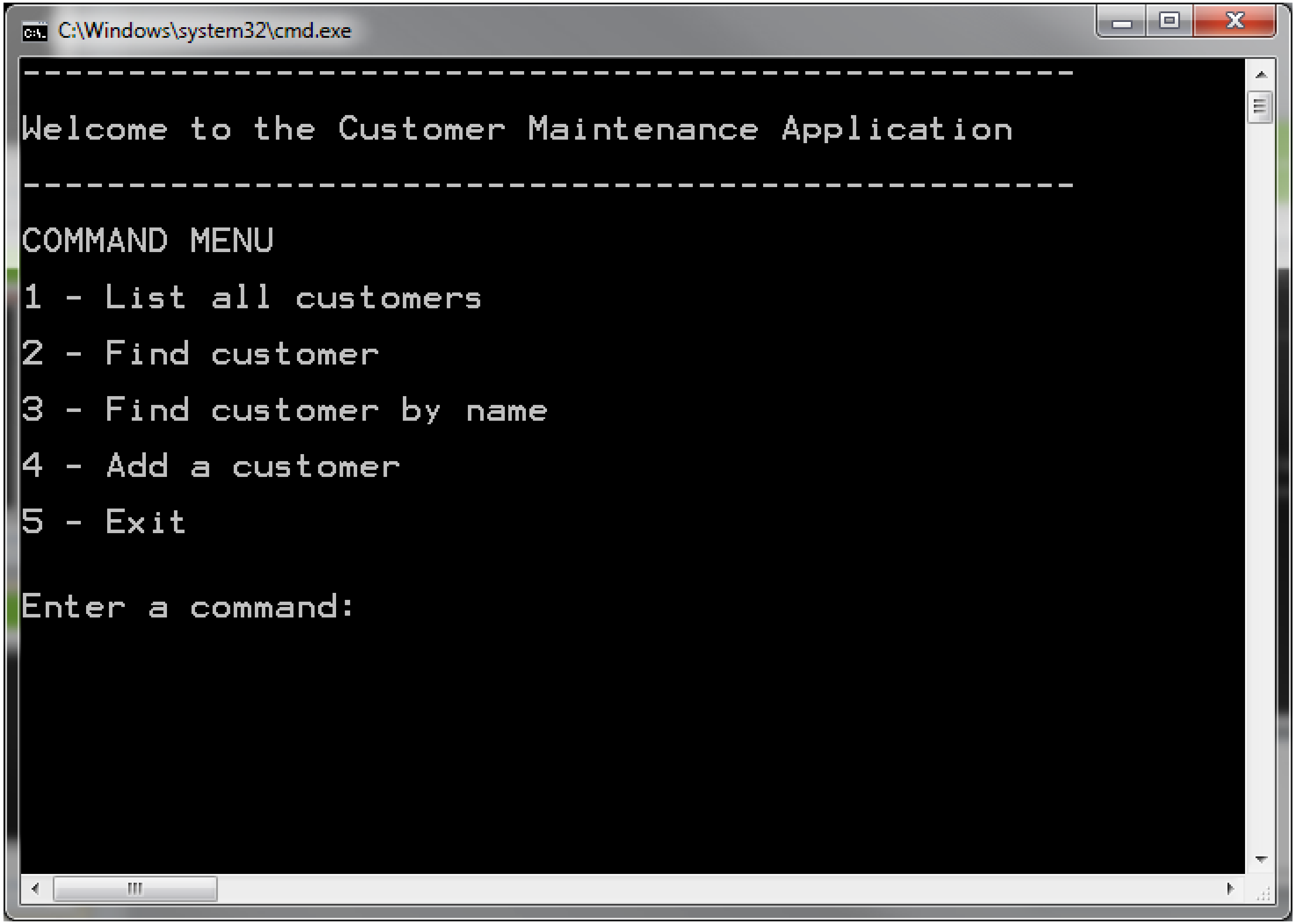
User Interface – Main Screen



```
--------------------------------------------------------------
Welcome to the Customer Maintenance Application
--------------------------------------------------------------
COMMAND MENU
1 - List all customers
2 - Find customer
3 - Find customer by name
4 - Add a customer
5 - Exit

Enter a command:
```

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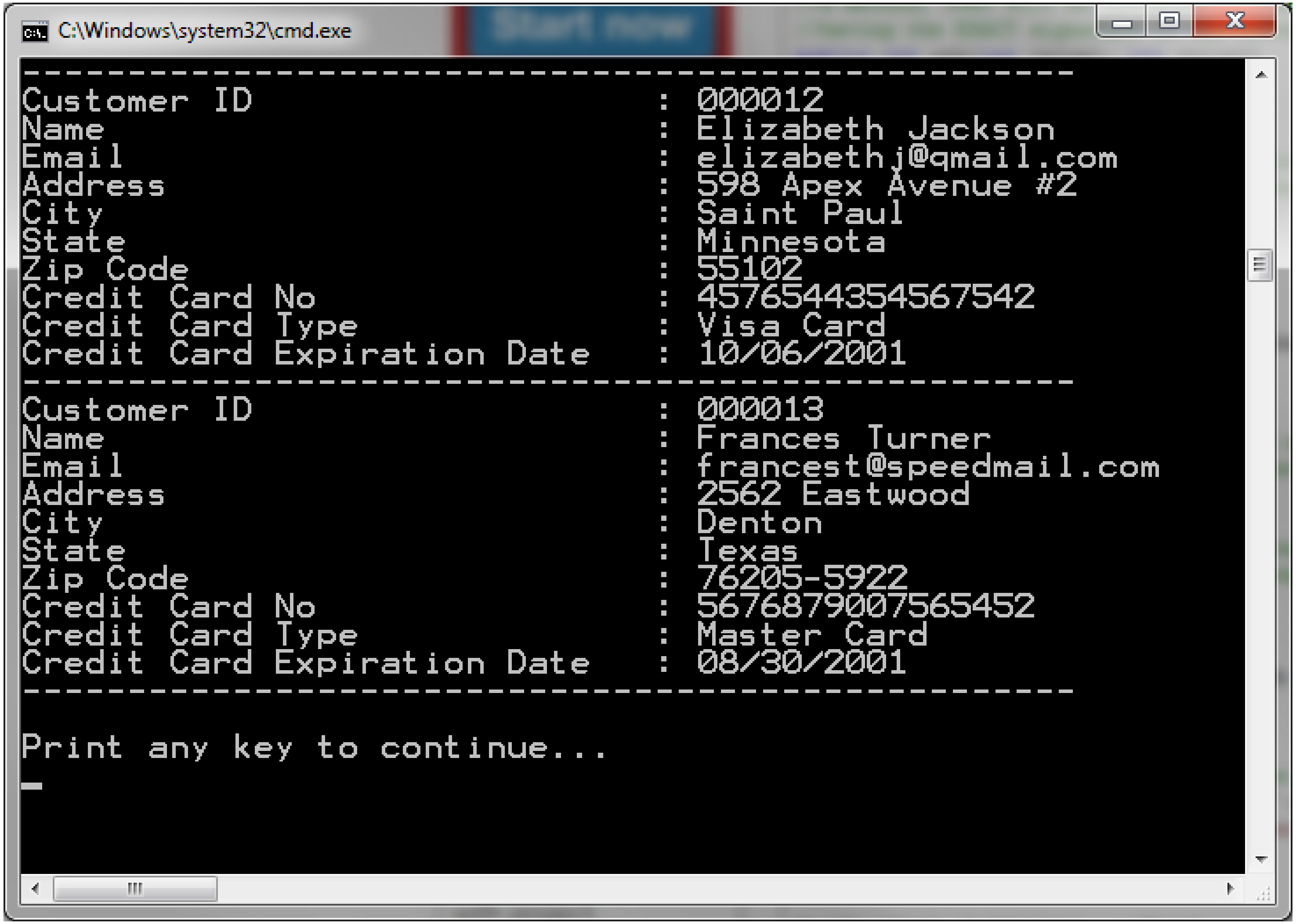
User Interface – List all customers (1 of 2)



```
--------------------------------------------------
Customer ID                   : 000012
Name                          : Elizabeth Jackson
Email                         : elizabethj@qmail.com
Address                       : 598 Apex Avenue #2
City                          : Saint Paul
State                         : Minnesota
Zip Code                      : 55102
Credit Card No                : 4576544354567542
Credit Card Type              : Visa Card
Credit Card Expiration Date   : 10/06/2001
--------------------------------------------------
Customer ID                   : 000013
Name                          : Frances Turner
Email                         : francest@speedmail.com
Address                       : 2562 Eastwood
City                          : Denton
State                         : Texas
Zip Code                      : 76205-5922
Credit Card No                : 5676879007565452
Credit Card Type              : Master Card
Credit Card Expiration Date   : 08/30/2001
--------------------------------------------------

Print any key to continue...
_
```

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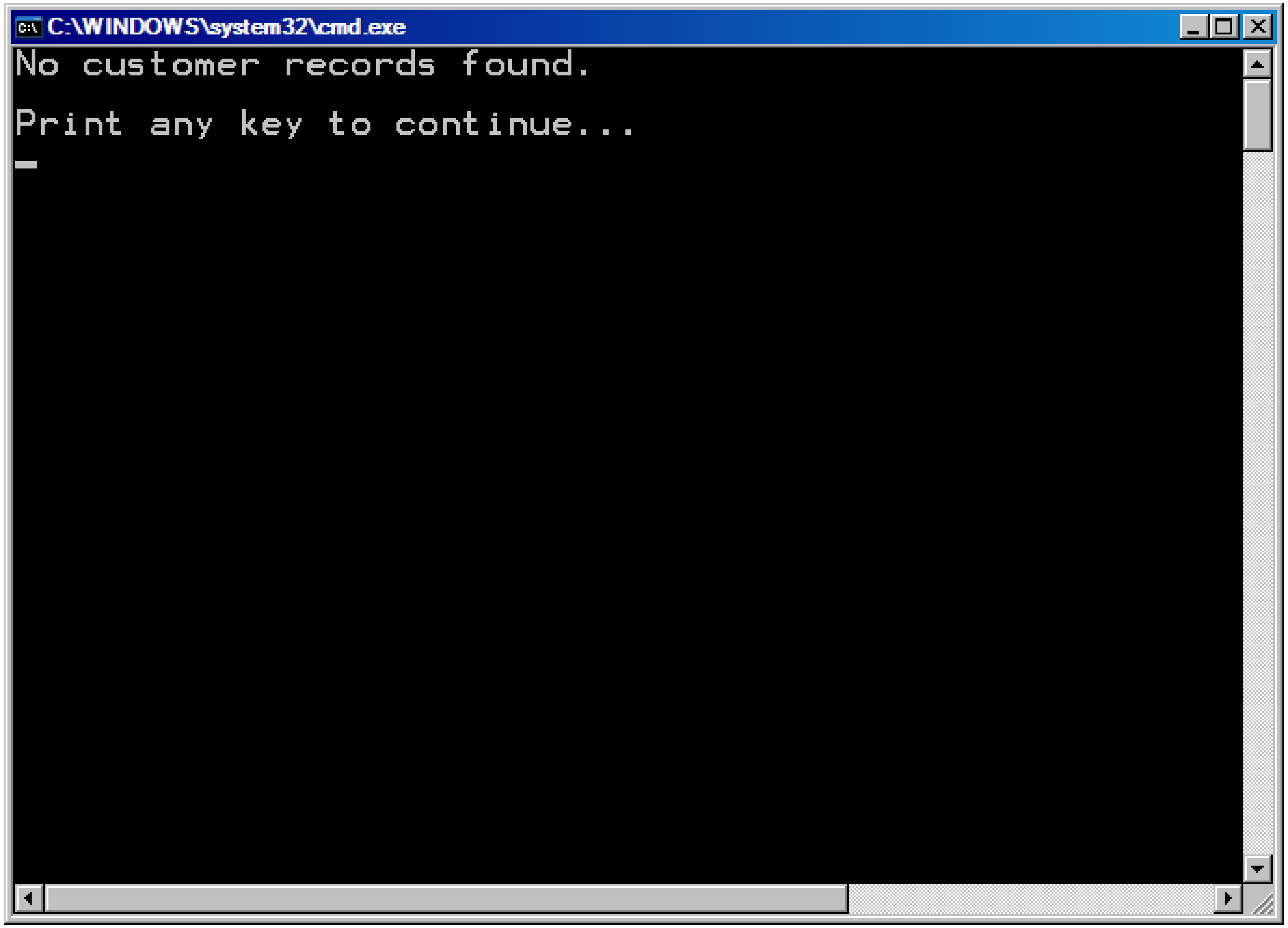
User Interface – List all customers (2 of 2)



```
No customer records found.

Print any key to continue...
_
```

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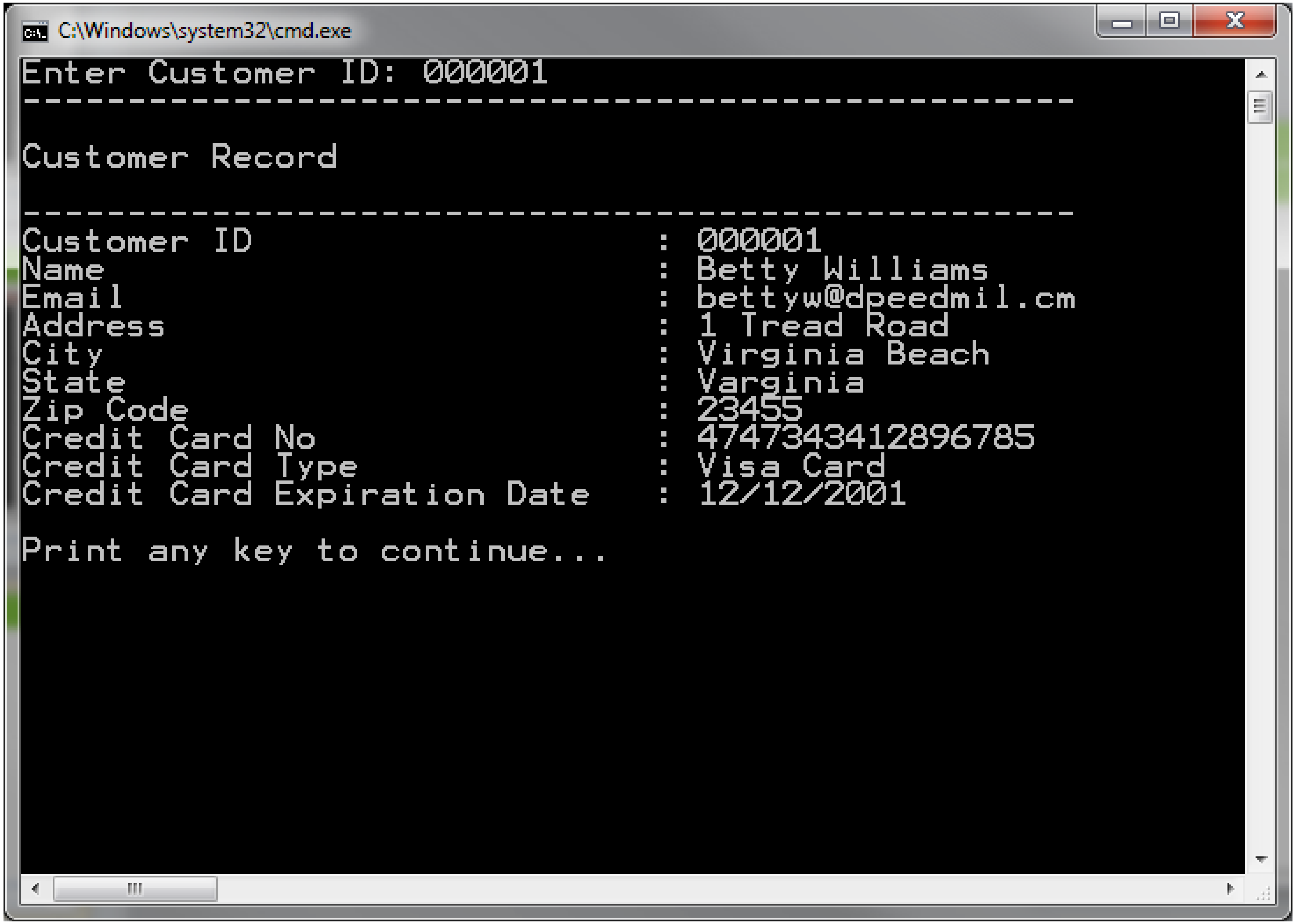
User Interface – Find Customer (1 of 2)



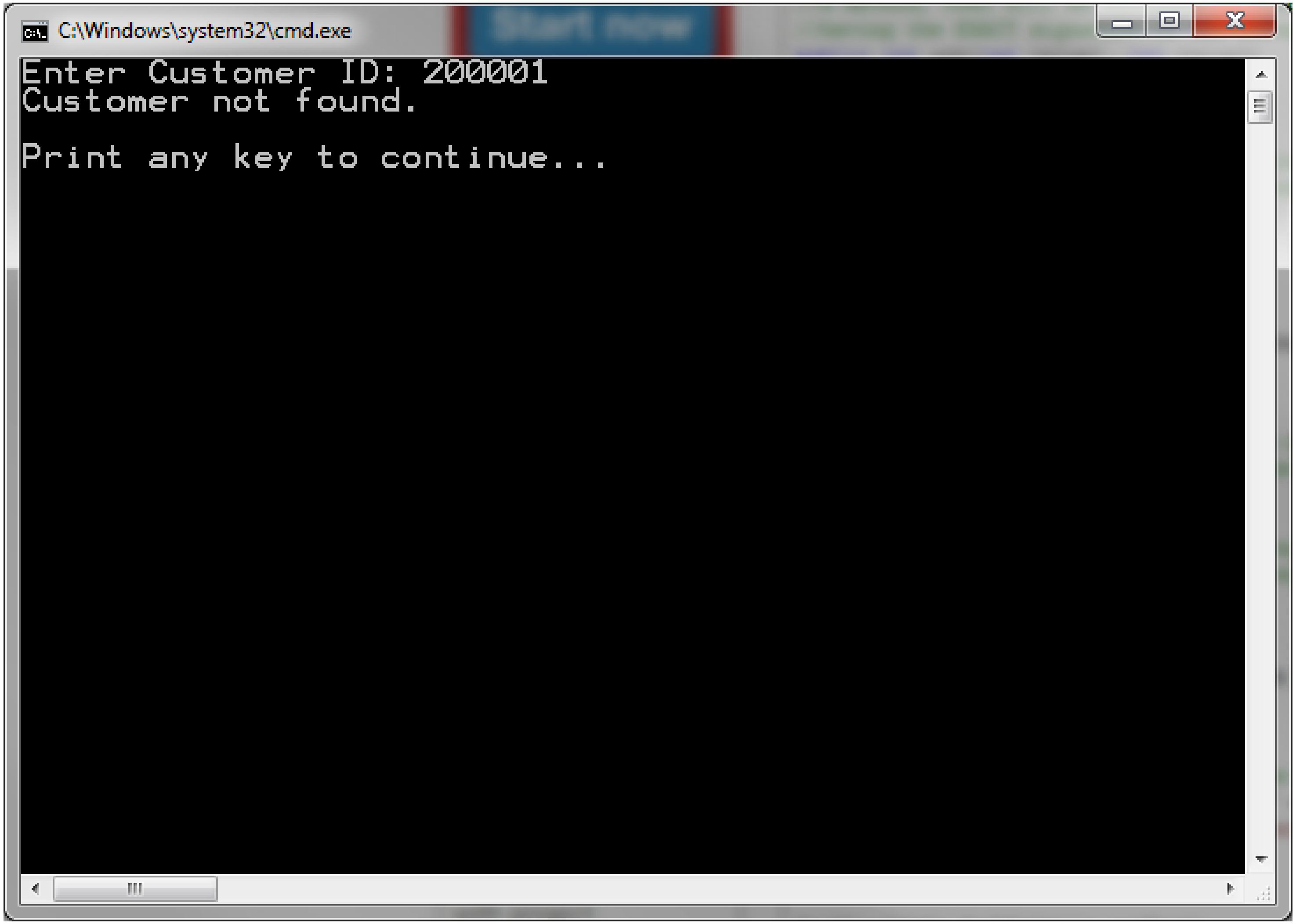
```
Enter Customer ID: 000001
----------------------------------------------------------------

Customer Record

----------------------------------------------------------------
Customer ID                          : 000001
Name                                 : Betty Williams
Email                                : bettyw@dpeedmil.cm
Address                              : 1 Tread Road
City                                 : Virginia Beach
State                                : Varginia
Zip Code                             : 23455
Credit Card No                       : 4747343412896785
Credit Card Type                     : Visa Card
Credit Card Expiration Date          : 12/12/2001

Print any key to continue...
```

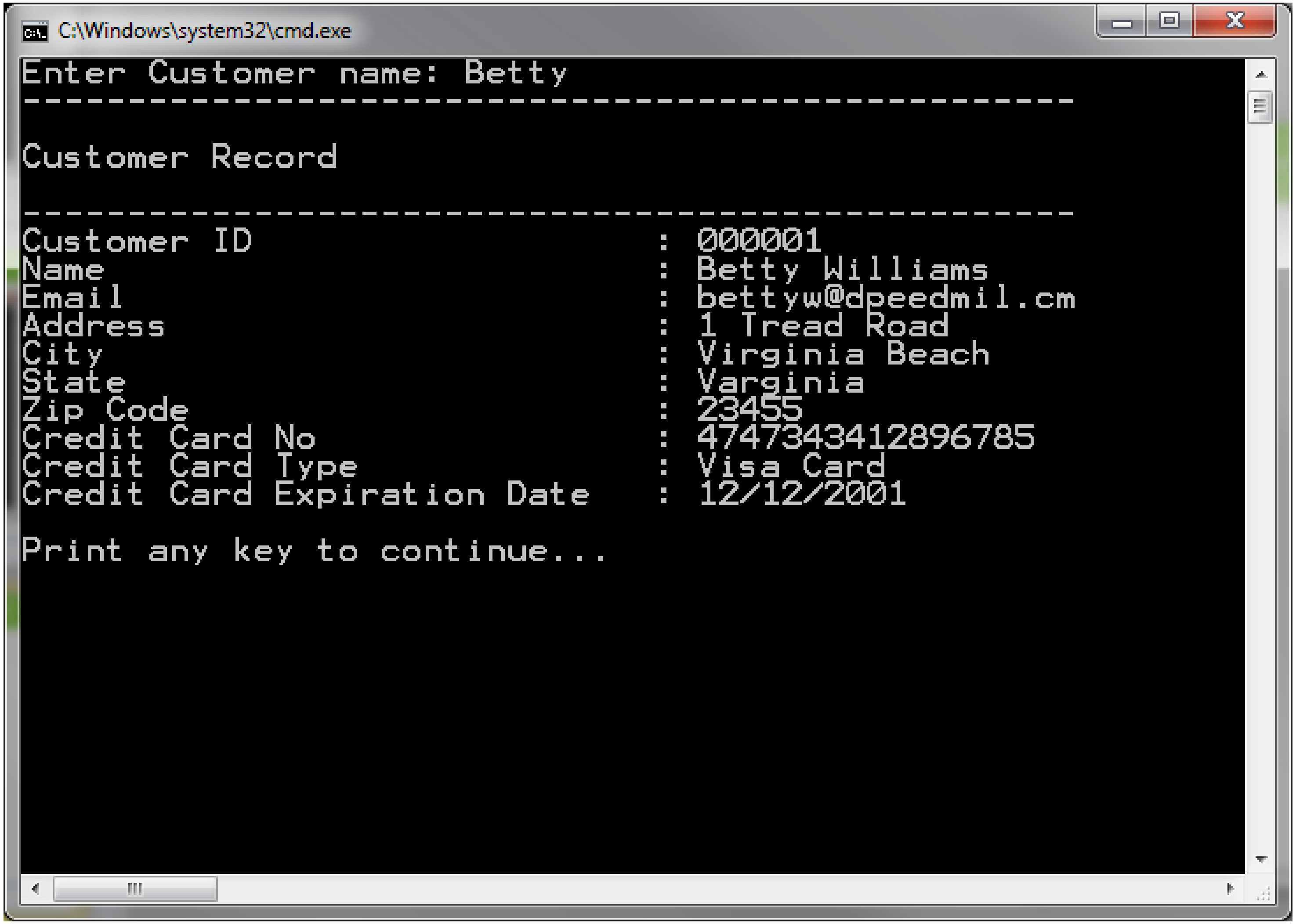
User Interface – Find Customer (2 of 2)



```
Enter Customer ID: 200001
Customer not found.

Print any key to continue...
```

User Interface – Find Customer by name (1 of 2)



```
Enter Customer name: Betty
----------------------------------------------------------------

Customer Record

----------------------------------------------------------------
Customer ID                           : 000001
Name                                  : Betty Williams
Email                                 : bettyw@dpeedmil.cm
Address                               : 1 Tread Road
City                                  : Virginia Beach
State                                 : Varginia
Zip Code                              : 23455
Credit Card No                        : 4747343412896785
Credit Card Type                      : Visa Card
Credit Card Expiration Date           : 12/12/2001

Print any key to continue...
```

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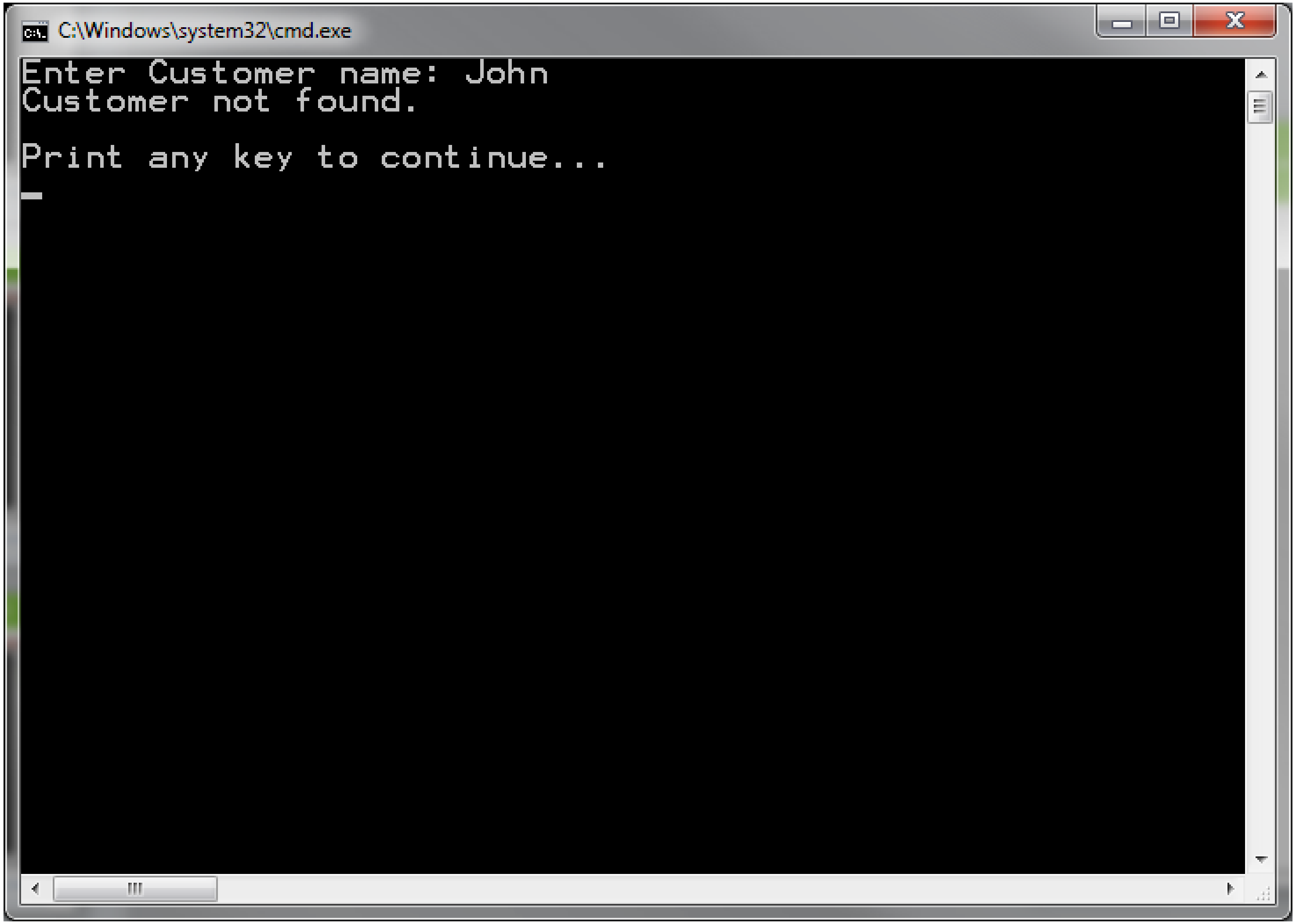
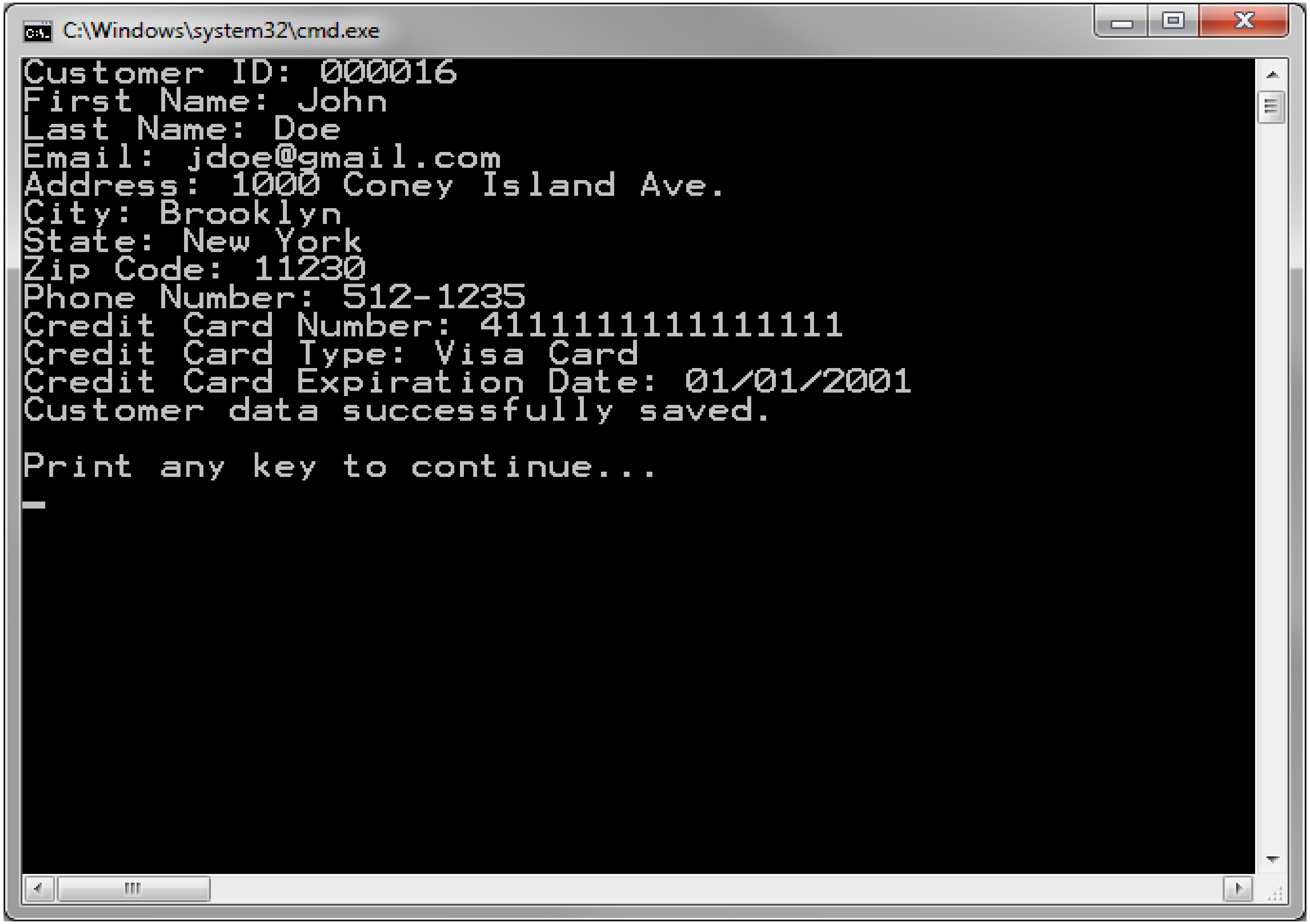
User Interface – Find Customer by name (2 of 2)



```
Enter Customer name: John
Customer not found.

Print any key to continue...
_
```

User Interface – Add a customer (1 of 5)



```
Customer ID: 000016
First Name: John
Last Name: Doe
Email: jdoe@gmail.com
Address: 1000 Coney Island Ave.
City: Brooklyn
State: New York
Zip Code: 11230
Phone Number: 512-1235
Credit Card Number: 4111111111111111
Credit Card Type: Visa Card
Credit Card Expiration Date: 01/01/2001
Customer data successfully saved.

Print any key to continue...
_
```

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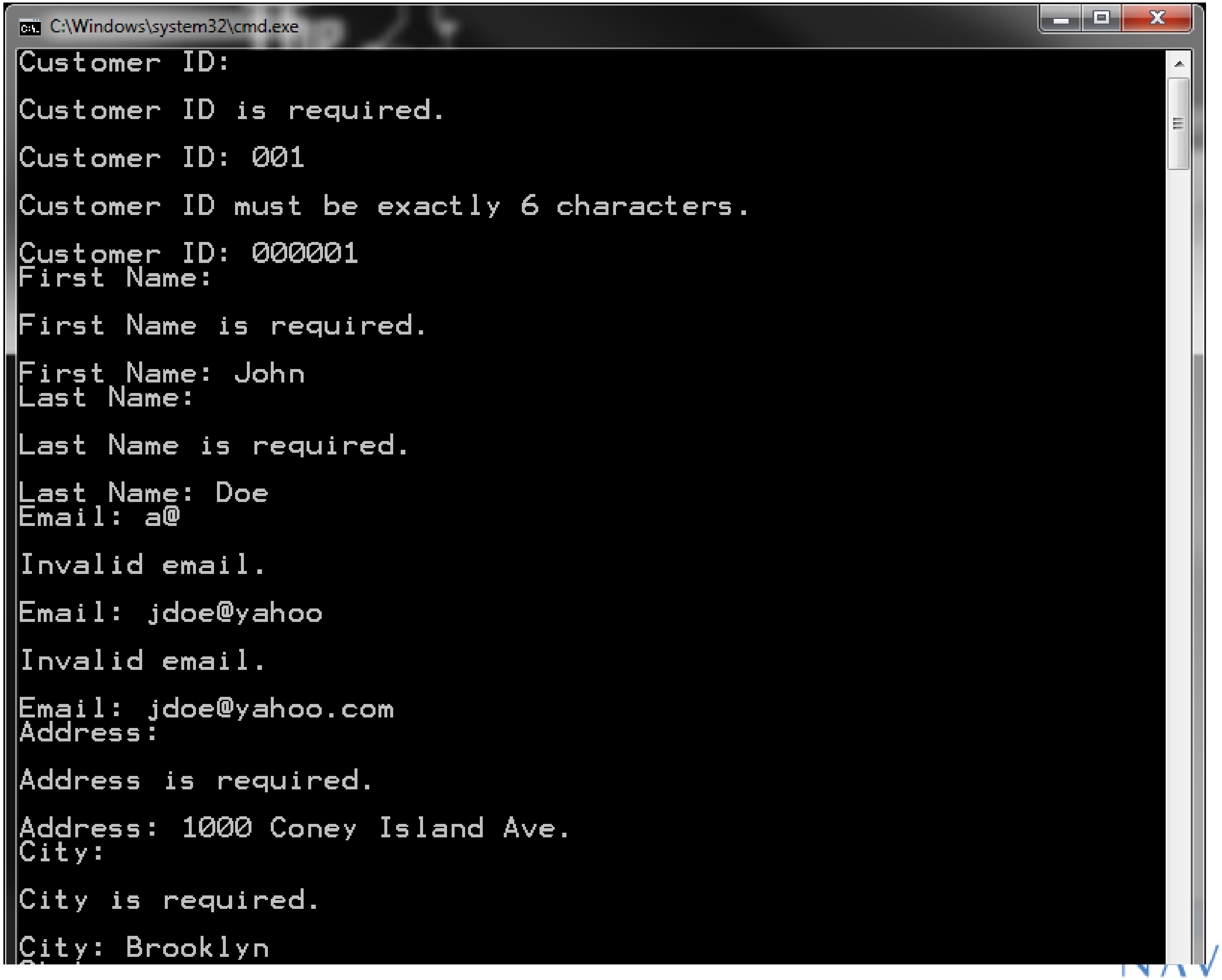
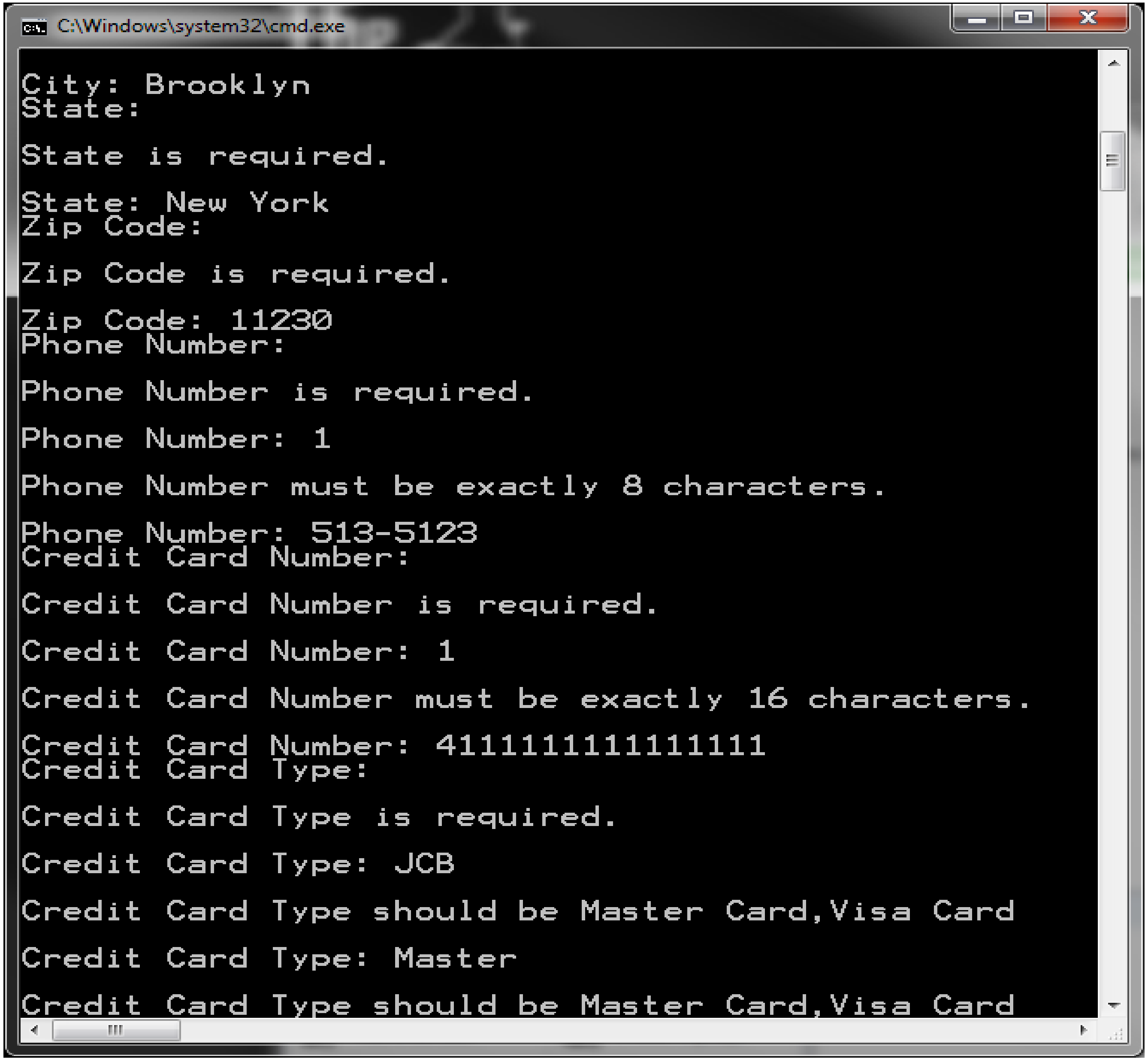
User Interface – Add a customer (2 of 5)



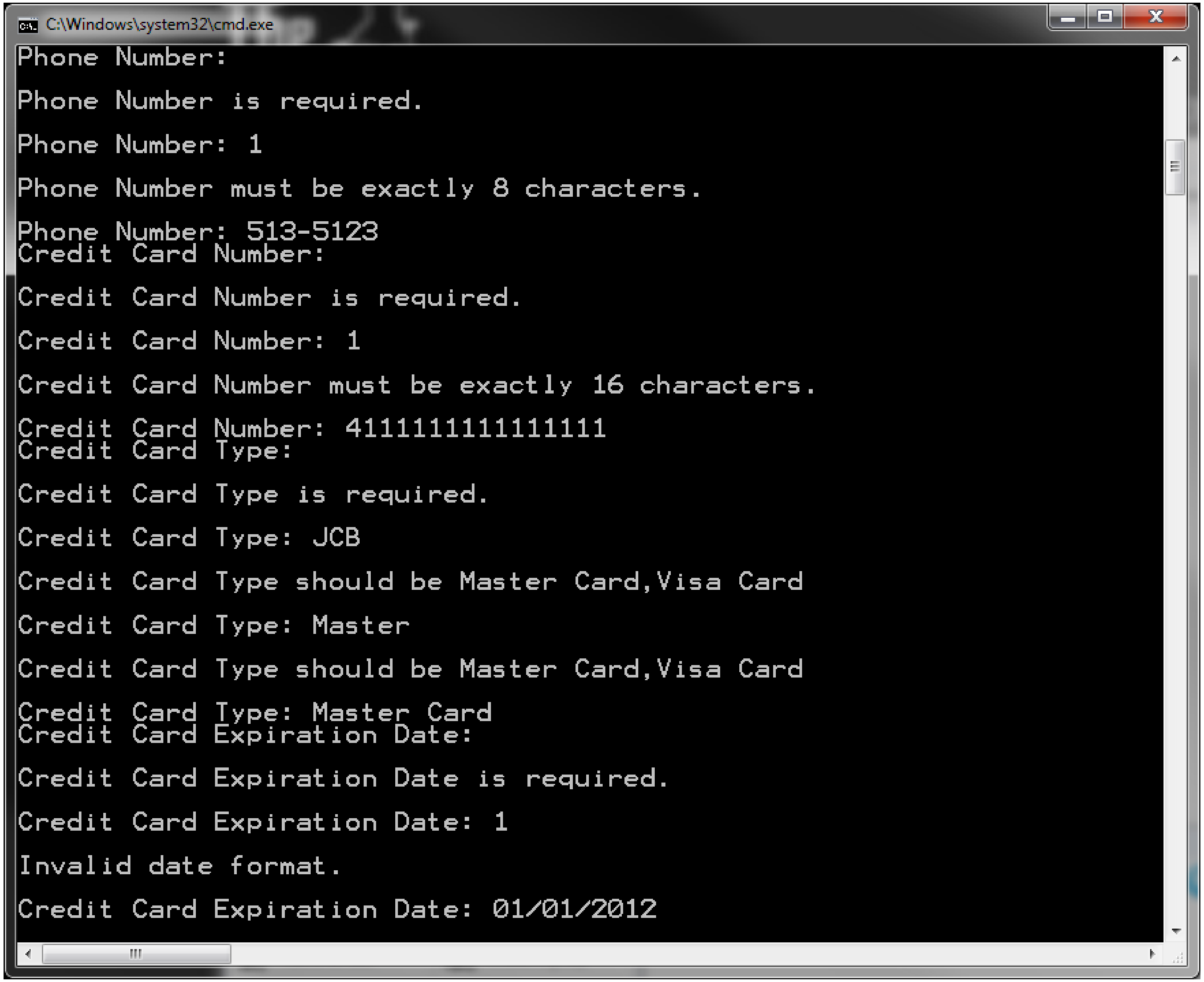
```
Customer ID:

Customer ID is required.

Customer ID: 001

Customer ID must be exactly 6 characters.

Customer ID: 000001
First Name:

First Name is required.

First Name: John
Last Name:

Last Name is required.

Last Name: Doe
Email: a@

Invalid email.

Email: jdoe@yahoo

Invalid email.

Email: jdoe@yahoo.com
Address:

Address is required.

Address: 1000 Coney Island Ave.
City:

City is required.

City: Brooklyn
```

Option 4 – Add a customer (3 of 5)



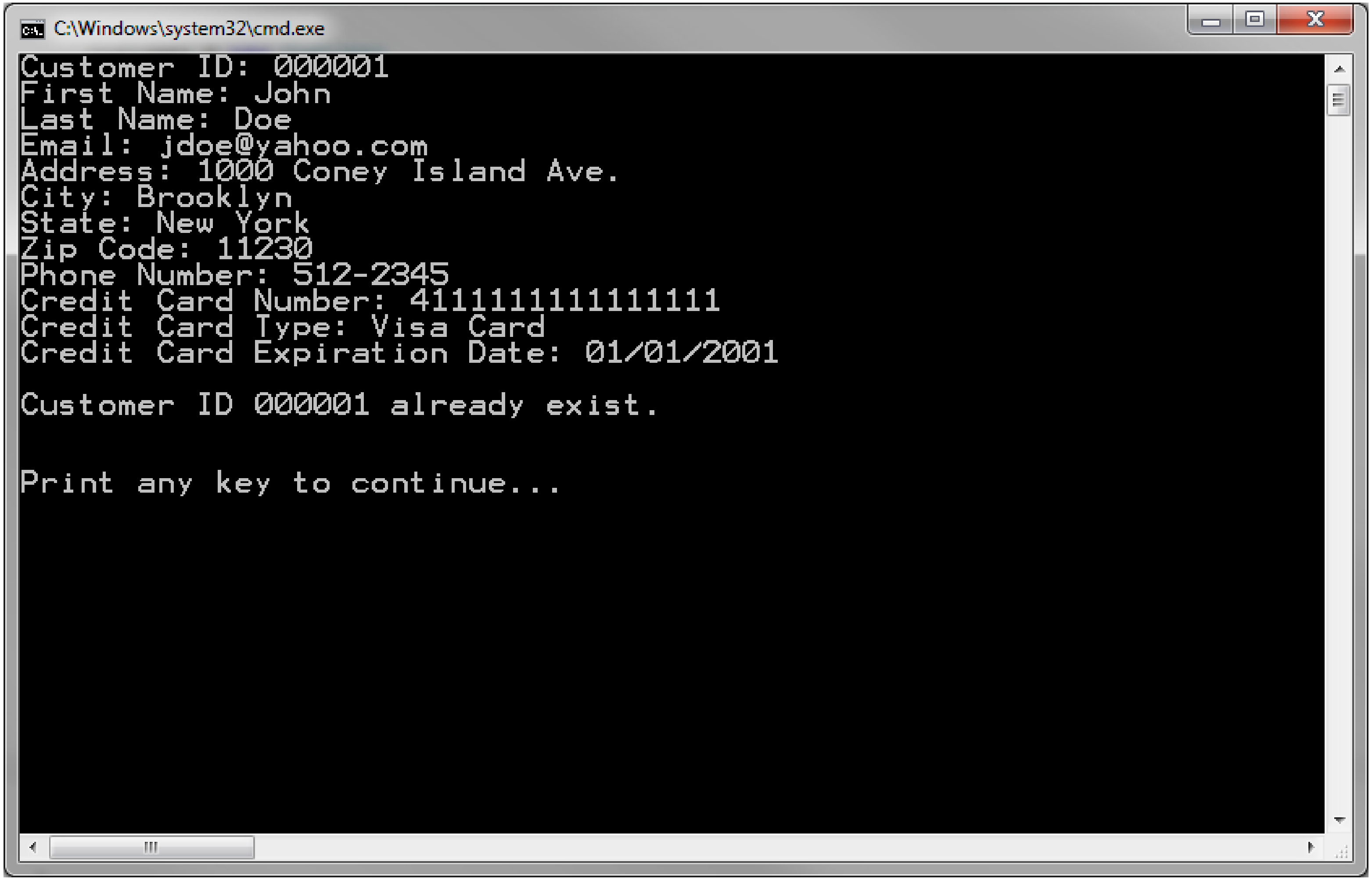
```
City: Brooklyn
State:

State is required.

State: New York
Zip Code:

Zip Code is required.

Zip Code: 11230
Phone Number:

Phone Number is required.

Phone Number: 1

Phone Number must be exactly 8 characters.

Phone Number: 513-5123
Credit Card Number:

Credit Card Number is required.

Credit Card Number: 1

Credit Card Number must be exactly 16 characters.

Credit Card Number: 4111111111111111
Credit Card Type:

Credit Card Type is required.

Credit Card Type: JCB

Credit Card Type should be Master Card,Visa Card

Credit Card Type: Master

Credit Card Type should be Master Card,Visa Card
```

User Interface – Add a customer (4 of 5)



```
Phone Number:

Phone Number is required.

Phone Number: 1

Phone Number must be exactly 8 characters.

Phone Number: 513-5123
Credit Card Number:

Credit Card Number is required.

Credit Card Number: 1

Credit Card Number must be exactly 16 characters.

Credit Card Number: 4111111111111111
Credit Card Type:

Credit Card Type is required.

Credit Card Type: JCB

Credit Card Type should be Master Card,Visa Card

Credit Card Type: Master

Credit Card Type should be Master Card,Visa Card

Credit Card Type: Master Card
Credit Card Expiration Date:

Credit Card Expiration Date is required.

Credit Card Expiration Date: 1

Invalid date format.

Credit Card Expiration Date: 01/01/2012
```

User Interface – Add a customer (5 of 5)



```
Customer ID: 000001
First Name: John
Last Name: Doe
Email: jdoe@yahoo.com
Address: 1000 Coney Island Ave.
City: Brooklyn
State: New York
Zip Code: 11230
Phone Number: 512-2345
Credit Card Number: 4111111111111111
Credit Card Type: Visa Card
Credit Card Expiration Date: 01/01/2001

Customer ID 000001 already exist.


Print any key to continue...
```

User Interface – Add Customer Elements

Element Name	Element Type	Data Type	Max Length	Mandatory	Input validation
Customer ID	Text Field	String	6	Yes	A
First Name	Text Field	String	20	Yes	C
Last Name	Text Field	String	20	Yes	C
Email	Text Field	String	50	Yes	NA
Address	Text Field	String	100	Yes	C
City	Text Filed	String	30	Yes	D
State	Text Field	String	30	Yes	D
Zip Code	Text Field	String	5	Yes	C
Phone Number	Text Field	String	8	Yes	C
Credit Card Number	Test Field	String	16	Yes	A
Credit Card Type	Text Field	String	11	Yes	F
Credit Card Expiration Date	Text Field	Date	8	Yes	E

Input Validation Criteria

A. Numbers only

B. Numbers, spaces ( ), and dashes (-) only

C. Letters, numbers, underscores (_), dashes (-), spaces ( ), and dots (.) only

D. Letters and numbers only

E. The date format is ”MM-DD-YYYY”

F. Specific inputs to be entered are Master Card and Visa Card

Customer Data File

- Store the customer data in a text file named customers.txt in a comma delimited format.

  Field1, Field2, Field3, Field4, Field5, Field6, Field7, Field8, Field9, Field10, Field11, Field12

- The application will maintain one line per customer record in the data file.
- If the customers.txt file doesn’t exist, this application should create it.

Field 1 – Customer Id

Field 2 – First Name

Field 3 – Last Name

Field 4 – Email

Field 5 – Address

Field 6 – City

Field 7 – State

Field 8 – Zip Code

Field 9 – Phone Number

Field 10 – Credit Card Number

Field 11 – Credit Card Type

Field 12 – Credit Card Expiration Date

Case Study Evaluation Parameters

- Application Design & Architecture
  - Supports the technical design process by participating in the analysis of technical application requirements
  - Participates in the program/module detailed design
- Application Programming
  - Codes modules following the design specifications and standards
  - Participates in the code review
  - Creates documentation for the code/application
- Operational Effectiveness
  - Utilizes standard methods and tools to improve personal productivity
  - Organizes own work, building time for review in order to minimize errors and avoid rework
  - Studies a problem but does not spend excessive time on it before asking their supervisor for help
  - Identifies possible causes of an issue and contributes to developing a resolution

Case Study Evaluation Parameters

- People Development
  - Works with team to manage own workload for reasonable work/life balance
  - Seeks and responds to developmental feedback
  - Takes advantage of job opportunities to learn new applications, technologies, skills (hands on)
- Professional Qualities and Communication
  - Asks questions to clarify objectives and priorities of tasks and activities
  - Listens to and accurately captures expectations, ideas, and concerns of others
  - Is clear and concise in written and verbal communications, using appropriate level of detail
  - Keeps commitments and promises
  - Contributes to a motivated and productive working atmosphere
  - Uses time intelligently
  - Remains calm when under pressure
- Value Creation
  - Maintains focus on assigned tasks despite distractions

Summary

- Explain how this project will be used throughout the course
- Describe the roles and responsibilities of an Application Developer
- Understand case study requirements
- Describe the criteria upon which you will be evaluated