

Assignment #2

Worth: 10% of final grade

Account Ticketing System

Milestone	Worth	Due Date	Submission Required
1	10%	(Suggested Target: November 16 th)	NO
2	40%	November 19 th by 23:59 EST (end of Week 10)	YES
3	10%	(Suggested Target: November 26 th)	NO
4	40%	December 3 rd by 23:59 EST (end of Week 12)	YES

A2-MS2: Sample Output (**LONG**)

The LONG submission option will qualify you to **potentially** earn a maximum of **100% (A+)**.

Also available, is a text file "**A2MS2-LONG_Inputs.txt**" which contains only the user inputs and can be used to help automate testing your work by copying and pasting it into your command window.

```

=====
Account Ticketing System - Login
=====
1) Login to the system
0) Exit application
-----

Selection: 2
ERROR: Value must be between 0 and 1 inclusive: 0

Are you sure you want to exit? ([Y]es|[N]o): n

=====
Account Ticketing System - Login
=====
1) Login to the system
0) Exit application
-----

Selection: 1

Enter the account#: 30004
User Login       : agentJ
Password        : TT*&21tt
INVALID user login/password combination! [attempts remaining:2]

Enter the account#: 50008
User Login       : userMayEnterAVeryLongLogonName
Password        : TT*&21tt
INVALID user login/password combination! [attempts remaining:1]

```

```
Enter the account#: 50008
User Login       : agentJ
Password        : userMayEnterAVeryLongPasswordValue
INVALID user login/password combination! [attempts remaining:0]
```

ERROR: Access Denied.

<< ENTER key to Continue... >>[ENTER]

```
=====
Account Ticketing System - Login
=====
```

- 1) Login to the system
- 0) Exit application

Selection: 1

```
Enter the account#: 50008
User Login       : agentJ
Password        : TT*&21tt
```

AGENT: Will Smith (50008)

```
=====
Account Ticketing System - Agent Menu
=====
```

- 1) Add a new account
- 2) Modify an existing account
- 3) Remove an account
- 4) List accounts: detailed view
- 5) List new tickets
- 6) List active tickets
- 7) List closed tickets
- 8) Add a new ticket
- 9) Manage a ticket

0) Logout

Selection: 4

Acct#	Acct.Type	Full Name	Birth	Income	Country	Login	Password
30001	CUSTOMER	Silly Sally	1990	150000.10	CANADA		
50599	AGENT	Fred Flintstone	1972	2250400.22	AFRICA	agent1	y*b*##@*
30004	CUSTOMER	Betty Boop	1978	250800.74	INDIA		
50008	AGENT	Will Smith	1952	2350600.82	U.S.A.	agentJ	T***2*t*
30020	CUSTOMER	Shrimpy Shrimp	2000	350500.35	KOREA		

<< ENTER key to Continue... >>[ENTER]

AGENT: Will Smith (50008)

```
=====
Account Ticketing System - Agent Menu
=====
```

- 1) Add a new account
- 2) Modify an existing account

- 3) Remove an account
- 4) List accounts: detailed view

- 5) List new tickets
- 6) List active tickets
- 7) List closed tickets
- 8) Add a new ticket
- 9) Manage a ticket

0) Logout

Selection: 5

Ticket	Acct#	Full Name	Status	Subject	Messages
080599	30001	Silly Sally	ACTIVE	No power/does not turn on	1

Enter the ticket number to view the messages or
0 to return to previous menu: 0

AGENT: Will Smith (50008)

Account Ticketing System - Agent Menu

- 1) Add a new account
- 2) Modify an existing account
- 3) Remove an account
- 4) List accounts: detailed view

- 5) List new tickets
- 6) List active tickets
- 7) List closed tickets
- 8) Add a new ticket
- 9) Manage a ticket

0) Logout

Selection: 6

Ticket	Acct#	Full Name	Status	Subject	Messages
060001	30004	Betty Boop	ACTIVE	Frequent Disconnects	5
080599	30001	Silly Sally	ACTIVE	No power/does not turn on	1
080004	30020	Shrimpy Shrimp	ACTIVE	My head hurts!	3
080020	30020	Shrimpy Shrimp	ACTIVE	It's broken/does not work	5

Enter the ticket number to view the messages or
0 to return to previous menu: 0

AGENT: Will Smith (50008)

Account Ticketing System - Agent Menu

- 1) Add a new account

- 2) Modify an existing account
- 3) Remove an account
- 4) List accounts: detailed view

- 5) List new tickets
- 6) List active tickets
- 7) List closed tickets
- 8) Add a new ticket
- 9) Manage a ticket

0) Logout

Selection: **7**

Ticket	Acct#	Full Name	Status	Subject	Messages
070533	30004	Betty Boop	CLOSED	Nothing happens...	1

Enter the ticket number to view the messages or
0 to return to previous menu: **60001**

ERROR: Invalid ticket number.

<< ENTER key to Continue... >> **[ENTER]**

Ticket	Acct#	Full Name	Status	Subject	Messages
070533	30004	Betty Boop	CLOSED	Nothing happens...	1

Enter the ticket number to view the messages or
0 to return to previous menu: **70533**

=====

070533 (CLOSED) Re: Nothing happens...

=====

CUSTOMER (Betty Boop):

Instructions state to 'say yes' to the prompts - but nothing happens.

<< ENTER key to Continue... >> **[ENTER]**

Ticket	Acct#	Full Name	Status	Subject	Messages
070533	30004	Betty Boop	CLOSED	Nothing happens...	1

Enter the ticket number to view the messages or
0 to return to previous menu: **0**

AGENT: Will Smith (50008)

=====

Account Ticketing System - Agent Menu

=====

- 1) Add a new account

```
2) Modify an existing account
3) Remove an account
4) List accounts: detailed view
-----
5) List new tickets
6) List active tickets
7) List closed tickets
8) Add a new ticket
9) Manage a ticket
-----
0) Logout

Selection: 1

ERROR: Account listing is FULL, call ITS Support!

<< ENTER key to Continue... >>[ENTER]

AGENT: Will Smith (50008)
=====
Account Ticketing System - Agent Menu
=====
1) Add a new account
2) Modify an existing account
3) Remove an account
4) List accounts: detailed view
-----
5) List new tickets
6) List active tickets
7) List closed tickets
8) Add a new ticket
9) Manage a ticket
-----
0) Logout

Selection: 3

Enter the account#: 50008

ERROR: You can't remove your own account!

<< ENTER key to Continue... >>[ENTER]

AGENT: Will Smith (50008)
=====
Account Ticketing System - Agent Menu
=====
1) Add a new account
2) Modify an existing account
3) Remove an account
4) List accounts: detailed view
-----
5) List new tickets
6) List active tickets
7) List closed tickets
8) Add a new ticket
9) Manage a ticket
-----
```

0) Logout

Selection: **3**Enter the account#: **30020**

Acct#	Acct.Type	Full Name	Birth	Income	Country	Login	Password
30020	CUSTOMER	Shrimpy Shrimp	2000	350500.35	KOREA		

Are you sure you want to remove this record? ([Y]es|[N]o): **Y**

*** Account Removed! (2 ticket(s) removed) ***

<< ENTER key to Continue... >> **[ENTER]**

AGENT: Will Smith (50008)

Account Ticketing System - Agent Menu

- 1) Add a new account
- 2) Modify an existing account
- 3) Remove an account
- 4) List accounts: detailed view

- 5) List new tickets
- 6) List active tickets
- 7) List closed tickets
- 8) Add a new ticket
- 9) Manage a ticket

0) Logout

Selection: **3**Enter the account#: **30001**

Acct#	Acct.Type	Full Name	Birth	Income	Country	Login	Password
30001	CUSTOMER	Silly Sally	1990	150000.10	CANADA		

Are you sure you want to remove this record? ([Y]es|[N]o): **Y**

*** Account Removed! (1 ticket(s) removed) ***

<< ENTER key to Continue... >> **[ENTER]**

AGENT: Will Smith (50008)

Account Ticketing System - Agent Menu

- 1) Add a new account
- 2) Modify an existing account
- 3) Remove an account
- 4) List accounts: detailed view

- 5) List new tickets
- 6) List active tickets
- 7) List closed tickets

```
8) Add a new ticket
9) Manage a ticket
-----
0) Logout

Selection: 1

New Account Data (Account#:50600)
-----
Enter the account type (A=Agent | C=Customer): C

Person Data Input
-----
Enter the person's full name (30 chars max): Happy Henry
Enter birth year (current age must be between 18 and 110): 1910
ERROR: Value must be between 1911 and 2003 inclusive: 2004
ERROR: Value must be between 1911 and 2003 inclusive: 1911
Enter the household Income: $0
ERROR: Value must be a positive double floating-point number: 123456.77
Enter the country (30 chars max.): Africa

*** New account added! ***

<< ENTER key to Continue... >>[ENTER]

AGENT: Will Smith (50008)
=====
Account Ticketing System - Agent Menu
=====
1) Add a new account
2) Modify an existing account
3) Remove an account
4) List accounts: detailed view
-----
5) List new tickets
6) List active tickets
7) List closed tickets
8) Add a new ticket
9) Manage a ticket
-----
0) Logout

Selection: 1

New Account Data (Account#:50601)
-----
Enter the account type (A=Agent | C=Customer): A

Person Data Input
-----
Enter the person's full name (30 chars max): Funny Phillis
Enter birth year (current age must be between 18 and 110): 2003
Enter the household Income: $765432.11
Enter the country (30 chars max.): Scotland

User Login Data Input
-----
Enter user login (10 chars max): agent Z
```

ERROR: The user login must NOT contain whitespace characters.

Enter user login (10 chars max): **agentZ**

Enter the password (must be 8 chars in length): **cat**

ERROR: String length must be exactly 8 chars: **alligator**

ERROR: String length must be exactly 8 chars: **TT@tt8t**

SECURITY: Password must contain 2 of each:

Digit: 0-9

UPPERCASE character

lowercase character

symbol character: !@#\$\$%^&*

Enter the password (must be 8 chars in length): **T@tt888**

SECURITY: Password must contain 2 of each:

Digit: 0-9

UPPERCASE character

lowercase character

symbol character: !@#\$\$%^&*

Enter the password (must be 8 chars in length): **TT@tt888**

SECURITY: Password must contain 2 of each:

Digit: 0-9

UPPERCASE character

lowercase character

symbol character: !@#\$\$%^&*

Enter the password (must be 8 chars in length): **TT@tt888**

SECURITY: Password must contain 2 of each:

Digit: 0-9

UPPERCASE character

lowercase character

symbol character: !@#\$\$%^&*

Enter the password (must be 8 chars in length): **TT-/tt88**

SECURITY: Password must contain 2 of each:

Digit: 0-9

UPPERCASE character

lowercase character

symbol character: !@#\$\$%^&*

Enter the password (must be 8 chars in length): **TT@tt88**

*** New account added! ***

<< ENTER key to Continue... >> **[ENTER]**

AGENT: Will Smith (50008)

=====

Account Ticketing System - Agent Menu

=====

- 1) Add a new account
- 2) Modify an existing account
- 3) Remove an account
- 4) List accounts: detailed view

- 5) List new tickets
- 6) List active tickets
- 7) List closed tickets
- 8) Add a new ticket
- 9) Manage a ticket

0) Logout

Selection: **2**

Enter the account#: 50600

Update Account: 50600 (Happy Henry)

1) Update account type (current value: C)
2) Person
3) Login
0) Done
Selection: 1

Enter the account type (A=Agent | C=Customer): A

Agent type accounts require a user login. Please enter this information now:

User Login Data Input

Enter user login (10 chars max): AgentH
Enter the password (must be 8 chars in length): 44rr##RR

Update Account: 50600 (Happy Henry)

1) Update account type (current value: A)
2) Person
3) Login
0) Done
Selection: 2

Person Update Options

1) Full name (current value: Happy Henry)
2) Household Income (current value: \$123456.77)
3) Country (current value: AFRICA)
0) Done
Selection: 1

Enter the person's full name (30 chars max): Happy Hillary

Person Update Options

1) Full name (current value: Happy Hillary)
2) Household Income (current value: \$123456.77)
3) Country (current value: AFRICA)
0) Done
Selection: 2

Enter the household Income: \$665544.33

Person Update Options

1) Full name (current value: Happy Hillary)
2) Household Income (current value: \$665544.33)
3) Country (current value: AFRICA)
0) Done
Selection: 3

Enter the country (30 chars max.): Brazil

Person Update Options

1) Full name (current value: Happy Hillary)
2) Household Income (current value: \$665544.33)
3) Country (current value: BRAZIL)
0) Done
Selection: 0

Update Account: 50600 (Happy Hillary)

1) Update account type (current value: A)
2) Person
3) Login
0) Done
Selection: 3

User Login: AgentH - Update Options

1) Password
0) Done
Selection: 1

Enter the password (must be 8 chars in length): 33rr##RR

User Login: AgentH - Update Options

1) Password
0) Done
Selection: 0

Update Account: 50600 (Happy Hillary)

1) Update account type (current value: A)
2) Person
3) Login
0) Done
Selection: 0

AGENT: Will Smith (50008)

=====

Account Ticketing System - Agent Menu

=====

1) Add a new account
2) Modify an existing account
3) Remove an account
4) List accounts: detailed view

5) List new tickets
6) List active tickets
7) List closed tickets
8) Add a new ticket
9) Manage a ticket

0) Logout

Selection: 2

Enter the account#: 50601

```
Update Account: 50601 (Funny Phillis)
-----
1) Update account type (current value: A)
2) Person
3) Login
0) Done
Selection: 1

Enter the account type (A=Agent | C=Customer): C

Update Account: 50601 (Funny Phillis)
-----
1) Update account type (current value: C)
2) Person
3) Login
0) Done
Selection: 0

AGENT: Will Smith (50008)
=====
Account Ticketing System - Agent Menu
=====
1) Add a new account
2) Modify an existing account
3) Remove an account
4) List accounts: detailed view
-----
5) List new tickets
6) List active tickets
7) List closed tickets
8) Add a new ticket
9) Manage a ticket
-----
0) Logout

Selection: 8

Enter the account#: 50008

ERROR: Agent accounts can't have tickets!

<< ENTER key to Continue... >>[ENTER]

AGENT: Will Smith (50008)
=====
Account Ticketing System - Agent Menu
=====
1) Add a new account
2) Modify an existing account
3) Remove an account
4) List accounts: detailed view
-----
5) List new tickets
6) List active tickets
7) List closed tickets
8) Add a new ticket
9) Manage a ticket
```

0) Logout

Selection: **8**

Enter the account#: **50601**

Acct#	Acct.Type	Full Name	Birth	Income	Country	Login	Password
50601	CUSTOMER	Funny Phillis	2003	765432.11	SCOTLAND		

Add a new ticket for this customer? ([Y]es|[N]o): **Y**

New Ticket (Ticket#:070534)

Enter the ticket SUBJECT (30 chars. maximum): **Empty Bottle!**

Enter the ticket message details (150 chars. maximum). Press the ENTER key to submit:
Scotch bottle arrived empty!

*** New ticket created! ***

<< ENTER key to Continue... >> **[ENTER]**

AGENT: Will Smith (50008)

=====

Account Ticketing System - Agent Menu

=====

- 1) Add a new account
- 2) Modify an existing account
- 3) Remove an account
- 4) List accounts: detailed view

-
- 5) List new tickets
 - 6) List active tickets
 - 7) List closed tickets
 - 8) Add a new ticket
 - 9) Manage a ticket
-

0) Logout

Selection: **9**

Enter ticket number: **70534**

Ticket 070534 - Update Options

Status : ACTIVE
Subject : Empty Bottle!
Acct# : 50601
Customer: Funny Phillis

- 1) Add CUSTOMER message
- 2) Add AGENT message
- 3) Close ticket
- 4) Re-activate ticket
- 0) Done

Selection: **2**

Enter the ticket message details (150 chars. maximum). Press the ENTER key to submit:

We will resend with a full bottle.

Ticket 070534 - Update Options

Status : ACTIVE
Subject : Empty Bottle!
Acct# : 50601
Customer: Funny Phillis

- 1) Add CUSTOMER message
- 2) Add AGENT message
- 3) Close ticket
- 4) Re-activate ticket
- 0) Done

Selection: **1**

Enter the ticket message details (150 chars. maximum). Press the ENTER key to submit:

Thanks!

Ticket 070534 - Update Options

Status : ACTIVE
Subject : Empty Bottle!
Acct# : 50601
Customer: Funny Phillis

- 1) Add CUSTOMER message
- 2) Add AGENT message
- 3) Close ticket
- 4) Re-activate ticket
- 0) Done

Selection: **4**

ERROR: Ticket is already active!

Ticket 070534 - Update Options

Status : ACTIVE
Subject : Empty Bottle!
Acct# : 50601
Customer: Funny Phillis

- 1) Add CUSTOMER message
- 2) Add AGENT message
- 3) Close ticket
- 4) Re-activate ticket
- 0) Done

Selection: **3**

Are you sure you CLOSE this ticket? ([Y]es|[N]o): **Y**

*** Ticket closed! ***

Ticket 070534 - Update Options

Status : CLOSED
Subject : Empty Bottle!
Acct# : 50601
Customer: Funny Phillis

- 1) Add CUSTOMER message
- 2) Add AGENT message
- 3) Close ticket
- 4) Re-activate ticket
- 0) Done

Selection: 0

AGENT: Will Smith (50008)

=====

Account Ticketing System - Agent Menu

=====

- 1) Add a new account
- 2) Modify an existing account
- 3) Remove an account
- 4) List accounts: detailed view

-
- 5) List new tickets
 - 6) List active tickets
 - 7) List closed tickets
 - 8) Add a new ticket
 - 9) Manage a ticket
-

0) Logout

Selection: 9

Enter ticket number: 70533

Ticket 070533 - Update Options

Status : CLOSED
Subject : Nothing happens...
Acct# : 30004
Customer: Betty Boop

- 1) Add CUSTOMER message
- 2) Add AGENT message
- 3) Close ticket
- 4) Re-activate ticket
- 0) Done

Selection: 3

ERROR: Ticket is already closed!

Ticket 070533 - Update Options

Status : CLOSED

Subject : Nothing happens...

Acct# : 30004

Customer: Betty Boop

-
- 1) Add CUSTOMER message
 - 2) Add AGENT message
 - 3) Close ticket
 - 4) Re-activate ticket
 - 0) Done

Selection: **4**

Are you sure you want to RE-ACTIVATE this closed ticket? ([Y]es|[N]o): **Y**

*** Ticket re-activated! ***

Ticket 070533 - Update Options

Status : ACTIVE

Subject : Nothing happens...

Acct# : 30004

Customer: Betty Boop

-
- 1) Add CUSTOMER message
 - 2) Add AGENT message
 - 3) Close ticket
 - 4) Re-activate ticket
 - 0) Done

Selection: **0**

AGENT: Will Smith (50008)

=====

Account Ticketing System - Agent Menu

=====

- 1) Add a new account
 - 2) Modify an existing account
 - 3) Remove an account
 - 4) List accounts: detailed view
-
- 5) List new tickets
 - 6) List active tickets
 - 7) List closed tickets
 - 8) Add a new ticket
 - 9) Manage a ticket
-

0) Logout

Selection: **4**

Acct#	Acct.Type	Full Name	Birth	Income	Country	Login	Password
50600	AGENT	Happy Hillary	1911	665544.33	BRAZIL	AgentH	3*r*##R*
50599	AGENT	Fred Flintstone	1972	2250400.22	AFRICA	agent1	y*b*##@*
30004	CUSTOMER	Betty Boop	1978	250800.74	INDIA		
50008	AGENT	Will Smith	1952	2350600.82	U.S.A.	agentJ	T***2*t*
50601	CUSTOMER	Funny Phillis	2003	765432.11	SCOTLAND		

<< ENTER key to Continue... >> **[ENTER]**

AGENT: Will Smith (50008)

=====
Account Ticketing System - Agent Menu
=====

- 1) Add a new account
- 2) Modify an existing account
- 3) Remove an account
- 4) List accounts: detailed view

-
- 5) List new tickets
 - 6) List active tickets
 - 7) List closed tickets
 - 8) Add a new ticket
 - 9) Manage a ticket
-

0) Logout

Selection: 5

Ticket	Acct#	Full Name	Status	Subject	Messages
070533	30004	Betty Boop	ACTIVE	Nothing happens...	1

Enter the ticket number to view the messages or
0 to return to previous menu: 0

AGENT: Will Smith (50008)

=====
Account Ticketing System - Agent Menu
=====

- 1) Add a new account
- 2) Modify an existing account
- 3) Remove an account
- 4) List accounts: detailed view

-
- 5) List new tickets
 - 6) List active tickets
 - 7) List closed tickets
 - 8) Add a new ticket
 - 9) Manage a ticket
-

0) Logout

Selection: 6

Ticket	Acct#	Full Name	Status	Subject	Messages
060001	30004	Betty Boop	ACTIVE	Frequent Disconnects	5
070533	30004	Betty Boop	ACTIVE	Nothing happens...	1

Enter the ticket number to view the messages or
0 to return to previous menu: 0

AGENT: Will Smith (50008)

=====

Account Ticketing System - Agent Menu

=====

- 1) Add a new account
- 2) Modify an existing account
- 3) Remove an account
- 4) List accounts: detailed view

- 5) List new tickets
- 6) List active tickets
- 7) List closed tickets
- 8) Add a new ticket
- 9) Manage a ticket

0) Logout

Selection: **7**

Ticket	Acct#	Full Name	Status	Subject	Messages
070534	50601	Funny Phillis	CLOSED	Empty Bottle!	3

Enter the ticket number to view the messages or

0 to return to previous menu: **70534**

=====

070534 (CLOSED) Re: Empty Bottle!

=====

CUSTOMER (Funny Phillis):

Scotch bottle arrived empty!

AGENT (Will Smith):

We will resend with a full bottle.

CUSTOMER (Funny Phillis):

Thanks!

<< ENTER key to Continue... >> **[ENTER]**

Ticket	Acct#	Full Name	Status	Subject	Messages
070534	50601	Funny Phillis	CLOSED	Empty Bottle!	3

Enter the ticket number to view the messages or

0 to return to previous menu: **0**

AGENT: Will Smith (50008)

=====

Account Ticketing System - Agent Menu

=====

- 1) Add a new account
- 2) Modify an existing account
- 3) Remove an account

```
4) List accounts: detailed view
-----
5) List new tickets
6) List active tickets
7) List closed tickets
8) Add a new ticket
9) Manage a ticket
-----
0) Logout

Selection: 0

### LOGGED OUT ###

=====
Account Ticketing System - Login
=====
1) Login to the system
0) Exit application
-----

Selection: 0

Are you sure you want to exit? ([Y]es|[N]o): Y

=====
Account Ticketing System - Terminated
=====
```