

Test Plan

Using Unity Framework

Modules Tested

Process for Unit Testing

1. Import Unity Utilities

```
#include "../unity/unity.h"
#include "../unity/unity_internals.h"
```

2. Add unity functions

```
void setUp() {}
void tearDown() {}
```

- 3.
4. Add unity methods pass function to it

```
UNITY_BEGIN();
RUN_TEST(check_train_num);
UNITY_END();
```

5. Write that method add test case statement

```
void check_train_num(void)
{
    TEST_ASSERT_EQUAL('y', confirm);
}
```

1. Login Module

Username :pass

Password :pass

This data will pass the test case rest will be failed

```
C:\Windows\System32\cmd.exe - make run

===== LOGIN FORM =====

ENTER USERNAME:-pass

ENTER PASSWORD:-pass

WELCOME TO OUR SYSTEM !! YOUR LOGIN IS SUCCESSFUL
SRC/login.c:32:logg:PASS

-----
1 Tests 0 Failures 0 Ignored
OK

Press any key to continue...

C:\Windows\System32\cmd.exe - make run

===== LOGIN FORM =====

ENTER USERNAME:-pa12

ENTER PASSWORD:-p123

SORRY !!!! LOGIN IS UNSUCCESSFUL
SRC/login.c:9:logg:FAIL: Expected 1 Was 0

-----
1 Tests 1 Failures 0 Ignored
FAIL

Press any key to Login again..._
```

2. Booking Module

User accept(y) the confirmation

Test case will pass if rejects(n) will fail the test case

Note :char y/n will check by ASCII value.

Ticket Holder exist in the list it will cancel the ticket and test case will pass if it doesn't exist it will fail

```
C:\Windows\System32\cmd.exe - make run
4>> Cancel Booked Tickets
-----
5>> validate Booked Tickets
-----
6>> Exit
-----

-->4

List of the Booked Tickets.

saurabh      1      1002      5000.00
shashan      2      1010      12000.00

Enter Name of the Ticket Holder for Cancellation: saurabh
SRC/cancel.c:45:test:PASS

-----
1 Tests 0 Failures 0 Ignored
OK

Ticket is Cancelled Successfully

List after Cancellation of ticket .

shashan      2      1010      12000.00

Press Enter to go back to Main menu!
```

```
C:\Windows\System32\cmd.exe - make run

TRAIN RESERVATION SYSTEM
=====
1>> Reserve A Ticket
-----
2>> View All Available Trains
-----
3>> Display Booked Tickets
-----
4>> Cancel Booked Tickets
-----
5>> validate Booked Tickets
-----
6>> Exit
-----

-->4

List of the Booked Tickets.

shashan      2      1010      12000.00

Enter Name of the Ticket Holder for Cancellation: saurabh
SRC/cancel.c:18:test:FAIL: Expected 1 Was 0

-----
1 Tests 1 Failures 0 Ignored
FAIL
No record found for this Name
Press Enter to go back to Main menu!
```

4. Validation of Ticket Module

To check whether user present in the list if it present test case will pass if it not present it will fails

```
C:\Windows\System32\cmd.exe - make run

=====
      TRAIN RESERVATION SYSTEM
=====
1>> Reserve A Ticket
-----
2>> View All Available Trains
-----
3>> Display Booked Tickets
-----
4>> Cancel Booked Tickets
-----
5>> validate Booked Tickets
-----
6>> Exit
-----

-->5
Enter the Ticket Holder name: shashan
shashan      2      1010      12000.00
SRC/validate.c:22:test_sum:PASS

-----
1 Tests 0 Failures 0 Ignored
OK
Ticket Holder exist check the list to confirm Once

Press Enter to go back to Main menu!
```

```
C:\Windows\System32\cmd.exe - make run

=====
      TRAIN RESERVATION SYSTEM
=====
1>> Reserve A Ticket
-----
2>> View All Available Trains
-----
3>> Display Booked Tickets
-----
4>> Cancel Booked Tickets
-----
5>> validate Booked Tickets
-----
6>> Exit
-----

-->5
Enter the Ticket Holder name: saurabh
SRC/validate.c:15:test_sum:FAIL: Expected 1 Was 0

-----
1 Tests 1 Failures 0 Ignored
FAIL
No Record Found
Press Enter to go back to Main menu!
```

Conclusion :Unit Testing implemented successfully.