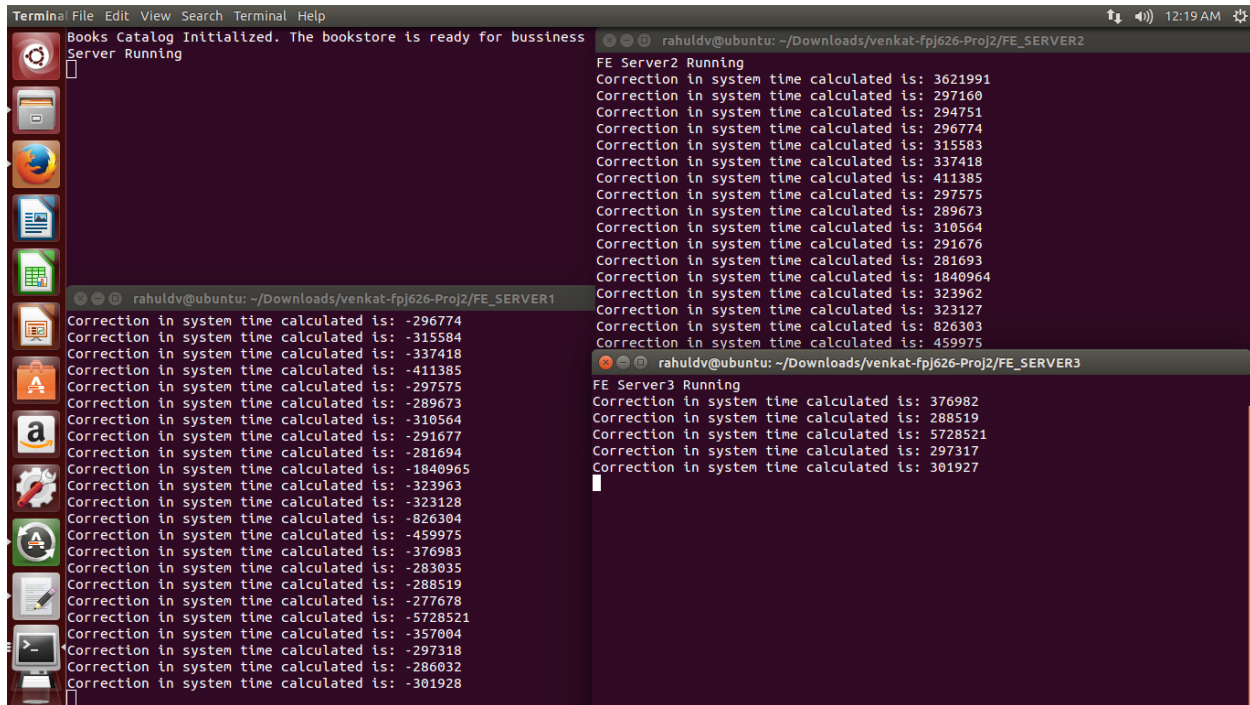# Test Case Design for MyBook.com Project.

Test case1: Clock Synchronization between 2 front end servers and leader front end server.
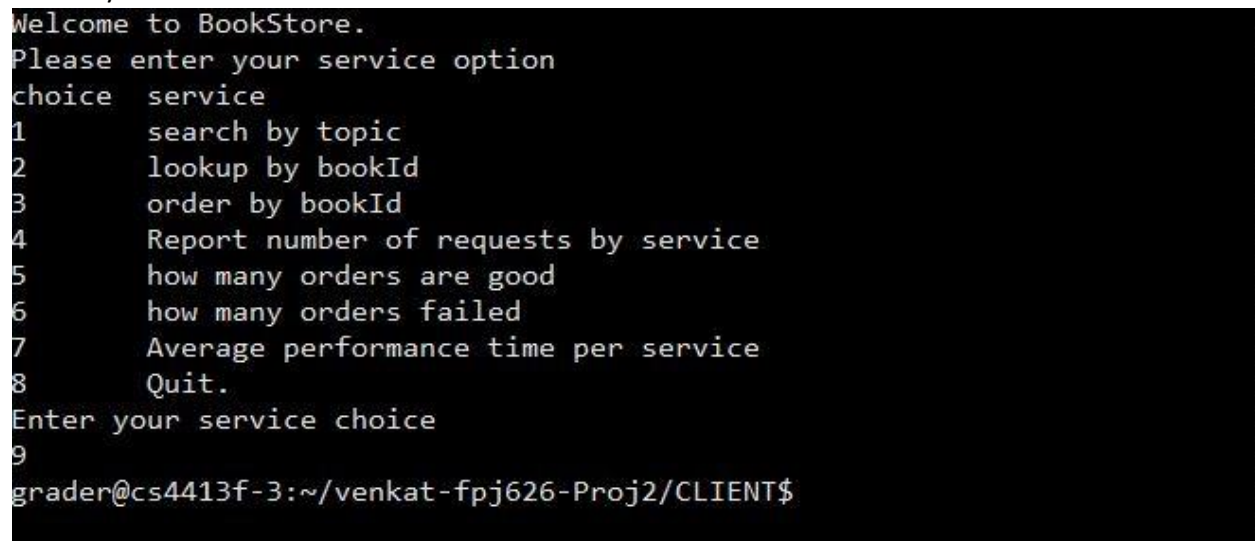

The above screen shot showing the correction calculated in nanoseconds.
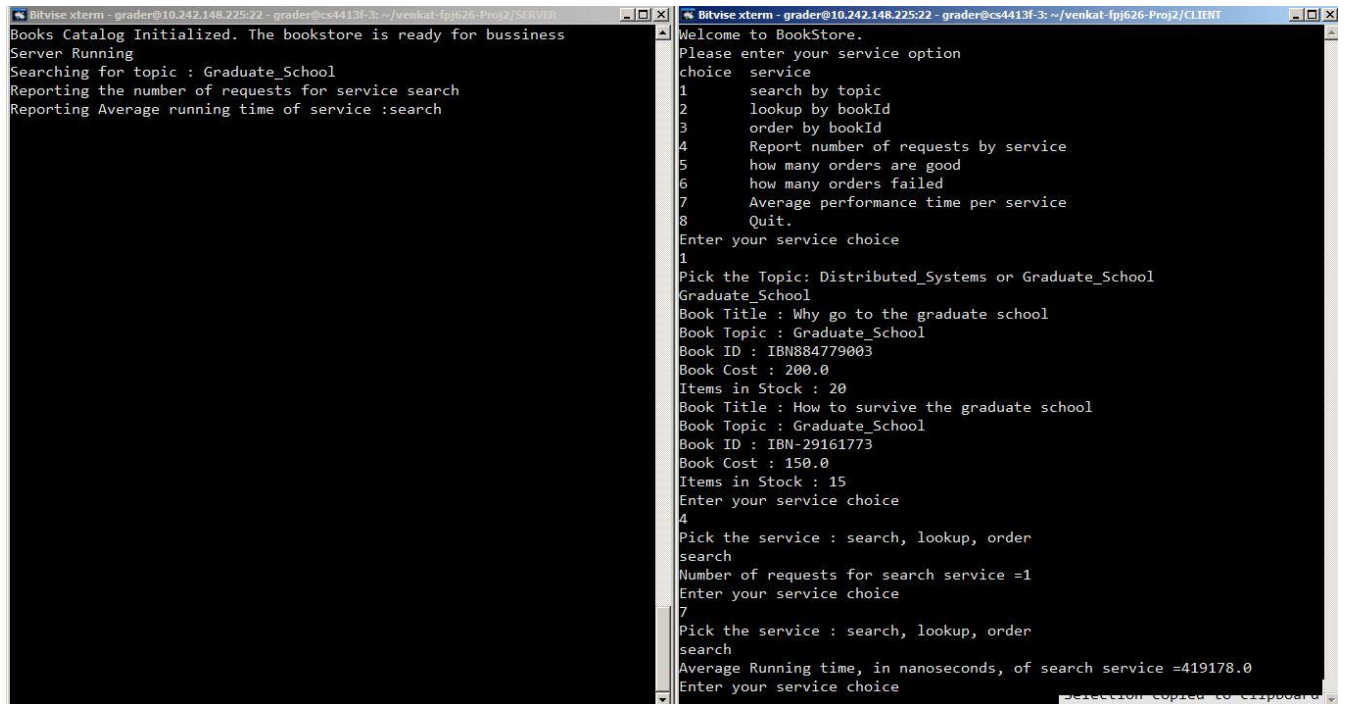
Test case1: If we give any other service option than the one specified. Then the client simply exits normally.

Test case2: We check the search service functionality. A normal test case that expects appropriate behavior because the inputs are valid. (left is server, right is client)

Test case3: We order a book and observe an increase in good orders and decrease in number of items in stock. (left is server, right is client)

Left (SERVER):

```
Books Catalog Initialized. The bookstore is ready for bussiness
Server Running
Searching for topic : Graduate_School
Reporting the number of requests for service search
Reporting Average running time of service :search
Searching for topic : Graduate_School
Ordering book with bookId : IBN-29161773
Trying to look up book with bookId : IBN-29161773
Reporting number of Good Orders
```

Right (CLIENT):

```
7       Average performance time per service
8       Quit.
Enter your service choice
1
Pick the Topic: Distributed_Systems or Graduate_School
Graduate_School
Book Title : Why go to the graduate school
Book Topic : Graduate_School
Book ID : IBN884779003
Book Cost : 200.0
Items in Stock : 20
Book Title : How to survive the graduate school
Book Topic : Graduate_School
Book ID : IBN-29161773
Book Cost : 150.0
Items in Stock : 15
Enter your service choice
3
Enter the book id you want to ORDER. You may want to search before if you
 do not know the book id
IBN-29161773
Book Ordered successfully
Enter your service choice
2
Enter the book id you want to look up. You may want to search before if y
ou do not know the book id
IBN-29161773
Book Title : How to survive the graduate school
Book Topic : Graduate_School
Book ID : IBN-29161773
Book Cost : 150.0
Items in Stock : 14
Enter your service choice
5
The number of Good orders = 1
Enter your service choice
```

Test case4: Simultaneous ordering same book by 2 or more clients. (left: client1, right: client2)

Left (CLIENT):

```
Welcome to BookStore.
Please enter your service option
choice  service
1       search by topic
2       lookup by bookId
3       order by bookId
4       Report number of requests by service
5       how many orders are good
6       how many orders failed
7       Average performance time per service
8       Quit.
Enter your service choice
3
Enter the book id you want to ORDER. You may want to search before if you
 do not know the book id
IBN-22161773
Book Ordered Failed. Please check Items in stock before ordering
Enter your service choice
3
Enter the book id you want to ORDER. You may want to search before if you
 do not know the book id
IBN-29161773
Book Ordered successfully
Enter your service choice
5
The number of Good orders = 3
Enter your service choice
```

Right (CLIENT):

```
Welcome to BookStore.
Please enter your service option
choice  service
1       search by topic
2       lookup by bookId
3       order by bookId
4       Report number of requests by service
5       how many orders are good
6       how many orders failed
7       Average performance time per service
8       Quit.
Enter your service choice
3
Enter the book id you want to ORDER. You may want to search before if you
 do not know the book id
IBN-29161773
Book Ordered successfully
Enter your service choice
```

Test case5: Enter wrong BookId while ordering. Application shows appropriate error message:

```
Welcome to BookStore.
Please enter your service option
choice   service
1        search by topic
2        lookup by bookId
3        order by bookId
4        Report number of requests by service
5        how many orders are good
6        how many orders failed
7        Average performance time per service
8        Quit.
Enter your service choice
3
Enter the book id you want to ORDER. You may want to search before if you
 do not know the book id
IBN-22161773
Book Ordered Failed. Please check Items in stock before ordering
Enter your service choice
```