

## CS300 Project Test Document

**Goal of Tests Based on Parameters & Grading Scale**

1. Demonstration of working Search Manager & Passage Processor
2. Demonstration of Concurrency
3. Signal Handling
4. Correct Input Parameters:
  - a. Prefix only alpha characters between 3 and 20 characters long.
  - b. Skip invalid prefixes and continue with valid.
  - c. Return if no valid prefixes.
  - d. Passages ignore words with punctuation within them and remove the punctuation from the end of words.
  - e. Return if no passages found.
  - f. Skip passages that are not found, continue with valid passages.

**Outline of Tests to meet above Goals**

1. Makefile successfully compiled necessary components.
2. Default Passages.txt with prefixes from PDF
3. Default Passages.txt with additional prefixes.
4. Signal Handler Demonstration of above.
5. Modified Passages.txt with different passages and prefixes.
6. Modified Passages.txt with 1 non-existent passage and the rest are valid.
7. Empty passages.txt / Non-existent passages only.
8. No prefixes passed.
9. Only invalid prefixes passed.
10. Single invalid prefix passed, multiple valid prefixes.
11. Multiple invalid prefixes, single valid prefix.

1. Makefile successfully compiled necessary components:

```
ccsanders6@cs426:~/Spring_cs300_project> make
javac edu/cs300/*java
Note: Some input files use unchecked or unsafe operations.
Note: Recompile with -Xlint:unchecked for details.
javac CtCILibrary/*.java
javac -h . edu/cs300/MessageJNI.java
gcc -c -fPIC -I/usr/java/latest/include -I/usr/java/latest/include/linux system5_msg.c -o edu_cs300_MessageJNI.o
gcc -shared -o libsystem5msg.so edu_cs300_MessageJNI.o -lc
gcc -std=c99 -D_GNU_SOURCE -lpthread -lrt search_manager.c -o searchmanager
ccsanders6@cs426:~/Spring_cs300_project>
```

## 2. Default Passages.txt with prefixes from Project PDF

## Search Manager &amp; Passage Processor:

```
ccsanders6@cs426:~/Spring_cs300_project> ./searchmanager 3 con pre wor
```

```
Message(1): "con" Sent (8 bytes)
```

```
Report "con"
```

```
Passage 0 - Sense_And_Sensibility.txt - constant
Passage 1 - Mansfield_Park.txt - contemptible
Passage 2 - The_Call_Of_The_Wild.txt - no word found
Passage 3 - Tale_Of_Two_Cities.txt - no word found
Passage 4 - Peter_Pan.txt - conspicuous
```

```
Message(2): "pre" Sent (8 bytes)
```

```
Report "pre"
```

```
Passage 0 - Sense_And_Sensibility.txt - no word found
Passage 1 - Mansfield_Park.txt - predict
Passage 2 - The_Call_Of_The_Wild.txt - no word found
Passage 3 - Tale_Of_Two_Cities.txt - preserves
Passage 4 - Peter_Pan.txt - no word found
```

```
Message(3): "wor" Sent (8 bytes)
```

```
Report "wor"
```

```
Passage 0 - Sense_And_Sensibility.txt - no word found
Passage 1 - Mansfield_Park.txt - worse
Passage 2 - The_Call_Of_The_Wild.txt - no word found
Passage 3 - Tale_Of_Two_Cities.txt - worst
Passage 4 - Peter_Pan.txt - no word found
```

```
Message(0): "" Sent (5 bytes)
```

```
Exiting ...
```

```
ccsanders6@cs426:~/Spring_cs300_project> java -cp . -Djava.library.path=. edu.cs300.PassageProcessor
Worker-0 (Sense_And_Sensibility.txt) thread started ...
Worker-1 (Mansfield_Park.txt) thread started ...
Worker-2 (The_Call_Of_The_Wild.txt) thread started ...
Worker-3 (Tale_Of_Two_Cities.txt) thread started ...
**prefix(1) con received
Worker-2 1:con ==> not found
Worker-0 1:con ==> constant
msgsnd Reply 2 of 5 on id:1 | prefix:con from passage "The_Call_Of_The_Wild.txt" present=0 lw=----(len=4) msglen=144
msgsnd Reply 0 of 5 on id:1 | prefix:con from passage "Sense_And_Sensibility.txt" present=1 lw=constant(len=8) msglen=144
Worker-3 1:con ==> not found
msgsnd Reply 3 of 5 on id:1 | prefix:con from passage "Tale_Of_Two_Cities.txt" present=0 lw=----(len=4) msglen=144
Worker-4 (Peter_Pan.txt) thread started ...
Worker-4 1:con ==> conspicuous
msgsnd Reply 4 of 5 on id:1 | prefix:con from passage "Peter_Pan.txt" present=1 lw=conspicuous(len=11) msglen=144
Worker-1 1:con ==> contemptible
msgsnd Reply 1 of 5 on id:1 | prefix:con from passage "Mansfield_Park.txt" present=1 lw=contemptible(len=12) msglen=144
**prefix(2) pre received
Worker-0 2:pre ==> not found
Worker-1 2:pre ==> predict
Worker-2 2:pre ==> not found
msgsnd Reply 0 of 5 on id:2 | prefix:pre from passage "Sense_And_Sensibility.txt" present=0 lw=----(len=4) msglen=144
msgsnd Reply 1 of 5 on id:2 | prefix:pre from passage "Mansfield_Park.txt" present=1 lw=predict(len=7) msglen=144
msgsnd Reply 2 of 5 on id:2 | prefix:pre from passage "The_Call_Of_The_Wild.txt" present=0 lw=----(len=4) msglen=144
Worker-4 2:pre ==> not found
Worker-3 2:pre ==> preserves
msgsnd Reply 4 of 5 on id:2 | prefix:pre from passage "Peter_Pan.txt" present=0 lw=----(len=4) msglen=144
msgsnd Reply 3 of 5 on id:2 | prefix:pre from passage "Tale_Of_Two_Cities.txt" present=1 lw=preserves(len=9) msglen=144
**prefix(3) wor received
Worker-0 3:wor ==> not found
Worker-3 3:wor ==> worst
Worker-2 3:wor ==> not found
Worker-4 3:wor ==> not found
Worker-1 3:wor ==> worse
msgsnd Reply 0 of 5 on id:3 | prefix:wor from passage "Sense_And_Sensibility.txt" present=0 lw=----(len=4) msglen=144
msgsnd Reply 3 of 5 on id:3 | prefix:wor from passage "Tale_Of_Two_Cities.txt" present=1 lw=worst(len=5) msglen=144
msgsnd Reply 2 of 5 on id:3 | prefix:wor from passage "The_Call_Of_The_Wild.txt" present=0 lw=----(len=4) msglen=144
msgsnd Reply 4 of 5 on id:3 | prefix:wor from passage "Peter_Pan.txt" present=0 lw=----(len=4) msglen=144
msgsnd Reply 1 of 5 on id:3 | prefix:wor from passage "Mansfield_Park.txt" present=1 lw=worse(len=5) msglen=144
**prefix(0) received
Terminating...
```

3. Default Passages.txt with additional prefixes. I used many of the top prefixes and checked within the passages provided for words and can confirm that the ones shown are correct. I did not include all of the results as it was too much to fit on the document but provided enough to prove that it is working.

```
ccsanders6@cs426:~/Spring_cs300_project> ./searchmanager 1 anti dis fore inter mid mis non over pre semi sub super trans
```

```
Message(1): "anti" Sent (9 bytes)
```

```
Report "anti"
```

```
Passage 0 - Sense_And_Sensibility.txt - no word found
```

```
Passage 1 - Mansfield_Park.txt - no word found
```

```
Passage 2 - The_Call_Of_The_Wild.txt - no word found
```

```
Passage 3 - Tale_Of_Two_Cities.txt - no word found
```

```
Passage 4 - Peter_Pan.txt - no word found
```

```
Message(2): "dis" Sent (8 bytes)
```

```
Report "dis"
```

```
Passage 0 - Sense_And_Sensibility.txt - no word found
```

```
Passage 1 - Mansfield_Park.txt - disrespectful
```

```
Passage 2 - The_Call_Of_The_Wild.txt - no word found
```

```
Passage 3 - Tale_Of_Two_Cities.txt - no word found
```

```
Passage 4 - Peter_Pan.txt - discover
```

```
Message(3): "fore" Sent (9 bytes)
```

```
Report "fore"
```

```
Passage 0 - Sense_And_Sensibility.txt - no word found
```

```
Passage 1 - Mansfield_Park.txt - no word found
```

```
Passage 2 - The_Call_Of_The_Wild.txt - no word found
```

```
Passage 3 - Tale_Of_Two_Cities.txt - no word found
```

```
Passage 4 - Peter_Pan.txt - no word found
```

```
Message(4): "inter" Sent (10 bytes)
```

```
Report "inter"
```

```
Passage 0 - Sense_And_Sensibility.txt - interest
```

```
Passage 1 - Mansfield_Park.txt - intercourse
```

```
Passage 2 - The_Call_Of_The_Wild.txt - interlacing
```

```
Passage 3 - Tale_Of_Two_Cities.txt - no word found
```

```
Passage 4 - Peter_Pan.txt - no word found
```

```
Message(5): "mid" Sent (8 bytes)
```

```
Report "mid"
```

```
Passage 0 - Sense_And_Sensibility.txt - no word found
```

```
Passage 1 - Mansfield_Park.txt - no word found
```

```
Passage 2 - The_Call_Of_The_Wild.txt - no word found
```

```
Passage 3 - Tale_Of_Two_Cities.txt - no word found
```

```
Passage 4 - Peter_Pan.txt - no word found
```

```
Message(6): "mis" Sent (8 bytes)
```

```
Report "mis"
```

```
Passage 0 - Sense_And_Sensibility.txt - no word found
```

```
Passage 1 - Mansfield_Park.txt - miss
```

```
Passage 2 - The_Call_Of_The_Wild.txt - no word found
```

```
Passage 3 - Tale_Of_Two_Cities.txt - no word found
```

```
Passage 4 - Peter_Pan.txt - no word found
```

```
Message(7): "non" Sent (8 bytes)
```

```
Report "non"
```

```
Passage 0 - Sense_And_Sensibility.txt - no word found
```

```
Passage 1 - Mansfield_Park.txt - no word found
```

```
Passage 2 - The_Call_Of_The_Wild.txt - no word found
```

```
Passage 3 - Tale_Of_Two_Cities.txt - no word found
```

```
Passage 4 - Peter_Pan.txt - no word found
```

```
Passage 1 - Mansfield_Park.txt - no word found
Passage 2 - The_Call_Of_The_Wild.txt - no word found
Passage 3 - Tale_Of_Two_Cities.txt - no word found
Passage 4 - Peter_Pan.txt - no word found

Message(8): "over" Sent (9 bytes)

Report "over"
Passage 0 - Sense_And_Sensibility.txt - no word found
Passage 1 - Mansfield_Park.txt - no word found
Passage 2 - The_Call_Of_The_Wild.txt - no word found
Passage 3 - Tale_Of_Two_Cities.txt - no word found
Passage 4 - Peter_Pan.txt - no word found

Message(9): "pre" Sent (8 bytes)

Report "pre"
Passage 0 - Sense_And_Sensibility.txt - no word found
Passage 1 - Mansfield_Park.txt - predict
Passage 2 - The_Call_Of_The_Wild.txt - no word found
Passage 3 - Tale_Of_Two_Cities.txt - preserves
Passage 4 - Peter_Pan.txt - no word found

Message(10): "semi" Sent (9 bytes)

Report "semi"
Passage 0 - Sense_And_Sensibility.txt - no word found
Passage 1 - Mansfield_Park.txt - no word found
Passage 2 - The_Call_Of_The_Wild.txt - no word found
Passage 3 - Tale_Of_Two_Cities.txt - no word found
Passage 4 - Peter_Pan.txt - no word found

Message(11): "sub" Sent (8 bytes)

Report "sub"
Passage 0 - Sense_And_Sensibility.txt - no word found
Passage 1 - Mansfield_Park.txt - subject
Passage 2 - The_Call_Of_The_Wild.txt - no word found
Passage 3 - Tale_Of_Two_Cities.txt - no word found
Passage 4 - Peter_Pan.txt - subject

Message(12): "super" Sent (10 bytes)

Report "super"
Passage 0 - Sense_And_Sensibility.txt - no word found
Passage 1 - Mansfield_Park.txt - no word found
Passage 2 - The_Call_Of_The_Wild.txt - no word found
Passage 3 - Tale_Of_Two_Cities.txt - superlative
Passage 4 - Peter_Pan.txt - no word found

Message(13): "trans" Sent (10 bytes)

Report "trans"
Passage 0 - Sense_And_Sensibility.txt - no word found
Passage 1 - Mansfield_Park.txt - no word found
Passage 2 - The_Call_Of_The_Wild.txt - transportation
Passage 3 - Tale_Of_Two_Cities.txt - no word found
Passage 4 - Peter_Pan.txt - no word found

Message(0): "" Sent (5 bytes)

Exiting ...
ccsanders6@cs426:~/Spring_cs300_project>
```

```

ccsanders6@cs426:~/Spring_cs300_project> java -cp . -Djava.library.path=. edu.cs300.PassagProcessor
Worker-0 (Sense_And_Sensibility.txt) thread started ...
Worker-1 (Mansfield_Park.txt) thread started ...
Worker-2 (The_Call_Of_The_Wild.txt) thread started ...
Worker-3 (Tale_Of_Two_Cities.txt) thread started ...
Worker-4 (Peter_Pan.txt) thread started ...
**prefix(1) anti received
Worker-3 1:anti ==> not found
Worker-0 1:anti ==> not found
Worker-2 1:anti ==> not found
Worker-4 1:anti ==> not found
msgsnd Reply 3 of 5 on id:1 | prefix:anti from passage "Tale_Of_Two_Cities.txt" present=0 lw=----(len=4) msglen=144
msgsnd Reply 2 of 5 on id:1 | prefix:anti from passage "The_Call_Of_The_Wild.txt" present=0 lw=----(len=4) msglen=144
msgsnd Reply 0 of 5 on id:1 | prefix:anti from passage "Sense_And_Sensibility.txt" present=0 lw=----(len=4) msglen=144
msgsnd Reply 4 of 5 on id:1 | prefix:anti from passage "Peter_Pan.txt" present=0 lw=----(len=4) msglen=144
Worker-1 1:anti ==> not found
msgsnd Reply 1 of 5 on id:1 | prefix:anti from passage "Mansfield_Park.txt" present=0 lw=----(len=4) msglen=144**pref
ix(2) dis received
Worker-0 2:dis ==> not found
Worker-3 2:dis ==> not found
Worker-2 2:dis ==> not found
msgsnd Reply 0 of 5 on id:2 | prefix:dis from passage "Sense_And_Sensibility.txt" present=0 lw=----(len=4) msglen=144
msgsnd Reply 3 of 5 on id:2 | prefix:dis from passage "Tale_Of_Two_Cities.txt" present=0 lw=----(len=4) msglen=144
msgsnd Reply 2 of 5 on id:2 | prefix:dis from passage "The_Call_Of_The_Wild.txt" present=0 lw=----(len=4) msglen=144
Worker-4 2:dis ==> discover
Worker-1 2:dis ==> disrespectfulmsgsnd Reply 4 of 5 on id:2 | prefix:dis from passage "Peter_Pan.txt" present=1 lw=dis
cover(len=8) msglen=144
msgsnd Reply 1 of 5 on id:2 | prefix:dis from passage "Mansfield_Park.txt" present=1 lw=disrespectful(len=13) msglen=
144
**prefix(3) fore received
Worker-1 3:fore ==> not found
Worker-2 3:fore ==> not found
Worker-4 3:fore ==> not found
Worker-3 3:fore ==> not found
msgsnd Reply 1 of 5 on id:3 | prefix:fore from passage "Mansfield_Park.txt" present=0 lw=----(len=4) msglen=144Worker
-0 3:fore ==> not found msgsnd Reply 2 of 5 on id:3 | prefix:fore from passage "The_Call_Of_The_Wild.txt" present=0 l
w=----(len=4) msglen=144
msgsnd Reply 4 of 5 on id:3 | prefix:fore from passage "Peter_Pan.txt" present=0 lw=----(len=4) msglen=144
msgsnd Reply 3 of 5 on id:3 | prefix:fore from passage "Tale_Of_Two_Cities.txt" present=0 lw=----(len=4) msglen=144
msgsnd Reply 0 of 5 on id:3 | prefix:fore from passage "Sense_And_Sensibility.txt" present=0 lw=----(len=4) msglen=144
**prefix(4) inter received
Worker-0 4:inter ==> interest
Worker-3 4:inter ==> not found
Worker-4 4:inter ==> not found
Worker-2 4:inter ==> interlacing
Worker-1 4:inter ==> intercoursemsgsnd Reply 0 of 5 on id:4 | prefix:inter from passage "Sense_And_Sensibility.txt" p
resent=1 lw=interest(len=8) msglen=144
msgsnd Reply 3 of 5 on id:4 | prefix:inter from passage "Tale_Of_Two_Cities.txt" present=0 lw=----(len=4) msglen=144
msgsnd Reply 4 of 5 on id:4 | prefix:inter from passage "Peter_Pan.txt" present=0 lw=----(len=4) msglen=144
msgsnd Reply 2 of 5 on id:4 | prefix:inter from passage "The_Call_Of_The_Wild.txt" present=1 lw=interlacing(len=11) m
sglen=144
msgsnd Reply 1 of 5 on id:4 | prefix:inter from passage "Mansfield_Park.txt" present=1 lw=intercourse(len=11) msglen=
144
**prefix(5) mid received
Worker-1 5:mid ==> not found
Worker-2 5:mid ==> not found

```

## 4. Signal Handler Demonstration of Number 3.

In order to force the signal handler to show progress (which the code runs fast enough that even me mashing Ctrl-C rarely gets this to show), I added a sleep on the third message received as a test. (This is removed in the submission but shows that the functionality works in these pictures.)

```
Message(6): "mis" Sent (8 bytes)

Report "mis"
Passage 0 - Sense_And_Sensibility.txt - no word found
Passage 1 - Mansfield_Park.txt - miss
Passage 2 - The_Call_Of_The_Wild.txt - no word found
Passage 3 - Tale_Of_Two_Cities.txt - no word found
Passage 4 - Peter_Pan.txt - no word found
^C
anti - done
dis - done
fore - done
inter - done
mid - done
mis - done
non - pending
over - pending
pre - pending
semi - pending
sub - pending
super - pending
trans - pending
```

Test Code Added:

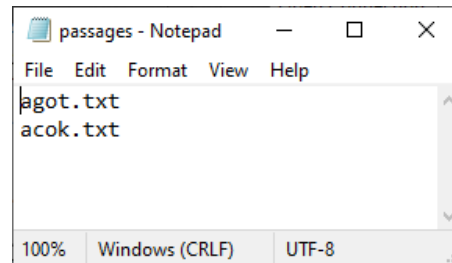
```
if(i==3) sleep(5);
```

Result during the sleep:

```
Message(4): "inter" Sent (10 bytes)
^C
anti - done
dis - done
fore - done
inter - 4 of 5
mid - pending
mis - pending
non - pending
over - pending
pre - pending
semi - pending
sub - pending
super - pending
tran - pending
```

5. I modified Passages.txt to include two text documents, each of which are long chapters from George RR Martin's *A Game of Thrones* and *A Clash of Kings*. These are good test passages as GRRM is very verbose and there will be few words not found with common prefixes.

Passages.txt



```

Exiting ...
ccsanders6@cs426:~/Spring_cs300_project> ./searchmanager 3 non mis pre

Message(1): "non" Sent (8 bytes)

Report "non"
Passage 0 - agot.txt - nonetheless
Passage 1 - acok.txt - nonetheless

Message(2): "mis" Sent (8 bytes)

Report "mis"
Passage 0 - agot.txt - mischance
Passage 1 - acok.txt - mission

Message(3): "pre" Sent (8 bytes)

Report "pre"
Passage 0 - agot.txt - presented
Passage 1 - acok.txt - prettily

Message(0): "" Sent (5 bytes)

Exiting ...
ccsanders6@cs426:~/Spring_cs300_project>

```

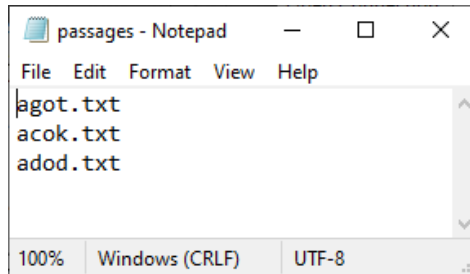
```

ccsanders6@cs426:~/Spring_cs300_project> java -cp . -Djava.library.path=. edu.cs300.PassageProcessor
Worker-0 (agot.txt) thread started ...
Worker-1 (acok.txt) thread started ...
**prefix(1) non received
Worker-1 1:non ==> nonetheless
Worker-0 1:non ==> nonetheless
msgsnd Reply 1 of 2 on id:1 | prefix:non from passage "acok.txt" present=1 lw=nonetheless(len=11) msglen=144
msgsnd Reply 0 of 2 on id:1 | prefix:non from passage "agot.txt" present=1 lw=nonetheless(len=11) msglen=144
**prefix(2) mis received
Worker-0 2:mis ==> mischance
Worker-1 2:mis ==> mission
msgsnd Reply 0 of 2 on id:2 | prefix:mis from passage "agot.txt" present=1 lw=mischance(len=9) msglen=144
msgsnd Reply 1 of 2 on id:2 | prefix:mis from passage "acok.txt" present=1 lw=mission(len=7) msglen=144
**prefix(3) pre received
Worker-1 3:pre ==> prettily
msgsnd Reply 1 of 2 on id:3 | prefix:pre from passage "acok.txt" present=1 lw=prettily(len=8) msglen=144
Worker-0 3:pre ==> presented
msgsnd Reply 0 of 2 on id:3 | prefix:pre from passage "agot.txt" present=1 lw=presented(len=9) msglen=144
**prefix(0) received
Terminating...
ccsanders6@cs426:~/Spring_cs300_project>

```

6. Passages.txt has been modified again to include an additional text document, A Dance of Dragons. This time, however, adod.txt does not exist. The program still runs like it should, does not create additional threads. I used different prefixes to confirm that I didn't just copy the previous pictures.

Passages.txt

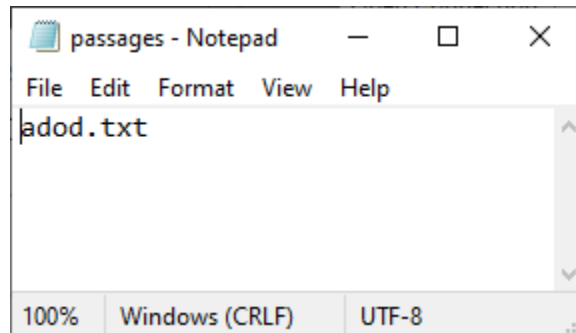


```
ccsanders6@cs426:~/Spring_cs300_project> ./searchmanager 3 wor use tre
Message(1): "wor" Sent (8 bytes)
Report "wor"
Passage 0 - agot.txt - world
Passage 1 - acok.txt - worn
Message(2): "use" Sent (8 bytes)
Report "use"
Passage 0 - agot.txt - useful
Passage 1 - acok.txt - used
Message(3): "tre" Sent (8 bytes)
Report "tre"
Passage 0 - agot.txt - trepidation
Passage 1 - acok.txt - trembles
Message(0): "" Sent (5 bytes)
Exiting ...
ccsanders6@cs426:~/Spring_cs300_project>
```

```
ccsanders6@cs426:~/Spring_cs300_project> java -cp . -Djava.library.path=. edu.cs300.PassageProcessor
Worker-0 (agot.txt) thread started ...
Worker-1 (acok.txt) thread started ...
**prefix(1) wor received
Worker-1 1:wor ==> worn
Worker-0 1:wor ==> world
msgsnd Reply 1 of 2 on id:1 | prefix:wor from passage "acok.txt" present=1 lw=worn(len=4) msglen=144
msgsnd Reply 0 of 2 on id:1 | prefix:wor from passage "agot.txt" present=1 lw=world(len=5) msglen=144
**prefix(2) use received
Worker-0 2:use ==> useful
Worker-1 2:use ==> usedmsgsnd Reply 0 of 2 on id:2 | prefix:use from passage "agot.txt" present=1 lw=useful(len=6) msglen=144
msgsnd Reply 1 of 2 on id:2 | prefix:use from passage "acok.txt" present=1 lw=used(len=4) msglen=144
**prefix(3) tre received
Worker-1 3:tre ==> trembles
Worker-0 3:tre ==> trepidation
msgsnd Reply 1 of 2 on id:3 | prefix:tre from passage "acok.txt" present=1 lw=trembles(len=8) msglen=144
msgsnd Reply 0 of 2 on id:3 | prefix:tre from passage "agot.txt" present=1 lw=trepidation(len=11) msglen=144
**prefix(0) received
Terminating...
ccsanders6@cs426:~/Spring_cs300_project>
```



7. Now I removed all existing passages from passages.txt. Searchmanager will continue to wait for a response, and the Passage Processor will exit early. Adod.txt does not exist. The same result occurs if there is no text in the passages file.



```
ccsanders6@cs426:~/Spring_cs300_project> java -cp . -Djava.library.path=. edu.cs300.PassageProcessor
No passages found in passages.txt. Exiting
```

8. Now testing to verify prefix checking. Firstly, providing no prefixes (or any amount of arguments less than the minimum amount) will exit the search manager immediately.

```
ccsanders6@cs426:~/Spring_cs300_project> ./searchmanager 3
Usage: ./searchmanager <secs between sending prefix requests> <prefix1> <prefix2> ...
ccsanders6@cs426:~/Spring_cs300_project> ./searchmanager
Usage: ./searchmanager <secs between sending prefix requests> <prefix1> <prefix2> ...
```

9. Passing only invalid prefixes (less than 3 characters, greater than 20 characters, or symbols) also gives an error.

```
ccsanders6@cs426:~/Spring_cs300_project> ./searchmanager 3 p 123 abcdefghijklmnopqrstuvwxyz
Error: Invalid Prefix Found. Will continue with valid prefixes.
Error: Invalid Prefix Found. Will continue with valid prefixes.
Error: Invalid Prefix Found. Will continue with valid prefixes.
No valid prefixes... Exiting.
```

10. Here is one invalid prefix compared to multiple valid prefixes. Passage Processor not shown as assumed correct from previous tests.

```
ccsanders6@cs426:~/Spring_cs300_project> ./searchmanager 0 non in-valid bro
Error: Invalid Prefix Found. Will continue with valid prefixes.

Message(1): "non" Sent (8 bytes)

Report "non"
Passage 0 - acok.txt - nonetheless
Passage 1 - agot.txt - nonetheless
Passage 2 - The_Call_Of_The_Wild.txt - no word found

Message(2): "bro" Sent (8 bytes)

Report "bro"
Passage 0 - acok.txt - brought
Passage 1 - agot.txt - brother
Passage 2 - The_Call_Of_The_Wild.txt - no word found

Message(0): "" Sent (5 bytes)

Exiting ...
```

11. Conversely, here is one valid prefix in the midst of many invalid prefixes.

```
ccsanders6@cs426:~/Spring_cs300_project> ./searchmanager 0 123 val hi
Error: Invalid Prefix Found. Will continue with valid prefixes.
Error: Invalid Prefix Found. Will continue with valid prefixes.

Message(1): "val" Sent (8 bytes)

Report "val"
Passage 0 - acok.txt - valyria
Passage 1 - agot.txt - no word found
Passage 2 - The_Call_Of_The_Wild.txt - valley

Message(0): "" Sent (5 bytes)

Exiting ...
```