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## **Test Cases for Programming Project**

## Test Case 1:

This test case is the same as the one in the project pdf. Figure 1 shows the output from the search manager, Figure 2 shows the output from the passage processor. In Figures 3 and 4, the signal handler is tested with the same arguments. Con, pre, and wor were tested.

```
[dafletemier@cs426:~/dafletemier> ./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 (8 bytes)
Exiting...
```

Figure 1: Search Manager Output For Test 1

```
[dafletemier@cs426:~/dafletemier> 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 ...
**prefix(1) con received
Worker-0 1:con ==> constant
Worker-1 1:con ==> contemptible
Worker-2 1:con ==> not found
Worker-3 (Tale Of Two Cities.txt) thread started ...
Worker-3 1:con ==> not found
msqsnd Reply 0 of 5 on 1:con from Sense And Sensibility.txt present=1 lw=constant(len=8) msqlen=144
msgsnd Reply 1 of 5 on 1:con from Mansfield Park.txt present=1 lw=contemptible(len=12) msglen=144
msgsnd Reply 2 of 5 on 1:con from The Call_Of_The Wild.txt present=0 lw=----(len=4) msglen=144
msgsnd Reply 3 of 5 on 1:con from 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 1:con from Peter Pan.txt present=1 lw=conspicuous(len=11) msglen=144
**prefix(2) pre received
Worker-0 2:pre ==> not found
Worker-1 2:pre ==> predict
Worker-2 2:pre ==> not found
Worker-3 2:pre ==> preserves
Worker-4 2:pre ==> not found
msgsnd Reply 0 of 5 on 2:pre from Sense And Sensibility.txt present=0 lw=---(len=4) msglen=144
msgsnd Reply 1 of 5 on 2:pre from Mansfield Park.txt present=1 lw=predict(len=7) msglen=144
msgsnd Reply 2 of 5 on 2:pre from The Call Of The Wild.txt present=0 lw=----(len=4) msglen=144
msgsnd Reply 3 of 5 on 2:pre from Tale Of Two Cities.txt present=1 lw=preserves(len=9) msglen=144
msgsnd Reply 4 of 5 on 2:pre from Peter Pan.txt present=0 lw=---(len=4) msglen=144
**prefix(3) wor received
Worker-0 3:wor ==> not found
Worker-1 3:wor ==> worse
Worker-2 3:wor ==> not found
Worker-3 3:wor ==> worst
Worker-4 3:wor ==> not found
msgsnd Reply 0 of 5 on 3:wor from Sense And Sensibility.txt present=0 lw=---(len=4) msglen=144
msgsnd Reply 1 of 5 on 3:wor from Mansfield Park.txt present=1 lw=worse(len=5) msglen=144
msgsnd Reply 2 of 5 on 3:wor from The Call Of The Wild.txt present=0 lw=----(len=4) msglen=144
msgsnd Reply 3 of 5 on 3:wor from Tale Of Two Cities.txt present=1 lw=worst(len=5) msglen=144
msgsnd Reply 4 of 5 on 3:wor from Peter_Pan.txt present=0 lw=---(len=4) msglen=144
**prefix(0)
                received
Terminating ...
```

Figure 2: Passage Processor Output for Test 1

```
[ualletemiet@c5420.~/ualletemitel/ ./Seatchmanagel 5 con pie woi
Message(1): "con" Sent (8 bytes)
^Ccon - pending
pre - pending
wor - pending
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 (8 bytes)
Exiting...
```

Figure 3: Signal Handler Before Any Responses

```
[dafletemier@cs426:~/dafletemier> ./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
^Ccon - done
pre - pending
wor - pending
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 (8 bytes)
Exiting...
```

Figure 4: Signal Handler In Between Responses

Test Case 2: No passages provided to passage processor. Prints message and terminates.

```
[dafletemier@cs426:~/dafletemier> java -cp . -Djava.library.path=. edu.cs300.PassageProcessor No passages were provided. Exiting dafletemier@cs426:~/dafletemier> []
Figure 5: No passages provided
```

Test Case 3: Another test case. Bad file names were placed in passages.txt. 6 good files were present. Tested fav, mor, ben.

```
[dafletemier@cs426:~/dafletemier> ./searchmanager 3 fav mor ben
Message(1): "fav" Sent (8 bytes)
Report "fav"
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 5 - Pride_And_Prejudice.txt - favourable
Message(2): "mor" Sent (8 bytes)
Report "mor"
Passage 0 - Sense_And_Sensibility.txt - no word found
Passage 1 - Mansfield_Park.txt - more
Passage 2 - The_Call_Of_The_Wild.txt - morning
Passage 3 - Tale Of Two Cities.txt - no word found
Passage 4 - Peter_Pan.txt - more
Passage 5 - Pride_And_Prejudice.txt - more
Message(3): "ben" Sent (8 bytes)
Report "ben"
Passage 0 - Sense_And_Sensibility.txt - no word found
Passage 1 - Mansfield_Park.txt - benefited
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 5 - Pride_And_Prejudice.txt - bennet
Message(0): " Sent (8 bytes)
Exiting...
```

Figure 6: Search Manager Test Case 3.

```
dafletemier@cs426:~/dafletemier> java -cp . -Djava.library.path=. edu.cs300.PassageProcessor
File thisisnotreal.txt doesn't exist
File thisoneisfaketoo.txt doesn't exist
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-5 (Pride And Prejudice.txt) thread started ...
**prefix(1) fav received
Worker-0 1:fav ==> not found
Worker-5 1:fav ==> favourable
Worker-1 1:fav ==> not found
Worker-2 1:fav ==> not found
msgsnd Reply 5 of 6 on 1:fav from Pride And Prejudice.txt present=1 lw=favourable(len=10) msglen=14
msgsnd Reply 1 of 6 on 1:fav from Mansfield Park.txt present=0 lw=---(len=4) msglen=144
msgsnd Reply 2 of 6 on 1:fav from The_Call_Of_The_Wild.txt present=0 lw=---(len=4) msglen=144
msgsnd Reply 0 of 6 on 1:fav from Sense_And_Sensibility.txt present=0 lw=----(len=4) msglen=144
Worker-3 1:fav ==> not found
msgsnd Reply 3 of 6 on 1:fav from Tale Of Two Cities.txt present=0 lw=---(len=4) msglen=144
Worker-4 (Peter Pan.txt) thread started ...
Worker-4 1:fav ==> not found
msgsnd Reply 4 of 6 on 1:fav from Peter_Pan.txt present=0 lw=---(len=4) msglen=144
**prefix(2) mor received
Worker-5 2:mor ==> more
Worker-1 2:mor ==> more
Worker-2 2:mor ==> morning
Worker-3 2:mor ==> not found
Worker-4 2:mor ==> more
Worker-0 2:mor ==> not found
msgsnd Reply 5 of 6 on 2:mor from Pride And Prejudice.txt present=1 lw=more(len=4) msglen=144
msgsnd Reply 1 of 6 on 2:mor from Mansfield Park.txt present=1 lw=more(len=4) msglen=144
msgsnd Reply 2 of 6 on 2:mor from The Call Of The Wild.txt present=1 lw=morning(len=7) msglen=144
msgsnd Reply 3 of 6 on 2:mor from Tale_Of_Two_Cities.txt present=0 lw=----(len=4) msglen=144
msgsnd Reply 4 of 6 on 2:mor from Peter Pan.txt present=1 lw=more(len=4) msglen=144
msgsnd Reply 0 of 6 on 2:mor from Sense And Sensibility.txt present=0 lw=----(len=4) msglen=144
**prefix(3) ben received
Worker-0 3:ben ==> not found
Worker-5 3:ben ==> bennet
Worker-1 3:ben ==> benefited
Worker-2 3:ben ==> not found
msgsnd Reply 0 of 6 on 3:ben from Sense And Sensibility.txt present=0 lw=----(len=4) msglen=144
Worker-3 3:ben ==> not found
msgsnd Reply 5 of 6 on 3:ben from Pride_And_Prejudice.txt present=1 lw=bennet(len=6) msglen=144
msgsnd Reply 1 of 6 on 3:ben from Mansfield Park.txt present=1 lw=benefited(len=9) msglen=144
msgsnd Reply 2 of 6 on 3:ben from The_Call_Of_The_Wild.txt present=0 lw=---(len=4) msglen=144
msgsnd Reply 3 of 6 on 3:ben from Tale Of Two Cities.txt present=0 lw=----(len=4) msglen=144
Worker-4 3:ben ==> not found
msgsnd Reply 4 of 6 on 3:ben from Peter Pan.txt present=0 lw=----(len=4) msglen=144
               received
**prefix(0)
Terminating...
```

Figure 7: Passage Processor Test Case 3

Test Case 4: Original passages.txt. Included a bad prefix that was too short. Tested hen, that, hu.

```
[dafletemier@cs426:~/dafletemier> ./searchmanager 2 hen tha hu
Message(1): "hen" Sent (8 bytes)
Report "hen"
Passage 0 - Sense_And_Sensibility.txt - henry
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 - henceforth
Message(2): "tha" Sent (8 bytes)
Report "tha"
Passage 0 - Sense_And_Sensibility.txt - no word found
Passage 1 - Mansfield_Park.txt - that
Passage 2 - The_Call_Of_The_Wild.txt - that
Passage 3 - Tale_Of_Two_Cities.txt - that
Passage 4 - Peter_Pan.txt - that
Error: prefix length invalid.. skipping hu
Message(0): " Sent (8 bytes)
Exiting...
Figure 8: Search Manager Test Case 4
[dafletemier@cs426:~/dafletemier> 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) hen received
Worker-0 1:hen ==> henry
Worker-1 1:hen ==> not found
Worker-2 1:hen ==> not found
msgsnd Reply 0 of 5 on 1:hen from Sense_And_Sensibility.txt present=1 lw=henry(len=5) msglen=144
msgsnd Reply 1 of 5 on 1:hen from Mansfield Park.txt present=0 lw=----(len=4) msglen=144
msgsnd Reply 2 of 5 on 1:hen from The Call_Of_The Wild.txt present=0 lw=----(len=4) msglen=144
Worker-3 1:hen ==> not found
Worker-4 (Peter_Pan.txt) thread started ...
Worker-4 1:hen ==> henceforth
msgsnd Reply 3 of 5 on 1:hen from Tale_Of_Two_Cities.txt present=0 lw=----(len=4) msglen=144
msgsnd Reply 4 of 5 on 1:hen from Peter_Pan.txt present=1 lw=henceforth(len=10) msglen=144
**prefix(2) tha received
Worker-0 2:tha ==> not found
msgsnd Reply 0 of 5 on 2:tha from Sense And Sensibility.txt present=0 lw=----(len=4) msglen=144
Worker-1 2:tha ==> that
msgsnd Reply 1 of 5 on 2:tha from Mansfield Park.txt present=1 lw=that(len=4) msglen=144
Worker-2 2:tha ==> that
msgsnd Reply 2 of 5 on 2:tha from The_Call_Of_The_Wild.txt present=1 lw=that(len=4) msglen=144
Worker-3 2:tha ==> that
msgsnd Reply 3 of 5 on 2:tha from Tale Of Two Cities.txt present=1 lw=that(len=4) msglen=144
Worker-4 2:tha ==> that
```

Figure 9: Passage Processor Test Case 5

Terminating...

Test Case 6: Testing prefixes ser, dis, and ove.

msgsnd Reply 4 of 5 on 2:tha from Peter Pan.txt present=1 lw=that(len=4) msglen=144

```
[dafletemier@cs426:~/dafletemier> ./searchmanager 2 ser dis ove
Message(1): "ser" Sent (8 bytes)
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 - servants
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): "ove" Sent (8 bytes)
Report "ove"
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(0): " Sent (8 bytes)
Exiting...
```

## Figure 10: Search Manager Test Case 6

```
[dafletemier@cs426:~/dafletemier> 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-4 (Peter_Pan.txt) thread started ..
Worker-3 (Tale Of Two Cities.txt) thread started ...
**prefix(1) ser received
Worker-0 1:ser ==> not found
Worker-1 1:ser ==> not found
msgsnd Reply 0 of 5 on 1:ser from Sense_And_Sensibility.txt present=0 lw=----(len=4) msglen=144
msgsnd Reply 1 of 5 on 1:ser from Mansfield_Park.txt present=0 lw=----(len=4) msglen=144
Worker-4 1:ser ==> not found
msgsnd Reply 4 of 5 on 1:ser from Peter Pan.txt present=0 lw=---(len=4) msglen=144
Worker-3 1:ser ==> not found
msgsnd Reply 3 of 5 on 1:ser from Tale Of Two Cities.txt present=0 lw=----(len=4) msglen=144
Worker-2 1:ser ==> servants
msgsnd Reply 2 of 5 on 1:ser from The_Call_Of_The_Wild.txt present=1 lw=servants(len=8) msglen=144
**prefix(2) dis received
Worker-2 2:dis ==> not found
Worker-0 2:dis ==> not found
msgsnd Reply 2 of 5 on 2:dis from The_Call_Of_The_Wild.txt present=0 lw=----(len=4) msglen=144
msgsnd Reply 0 of 5 on 2:dis from Sense_And_Sensibility.txt present=0 lw=----(len=4) msglen=144
Worker-1 2:dis ==> disrespectful
msgsnd Reply 1 of 5 on 2:dis from Mansfield Park.txt present=1 lw=disrespectful(len=13) msglen=144
Worker-4 2:dis ==> discover
msgsnd Reply 4 of 5 on 2:dis from Peter Pan.txt present=1 lw=discover(len=8) msglen=144
Worker-3 2:dis ==> not found
msgsnd Reply 3 of 5 on 2:dis from Tale Of Two Cities.txt present=0 lw=----(len=4) msglen=144
**prefix(3) ove received
Worker-2 3:ove ==> not found
msgsnd Reply 2 of 5 on 3:ove from The Call Of The Wild.txt present=0 lw=----(len=4) msglen=144
Worker-1 3:ove ==> not found
msgsnd Reply 1 of 5 on 3:ove from Mansfield Park.txt present=0 lw=----(len=4) msglen=144
Worker-0 3:ove ==> not found
msgsnd Reply 0 of 5 on 3:ove from Sense_And_Sensibility.txt present=0 lw=----(len=4) msglen=144
Worker-4 3:ove ==> not found
msgsnd Reply 4 of 5 on 3:ove from Peter_Pan.txt present=0 lw=----(len=4) msglen=144
Worker-3 3:ove ==> not found
msgsnd Reply 3 of 5 on 3:ove from Tale_Of_Two_Cities.txt present=0 lw=----(len=4) msglen=144
**prefix(0)
                received
Terminating..
```

Figure 11: Passage Processor Test Case 6

Test Case 7: Testing whether prefixes with capital letters in them are treated properly. All characters are sent to lowercase before being sent to passage processor. The prefixes tested are for and the.

```
[dafletemier@cs426:~/dafletemier> ./searchmanager 3 fOR tHe
Message(1): "for" Sent (8 bytes)
Report "for"
Passage 0 - Sense_And_Sensibility.txt - no word found
Passage 1 - Mansfield Park.txt - fortune
Passage 2 - The_Call_Of_The_Wild.txt - forth
Passage 3 - Tale_Of_Two_Cities.txt - no word found
Passage 4 - Peter_Pan.txt - no word found
Message(2): "the" Sent (8 bytes)
Report "the"
Passage 0 - Sense_And_Sensibility.txt - their
Passage 1 - Mansfield_Park.txt - there
Passage 2 - The_Call_Of_The_Wild.txt - these
Passage 3 - Tale_Of_Two_Cities.txt - there
Passage 4 - Peter Pan.txt - there
Message(0): " Sent (8 bytes)
Exiting...
dafletemier@cs426:~/dafletemier>
Figure 12: Search Manager Test Case 7
dafletemier@cs426:~/dafletemier> java -cp . -Djava.library.path=. edu.cs300.PassageProcessor
Worker-0 (Sense And Sensibility.txt) thread started ...
Worker-1 (Mansfield Park.txt) thread started ...
Worker-3 (Tale_Of_Two_Cities.txt) thread started ...
Worker-2 (The Call Of The Wild.txt) thread started ...
**prefix(1) for received
Worker-0 1:for ==> not found
Worker-2 1:for ==> forth
Worker-1 1:for ==> fortune
Worker-3 1:for ==> not found
msgsnd Reply 1 of 5 on 1:for from Mansfield Park.txt present=1 lw=fortune(len=7) msglen=144
msgsnd Reply 0 of 5 on 1:for from Sense And Sensibility.txt present=0 lw=---(len=4) msglen=144
msgsnd Reply 3 of 5 on 1:for from Tale Of Two Cities.txt present=0 lw=---(len=4) msglen=144
msgsnd Reply 2 of 5 on 1:for from The Call Of The Wild.txt present=1 lw=forth(len=5) msglen=144
Worker-4 (Peter Pan.txt) thread started ...
Worker-4 1:for ==> not found
msgsnd Reply 4 of 5 on 1:for from Peter Pan.txt present=0 lw=----(len=4) msglen=144
**prefix(2) the received
Worker-1 2:the ==> there
Worker-2 2:the ==> these
Worker-3 2:the ==> there
msgsnd Reply 1 of 5 on 2:the from Mansfield_Park.txt present=1 lw=there(len=5) msglen=144
msgsnd Reply 2 of 5 on 2:the from The Call Of The Wild.txt present=1 lw=these(len=5) msglen=144
msgsnd Reply 3 of 5 on 2:the from Tale Of Two Cities.txt present=1 lw=there(len=5) msglen=144
Worker-0 2:the ==> their
msgsnd Reply 0 of 5 on 2:the from Sense_And_Sensibility.txt present=1 lw=their(len=5) msglen=144
Worker-4 2:the ==> there
msgsnd Reply 4 of 5 on 2:the from Peter_Pan.txt present=1 lw=there(len=5) msglen=144
**prefix(0)
               received
Terminating...
```

Figure 13: Passage Processor Test Case 7