COP4338 Assignment 1 Grading Rubric

100 points

If the submission is not a zip file it earns a 0.

If the program does not compile using your Makefile on ocelot it earns a 0.

Submission worth 10 points

* Not naming the program as specified in the directions. (bstsort for the program) -1
* Not naming the zip file appropriately (FirstnameLastnameA1) -1
* Not including all files expected in the submission. (Makefile, bstsort.c and possibly bstsort.h) -1
* Missing student name -1
* Missing affirmation of Originality -1
* Missing a program description -1
* Program should have good comments along with readable code. -2
* Program not structured nicely with good indentation -2

Requirements worth 50 points

* Program should use getopt. -5
* Program should print an error message and the usage statement if user input is wrong. -5
* Program should complete with a success return code of 0 or an error code if something else happens. -5
* Malloc or Calloc should be used to allocate memory for each node. Strings may be included in the node or allocated separately. -10
* Free should be used to free any memory allocated for the nodes or the strings. -5
* Program should not rename any input or output files from the command line request. -5
* Program should have its own string comparison functions. -10
* Program should end with a blank line or a ctrl-d for end of file. -5

Program should run for the following cases (-3 for any case that does not work):

|  |  |
| --- | --- |
| bstsort | Input from the keyboard, output to screen, case insensitive |
| bstsort -c | Input from the keyboard, output to screen, case sensitive |
| bstsort infile1 | Input from file called infile1, output to screen, case insensitive |
| bstsort –c infile1 | Input from file called infile1, output to screen, case sensitive |
| bstsort –o outfile1 | Input from the keyboard, output to file called outfile1 case insensitive |
| bstsort –c –o outfile2 | Input from the keyboard, output to file called outfile2 case sensitive |
| bstsort –o outfile3 infile1 | Input from file called infile1, output to file called outfile3, case insensitive |
| bstsort –c –o outfile4 infile1 | Input from file called infile1, output to file called outfile4, case sensitive |
| bstsort –o outfile5 infile2b | Input from file called infile2b, output to file called outfile5, case insensitive |
| bstsort –c –o outfile6 infile2a | Input from file called infile2a, output to file called outfile6, case sensitive |
| bstsort –o outfile7 infile3b | Input from file called infile3b, output to file called outfile7, case insensitive |
| bstsort –c –o outfile8 infile3a | Input from file called infile3a, output to file called outfile8, case sensitive |
| bstsort –o outfile9 < infile3b | Input from file called infile3b, output to file called outfile9, case insensitive |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Infile1** | **Infile2a** | **Infile2b** | **Infile3a** | **Infile3b** |
| bob is working. david is a new hire.  alice is bob’s boss.  charles doesn’t like bob. | apple  APPLE  Banana  Apple  banana | apple  Banana  Ban | apple  APPLE  Banana  Apple  Banana  AAA | apple  Banana  ban  AAA |