

DIAGONAL - BINARY FILES

This and all future assignments must use the exception handling features described in the assignment guides.

Create a directory with a meaningful name to be the working directory for this assignment development.

In the assignment development working directory do the following steps.

Copy **diagonal.cpp** and LineInfo.h from the professor's Linux account directory to your working directory:

Professor's path and filename:

~smd013000/courses/3377/assigns/02/diagonal.cpp

Build the application naming the execution file **diagonal**.

Run the execution file diagonal with Funny! as the argument.

The binary file outputted by the program will be **diagonal.bin**.

Use **od -c** command on the **diagonal.bin** binary output file to see the **diagonal.bin** contents.

The result of the octal dump command on the binary file treats the contents of the file as characters.

The output should look like :

```
od -c diagonal.bin
0000000  F . . . . .
0000020  . U . . . . .
0000040  . . N . . . . .
0000060  . . . N . . . . .
0000100  . . . . Y . . . . .
0000120  . . . . . ! . . . . .
0000140  . . . . .
*
0000400
```

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Copy the successful diagonal.cpp to diagonal2.cpp.

Enhance the diagonal2.cpp file to handle any number of words as arguments.

Build a diagonal2 execution file - diagonal2.

Execute the following command:

```
./diagonal WoW Sumptuous
```

A pattern like as shown below should be produced by the OD command.

```
{cslinux1:~} od -c diagonal2.bin
0000000  W  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
0000020  .  o  .  .  .  .  .  .  .  .  .  .  .  .  .  .
0000040  .  .  W  .  .  .  .  .  .  .  .  .  .  .  .  .
0000060  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
*
0000400  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  S
0000420  .  .  .  .  .  .  .  .  .  .  .  .  .  .  u  .
0000440  .  .  .  .  .  .  .  .  .  .  .  .  .  m  .  .
0000460  .  .  .  .  .  .  .  .  .  .  .  .  .  p  .  .
0000500  .  .  .  .  .  .  .  .  .  .  .  .  .  t  .  .
0000520  .  .  .  .  .  .  .  .  .  .  .  u  .  .  .  .
0000540  .  .  .  .  .  .  .  .  .  .  o  .  .  .  .  .
0000560  .  .  .  .  .  .  .  .  .  u  .  .  .  .  .  .
0000600  .  .  .  .  .  .  .  .  s  .  .  .  .  .  .  .
0000620  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
*
0001000
{cslinux1:~}
```

Capture the correct runs of diagonal2.cpp and the od on binary file in an activities file.

Zip up the activity file and the diagonal2.cpp and LineInfo.h to submit the assignment.