Overview

The crew of Planet Express is sitting around the conference table. Bender is leaning back in his chair - smoking a cigar. Fry is trying, unsuccessfully, to get his fingers out a Chinese Finger Trap.

Farnsworth::	Good news everyone! Today you get to deliver an assembly program to the Pointless Student Work Nebula!
Bender:	Aaarrrgggh. I hate work!
Fry:	Well, pointless sounds fun!
Bender:	Nah. It's work that sounds pointless to me.
Farnsworth:	Shut up you!
Leela:	*(sigh)* What does the program do?
Farnsworth:	The program takes any word and displays it back to the user – *bended!*
Bender:	What? Bended? That sounds like a job for me!
Leela:	Hmmm. A "job"…. that sounds like you might actually have a work ethic.
Bender:	*(annoyed)* Nooooooo! I bend for fun… what I want, when I want, *who* I want! I'm Bender Bending Rodriguez!
Farnsworth:	Yes. As bad as it sounds, this mission depends on you Bender.
Leela:	Oh Lord…. we're doomed.
Farnsworth:	*(angry)* I never said that!
	But, I'm certainly thinking it loudly….

The Program

The Word Bender program reads a word (or sentence) and prints it back to the screen "bent". The word is "bent" by displaying the first half the word vertically and the second half horizontally.

For example, the word "Sacramento" would be displayed as:

```
S
a
c
r
a
m e n t o
```

So, the first 5 letters are displayed vertically – character by character. The second half is displayed horizontally with spaces between each character.

Sample Program

Here is a sample program. Your solution doesn't have to look exactly like this. The user's input is displayed in blue.
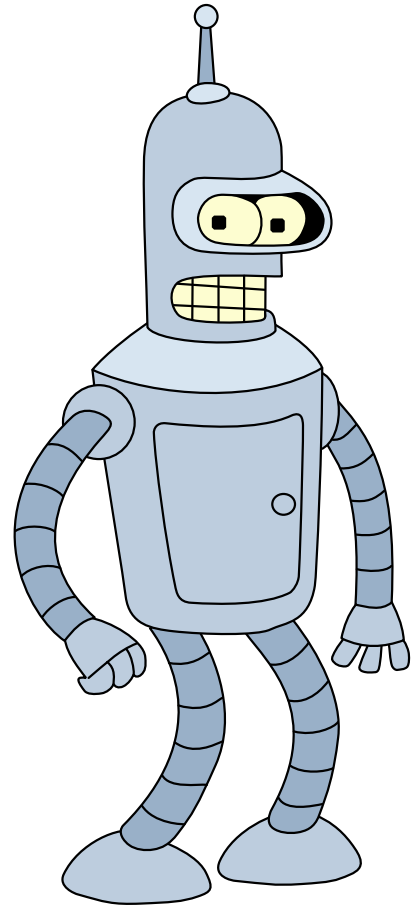
```
Welcome to the Word Bender program

Enter a word to bend!
Hypnotoad

H
y
p
n
o t o a d
```

Reading and Storing Text

To read text from the keyboard, please read about the ScanCString subroutine in the CSC35 Library. You will need to create a buffer large enough to hold each part of the sentence.
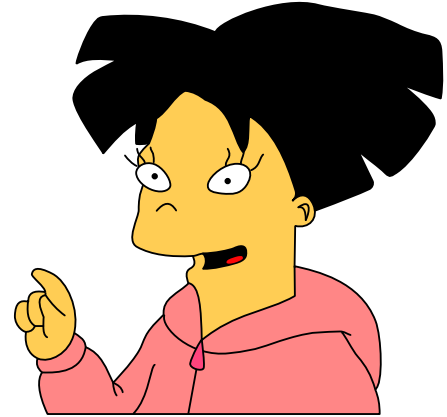
```
Word:
    .space 30
```

Tips

Amy: Hey! You might want to use the following tips. I can't help. I
       need to go buy a new tubetop! Byeeeeee!

Amy's Helpful list:

1. First try to print the entire word to the screen <u>vertically</u>. Grab a
    character at a time (you need to use indexing). Use PrintChar
    to print each to the screen. Look at the library documentation.

2. Once you have #1 working. Use LengthCString to get the
    length of the input. You can then calculate half the length.

3. Now, try to print <u>half</u> the string vertically.

4. Finally, print the second half horizontally.

Requirements

You must think of a solution on your own. .

1. Display the title of the program

2. Prompt the user for input.

3. Read a word (sentence) from the keyboard and store in a buffer.

4. Display the sentence "bent".

UNIX Commands

Editing

Action	Command	Notes
Edit File	`nano` *filename*	"Nano" is an easy to use text editor.
E-Mail	`alpine`	"Alpine" is text-based e-mail application. You will e-mail your assignments it.
Assemble File	`as –o` *objectfile asmfile*	Don't mix up the *objectfile* and *asmfile* fields. It will destroy your program!
Link File	`ld –o` *exefile objectfiles*	Link and create an executable file from one (or more) object files

Folder Navigation

Action	Command	Description
Change current folder	`cd` *foldername*	"Changes Directory"
Go to parent folder	`cd ..`	Think of it as the "back button".
Show current folder	`pwd`	Gives a file path
List files	`ls`	Lists the files in current directory.

What? No Zoidberg in this lab! Why no Zoidberg?