

## Digital Representation

Or, where do the letters come from?

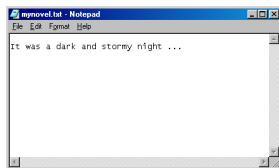
Textbook Ch. 8

## Technologies of writing and publishing



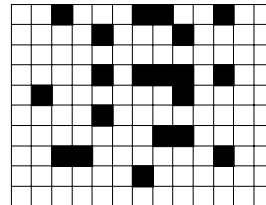
## The computer as a writing tool

How does it work?



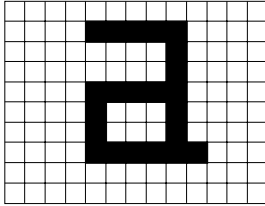
## The display screen

The screen is a grid of rectangular regions, called pixels, each one of which can be made black or white (or a color)



## The display screen

Patterns of black and white (or colors) can be used to create meaningful marks, such as letters or other characters



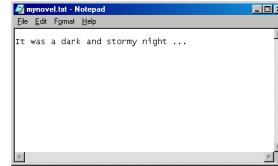
1/27/2002

04-5

© Copyright 2000-2001, University of Washington

## Saving the text

- ❖ But the marks on the computer screen are transient
- ❖ The letters and words need to be saved somewhere so they can be viewed, printed, or edited at a later time
- ❖ They are saved in computer memory in a file



1/27/2002

04-6

© Copyright 2000-2001, University of Washington

## Little, teeny letters?

But computer memory (e.g. your file) doesn't actually contain letters or characters

~~It was a dark and stormy night~~

1/27/2002

04-7

© Copyright 2000-2001, University of Washington

## Character codes

- ❖ Instead, what it contains are character codes
- ❖ The character codes represent the characters

65 A  
66 B  
67 C  
97 a  
98 b  
99 c



1/27/2002

04-8

© Copyright 2000-2001, University of Washington

73 116 32 97 32 100 97 114 107 32 . . .

