

AP Computer Science

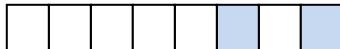


Mr Hanley



Assignment 5/10₂/5₈/5₁₆

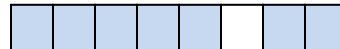
Binary



Ones Comp



Twos Comp



Strings Redo

Write a class that features a series of String methods

1. Write a method to separate out the first, last and middle initial from a name. The name will be input in the form last, first middle
Examples,
Smith, Gerald E
Harrison, Lyn A
Baxter-Hayes, Steve P
2. Take in 3 Strings and return them in alphabetical (ASCII) order. Do not use Collections.sort.
3. Cooney likes noodles but not pasta. Cooney likes fruit loops but not cereal. Write a method that takes in a String and returns true if Cooney likes it.
4. Write a program that creates a scalable American Flag.

Size 1

***=====

***=====

=====

=====

Size 2

```
*****=====
*****=====
*****=====
*****=====
=====
=====
=====
=====
```

Size3

```
*****=====
*****=====
*****=====
*****=====
*****=====
*****=====
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=====
=====
```

Your scalable American flag should go up to Size 7, use Loops

5. Some web pages have color backgrounds. Some web pages use images
Grab the color of the background if it has a color, otherwise get the name of the image

Here is an example of a black background color

```
<body text = "#FFFFFF" bgcolor = "#000000">
```

return 000000 in this example

Here is an example of a background with an image

```
<body background = "Computer-Background.jpg">
```

return Computer-Background.jpg in this example

If the page has neither, then return "no background specified"

return no background specified in this example

6. A valid email address is of the form username(no spaces)@domain.com
For the local part(before the @), the following are acceptable;
characters (A-Z and a-z), numbers (0-9), periods (.) ,underscores (_) and dashes(-)
NO SPACES or other symbols are allowed
The local part must be at least one character!!!

Examples of acceptable;

captain66
captain_66
capt-71_
captain.smith.ops

Unacceptable;

captain 66
CAP^
cc*
(No String) Invalid because there is no localpart

For the domain name (after the @), there must be a first part with at least one character, followed by a . followed by a second part
The first part must have characters (A-Z and a-z), numbers(0-9), no other characters are allowed. The second part must be com, edu, net, org, gov

Examples of acceptable;

aol.com
shenet.org
nys.gov
Verizon3.net

Unacceptable;

s hark.net
sharknet
skidmore.edi
(No String) Invalid because there is no domain

Write a method that takes in a String and returns a boolean if the String is a valid email or not.

Project Name	Assign 5A – String Methods Redo
Class 1 Name	StringMethods
Class 2 Name	StringDriver

Rubric	
Name Parser	20
Sorter	30
Cooney	20
Scalable Flag	40
Get Background	15
EmailValidityChecker	25
TOTAL	150

Recursion*Linear Search*Binary Search*Grid World Case Study*File Processing *nlogn*Hangman