Password Generator Project

Jessica Tunick and Monika Allen
APCSP Period 1
Myers
08/12/19

Password Generator Algorithm

Step 1: Take the first and the last letter of the site name (uppercase)
Step 2: If the site has 3 or more vowels, put all the vowels. If not, just put the first vowel.
Step 3: Replace all vowels put down as a result of step 2 (if any) with their number order in the alphabet
Step 4: Take the main color of the site logo, find the opposite color, then put the letters of the color in alphabetical order. In the case that the main color is unclear, use the color white
Step 5: Add up all the letters in the site name, take the square root, and take the first two digits after the decimal.
Step 6: If the site name can intentionally be split into two or more words, (ex. Collegeboard.org) put an asterisk. (*) If not, (ex. Facebook.com) put an exclamation point. (!)
Step 7: Add a Hashtag
Step 8: Take the number of letters in the site name and subtract one.

Annotated Example:

Twitter

Step 1: Take the first and last letter of the site name (uppercase)
Outcome:TR
Step 2: If the site has 3 or more vowels, put all the vowels. If not, just put the 3rd vowel.
Outcome: TRi
Step 3: Replace all vowels put down as a result of step 2 (if any) with their number order in the alphabet
Outcome: TRi9
Step 4: Take the main color of the site logo, find the opposite color, then put the letters of the color in alphabetical order.
Outcome: TRi9ellowy
Step 5: Add up all the letters in the site name, take the square root, and take the first two digits after the decimal.
Outcome: TRi9ellowy64
Step 6: If the site name can intentionally be split into two or more words, (ex. Collegeboard.org) put an asterisk. (*) If not, (ex. Facebook.com) put an exclamation point. (!)
Outcome: TRi9ellowy64!
Step 7: Add a Hashtag
Outcome: TRi9ellowy64!#
Step 8: Take the number of letters in the site name and subtract one.
Outcome: TRi9ellowy64!#6

	Twitter	Instagram	Snapchat	YouTube	Netflix
Step 1	TR	IM	ST	YE	NX
Step 2	TRi	IMiaa	STa	YEouue	NXe
Step 3	TRi9	IM911	STa1	YE1521215	NXe5
Step 4	TRi9ellowy	IM911abckl	STa1belu	YE1521215acny	NXe5acny
Step 5	TRi9ellowy64	IM911abckl82	STa1belu82	YE1521215acny64	NXe5acny44
Step 6	TRi9ellowy64!	IM911abckl82#	STa1belu82!	YE1521215acny64*	NXe5acny44!
Step 7	TRi9ellowy64!#	IM911abckl82#*	STa1belu82!#	YE1521215acny64*#	NXe5acny44!#
Step 8	TRi9ellowy64!#6	IM911abckl82#*7	STa1belu82!#7	YE1521215acny64*#6	NXe5acny44!#5

Rubric

Content Area	Performance Quality			
Readability	Algorithm is typed, organized, and nicely formatted for easy use.	Algorithm is organized and nicely formatted for easy use, but is not typed. —OR— Algorithm is typed, but the formatting and organization makes it somewhat difficult to use.	Algorithm has formatting and organization that makes it somewhat difficult to use AND is not typed. —OR— Algorithm may be typed, but the formatting and organization makes it extremely difficult to use.	Not enough criteria are met in order to award any credit.

Flow	The algorithm incorporates the appropriate use of all three types of programming structure: sequencing, selection, and iteration.	The algorithm incorporates the appropriate use of only two types of programming structure: sequencing, selection, and iteration.	The algorithm incorporates the appropriate use of only one type of programming structure: sequencing, selection, and iteration.	Not enough criteria are met in order to award any credit.
Correctness	The algorithm generates a unique and reproducible password for all sites.	The algorithm generates a reproducible password for all sites, however, some may not be unique. —OR— The algorithm generates a unique and reproducible password for most sites. —OR— The algorithm generates a unique password for all sites, however, it is not reproducible.	The algorithm generates a password for all sites, however, some may not be unique or reproducible. —OR— The algorithm generates a unique and reproducible password for only a few sites.	Not enough criteria are met in order to award any credit.
Effectiveness	The algorithm cannot be easily deduced from just the password and the name of the site.	A few parts of the algorithm can be easily deduced from just the password and the name of the site.	Most parts of the algorithm can be easily deduced from just the password and the name of the site.	Not enough criteria are met in order to award any credit.
Examples	There are five sample passwords generated correctly based on the algorithm.	There are four sample passwords generated correctly based on the algorithm.	There are three or fewer sample passwords generated correctly based on the algorithm.	Not enough criteria are met in order to award any credit.

Documented Case	There is one annotated example documented at all steps of the process. —AND— It is well formatted and organized and easy to follow.	There is one annotated example documented at most steps of the process AND It is well formatted and organized and easy to follow. —OR— There is one annotated example documented at all steps of the process, but the organization and formatting makes it difficult to follow.	There is one annotated example documented at some steps of the process AND It is well formatted and organized and easy to follow. —OR— There is one annotated example documented at all steps of the process, but the organization and formatting makes it extremely difficult to follow. —OR— There is one annotated example documented at most steps of the process, but the organization and formatting make it difficult to follow.	Not enough criteria are met in order to award any credit.