Hash Function

horizontal line

# Explanation:

<?php

function simple\_hash($str) {

$characters='0123456789abcdefghijklmnopqrstuvwxyz';

$hash\_array = [];

$hash = '';

$i=0;

for($s=0;$s<10;$s++){

$hash\_array[$i]=($hash\_array[$i]+ord($str[$s])+$s)%strlen($characters);

$hash[$s] = $characters[$hash\_array[$i]];

}

return $hash;

}

echo (simple\_hash('bharat'));

echo('<br>');

echo strlen(simple\_hash('bharat'));

?>

The function simple\_hash follows the following process.

1)It takes $str as a parameter from the user..

2)And we are predefining the entire constant in the variable $characters

i.e $characters='0123456789abcdefghijklmnopqrstuvwxyz';

3)I am defining an empty array and an empty string named $hash\_array,$hash and $i=0;

i.e $hash\_array = [];

$hash = '';

$i=0;

4) I am running a for loop for a interval of 0 to 10 such that the output will contain 10 characters

which doesn’t depend on the input string length

i.e for($s=0;$s<10;$s++)

5)Now the main operation is performed inside the for loop

i.e the each value in the string $str will get converted into its ASCII value by using ord() function

And then the changed value adds up to the previous value stored in the $hash\_array and it’s

Modulus of that number with the strlen($characters) is again stored in $hash\_array.

i.e $hash\_array[$i]=($hash\_array[$i]+ord($str[$s])+$s)%strlen($characters);

Let’s assume that the initial value of $hash\_array[0]=0

Now let assume $str[0] = ‘a’

Now the function ord($str[$s]) converts it to 97(97 is the ASCII value of ‘a’).

So now the summation of (0 + 97+ 0) %36 = 25 .(where strlen($characters) = 36).

This 25 gets stored inside $hash\_array[0].

6)Now a character mapping with the value in $hash\_array is mapped to the empty string.

$hash[$s] = $characters[$hash\_array[$i]];

Note: The step 5 and 6 will run until for loop executes.

7)The so concatenated string is returned which is nothing but the hashed value of the input

String.

return $hash;

8)So the above code returns the following output.

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