**Part 2 - Theory Questions**

1. **What is an associative array and how does it differ from an Indexed array?**

Associate arrays are arrays that you can assign named keys as index for each value. Unlike an numeric array which stores values in a linear index order, an associative array can use either an int or string type as keys for its values.

1. **Describe the foreach loop and how it is used in processing arrays.**

The foreach loop is used to loop through an array. When using foreach loop, we should use the following syntax:

foreach($array as $value){

// code to be executed

}, where $array is the variable name of an array and $value is the variable name for each array element. During each loop, the value of each current array element will be assigned to the $value variable and then, the array pointer moves to next array element for next loop.

1. **What array functions can help remove elements from the middle sections of an array? Describe what each of these do.**

1) The array function array\_splice() removes the elements in an array and replaces it with elements of the replacement array if supplied.

array array\_splice ($input , $offset [, $length = 0 [, $replacement ]] )

$input: The array where you want to remove element, required.

$offset: The starting position from removing elements in the array, required.

$length: The number of elements to be removed, optional.

$replacement: The array you want to replace with, optional.

This function returns the extracted elements. If the $replacement array is supplied, the removed elements are replaced with elements from this array.

2) You may also use unset() function to destroy a specified element from an array, for example, unset($capital[“California”]);

1. **List 2 other array functions we have not used (and are not part of your question 3 answers) and describe the purpose of each.**
2. The function array\_keys() returns an array containing all keys or a subset of the keys. The syntax: array\_key($input[, $search\_value]); If $search\_value is not given, this function returns all keys of the $input array. Otherwise, it returns an array containing the key of $search\_value value.
3. The function array\_search() searches a given value from an array and returns the corresponding key if successful, FALSE otherwise. The syntax is: array\_search($needle, $haystack);