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**Academic Year 2017/2018 – 2nd Semester**
**PHP Lab. 2nd Level.**
**Web Programming (comp-206)**
**Math. Dept., CS Division.**

# PHP Lab#2

**Objective**

- **How to build PHP arrays and associative array**
- **Looping through array and associative array**
- **How to process array of arrays**
- **How to use some built-in array functions**
- **Defining Your Own PHP Functions**
- **Programming in Multiple Files**

**Note: The output of your PHP code should be in HTML table format.**

**Q1) Write a PHP code that builds an array of the first 100 prime numbers. Then**

1. **Print out the sum of these primes and their average**
2. **Print out positions of primes that contains digit 3**

**Q2) Let A be an array of all positive integers smaller than 102 and divisible by 3 and B be an array of all positive integers smaller than 170 and divisible by 5.**

1. **Compute the difference C[i] = A[i]-B[i].**
2. **Compute D[i]= A[i]2-B[i]2**
3. **Compute E[i] = A[i]2+B[i]2-A[i]B[i].**

**Q3) Build an array of strings and contains names of your friends. Then,**

**1- Find all names contains the substring "he"**

**2- Display names of your friends where the name with word Ahmed colored with blue.**

**Q4) Write a PHP that builds a tow dimensional array M of size (10 × 10). The code will fill each location in M by its index summation (M[i][j]= i+j). Then print the summation of the elements located at the circumference.**

**Q5) Write a PHP code that contains the following functions:**

1. **displayTableFormat($arr): display the array $arr in HTML table format.**
2. **getAverage($arr): return the average of numbers in $arr**
3. **getVariance($arr): return the variance of numbers in $arr,**

$$variance = \sum_{i}^{n} (arr[i] - average)^2$$

**Q6) Let $SArr be an array of students, where every key index of $SArr contains name, dept, marks, e.g.,**

**$Arr= array( [0]=>array('Ahmed Ali', 'physics',86),**

**[1]=>array('Hussin', 'Mathematics',92),**

**……**

**) ;**

**Show how to perform the following:**

1. **A function to display all students in physics department.**
2. **A function to return an array of all students whose marks greater than 78.**
3. **Show how to calculate the average and variance of students whose marks greater than 78.**