



## **Presidential Initiative for Artificial Intelligence and Computing (PIAIC)**

<https://www.piaic.org>

### **JavaScript Programming Assignment 3**

**Note: Check Rules end of document**

1. Declare and Initialize an array and store available education qualifications in Pakistan (e.g. SSC, HSC, BCS, BS, BCOM, MS, M. Phil., PhD). Show the listed qualifications in your browser like:

**Qualifications:**

- 1) SSC
- 2) HSC
- 3) BCS
- 4) BS
- 5) BCOM
- 6) MS
- 7) M. Phil.
- 8) PhD

2. Write a program to store 3 student names in an array. Take another array to store score of these three students. Assume that total marks are 500 for each student, display the scores & percentages of students like:

Score of Michael is 320. Percentage: 64%  
Score of John is 230. Percentage: 46%  
Score of Tony is 480. Percentage: 96%

3. Initialize an array with color names. Display the array elements in your browser.
  - A. Ask the user what color he/she wants to add to the beginning & add that color to the beginning of the array. Display the updated array in your browser.
  - B. Ask the user what color he/she wants to add to the end & add that color to the end of the array. Display the updated array in your browser.
  - C. Add two more colors to the beginning of the array. Display the updated array in your browser.
  - D. Delete the first color in the array. Display the updated array in your browser.
  - E. Delete the last color in the array. Display the updated array in your browser.
  - F. Ask the user at which index he/she wants to add a color & color name. Then add the color to desired position/index. Display the updated array in your browser.
  - G. Ask the user at which index he/she wants to delete color(s) & how many colors he/she wants to delete. Then remove the same number of color(s) from user-defined position/index. . Display the updated array in your browser.

4. Write a program to initialize an array with city names. Copy 3 array elements from cities array to selected cities array.

Cities list:

Karachi,Lahore,Islamabad,Quetta,Peshawar

Selected cities list:

Islamabad,Quetta

5. Write a JavaScript program to remove all duplicate items from an array

*Sample array* : `var arr1=[3, 'a', 'a', 'a', 2, 3, 'a', 3, 'a', 2, 4, 9, 3];`

**Sample Output** : `[3, 'a', 2, 4, 9]`

6. We have the following arrays:

`var aCities = ["Karachi", "Lahore", "Islamabad", "Faisalabad"];`

`var o = ["th","st","nd","rd"];`

Write a JavaScript program to display in the following way :

1st choice is Karachi

2nd choice is Lahore

3rd choice is Islamabad

7. Write a JavaScript program to compute the union of two arrays.

(Merge two arrays by removing all duplicates)

`var a = [10,20,4,40,60,70]`

`var b = [1,2,3,4,5,6,7,8,9,10]`

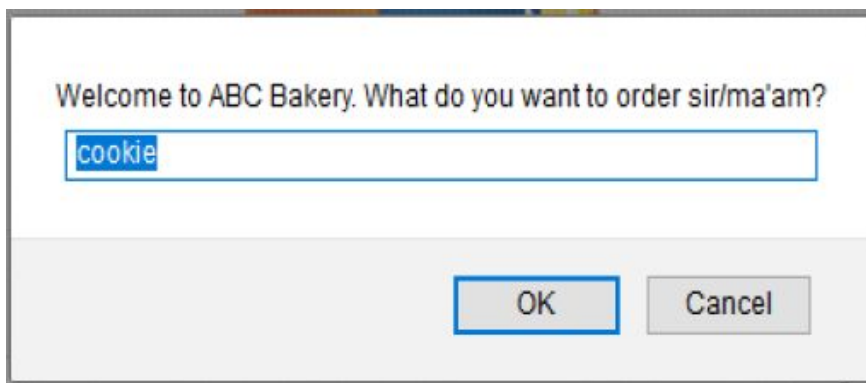
Output should be:

`[1,2,3,4,5,6,7,8,9,10,20,40,60,70]`

8. Generate the following series in your browser. See example output.
- a. Counting: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
  - b. Reverse counting: 10, 9, 8, 7, 6, 5, 4, 3, 2, 1
  - c. Even: 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20
  - d. Odd: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19
  - e. Series: 2k, 4k, 6k, 8k, 10k, 12k, 14k, 16k, 18k, 20k
9. Write a program to identify the largest number in the given array.  
A = [24, 53, 78, 91, 12].

Array items: 24,53,78,91,12  
The largest number is 91

10. Sort an array from smallest to largest value  
A = [20,53,78,4,91,12]  
**Output should be:** [4,12,20,53,78,91]
11. You have an array  
A = ["cake", "apple pie", "cookie", "chips", "patties"]  
Write a program to enable "search by user input" in an array. After searching, prompt the user whether the given item is found in the list or not. Example:



cookie is **available** at index 2 in our bakery

Welcome to ABC Bakery. What do you want to order sir/ma'am?

OK Cancel

We are sorry. pastry is **not available** in our bakery

## **Rules for Assignment completion and submission**

- 1) Each task should be in separate file
- 2) Files name should be the task name e.g task1, task2, task 3
  - a) task1.html
  - b) task1.js
- 3) You should upload your code on GitHub or google drive and share link for code review
- 4) All files in assignment should be in one folder and folder name should contains assignment number e.g assignment1\_YourRollNo, assignment2\_YourRollNo
  - a) Create a folder
  - b) Add all tasks file in this assignment folder
  - c) Push code on github or upload folder on google drive
  - d) Share github url or drive url for code review