Computer Science/Information Technology

Posted: 11/19/2014

Employer: Aladtec, Inc.
Job Title: Programming Intern
Location: River Falls, WI
Work Schedule: Part-time
Salary/Wages: Paid

Description
Aladtec has been a proud provider of web-based software solutions for online employee scheduling and workforce management for more than a decade. Today, we have over 1,300 customers and more than 80,000 users throughout North America.

We are currently seeking interns for programming positions in our River Falls office. As a part of our team, you will be involved in a wide variety of software engineering tasks, at all stages of the software development cycle: concept discussion, design and planning, development, and testing. Your work with us will give you experience in both front end GUI design and development (using HTML, JavaScript, and CSS) as well as back end design and development (in PHP and SQL).

No prior experience in these specific languages is required. We are most interested in hiring bright, capable people who are highly motivated to work with a small team to produce quality software – and have some fun along the way.

You are not required to submit responses to our programming prompts to apply, but submissions of good solutions will be considered a plus. Please see the attachments to this posting for more information.

Responsibilities may include
- Writing unit tests for PHP and JavaScript functions
- Conducting manual testing
- Implementing new functions
- Exploring new features
- Fixing bugs
- Performing other duties as assigned

Application Details
- Application Deadline: Open Until Filled
- Send an email to audrey.ternes@uwrf.edu to get a copy of the programming challenge worksheet
- How to Apply: Send resume, cover letter, references, and (optional) responses to our programming challenge worksheet to jobs@aladtec.com

TO APPLY: For employer contact information, please see Audrey Ternes in the College of Business and Economics, 23A South Hall or email cbe-interns@uwrf.edu.

I understand that if I accept employment related to any information provided by the CBE Internship Office or faculty coordinators,
1) Internships for academic credit subject to faculty approval,
2) I will be required to enroll in the CBE Internship Program for academic credit, and
3) I will be required to pay the appropriate fees for those credits.
Aladtec Programming Challenge

This challenge is completely open-book and open-Internet. Use whatever resources you want—except for other people, and other people's solutions. This is your challenge to complete.

PHP Questions

Assume PHP 5.3.2 is being used for these questions. (You may find this link helpful for PHP: http://php.net/manual/en/.)

1. Assume the following array $a, which contains a company's products. Each product's key in the array is its product ID, and each product has a price, timestamp when it was added, and name.

Write a function that will sort the array from lowest to highest price (primary sort), then sort by earliest to latest time added within identical prices (secondary sort), while preserving the correct product ID array keys with their corresponding products. Then print the sorted list out with the product ID, name, price, and date the product was added. The dates should be in the format “Jan 01, 2011”.

```php
<?php

$a = array(
    1=>array('price'=>9.25, 'timestamp_added'=>1301945848, 'name'=>'pencils'),
    4=>array('price'=>19.15, 'timestamp_added'=>1299267448, 'name'=>'crayon box'),
    15=>array('price'=>4.25, 'timestamp_added'=>1299785848, 'name'=>'markers'),
    2=>array('price'=>4.28, 'timestamp_added'=>1299785848, 'name'=>'eraser'),
    44=>array('price'=>13.99, 'timestamp_added'=>1299872248, 'name'=>'trapper'),
    32=>array('price'=>9.25, 'timestamp_added'=>1299872248, 'name'=>'notebook'),
    14=>array('price'=>13.99, 'timestamp_added'=>1301945848, 'name'=>'sharpener'),
    5=>array('price'=>15.01, 'timestamp_added'=>1299872248, 'name'=>'calculator')
);

?>

2. Using PHP, write a function that uses a loop to print out the date in the format "12-31-2010" for every date in the year 2010 that satisfies ALL of the following requirements:

   a) The date is an even number (such as the 2nd)
b) The day is a weekday (Monday, Tuesday, Wednesday, Thursday, or Friday)

c) The date occurs within a month that is at least 30 days long

d) The date does not occur in the last week of the month (full or partial week)

**JavaScript Questions**

1. Assume the following form exists within a full HTML page:

```html
<form action="" method="POST" name="myform">
  <select name="test_select">
    <option value="1">my val 1</option>
    <option value="3">my val 3</option>
    <option value="4">my val 4</option>
  </select>

  <input type="button" value="test_button" name="test_button">
</form>
```

Using JavaScript and NO helper libraries, write a cross-browser function that will add another option with text “my val 2” with a value of “2” to the select element. This element should fall in the appropriate spot in the option list. Then modify the button so that when the button is clicked the form is submitted, but ONLY if the newly-added “my val 2” option is selected.