# Problem 4 – Price List

Write a PHP script to **parse a price list given as HMTL table** and produce a **JSON string, holding the products by categories**. The input comes in the following format:

|  |
| --- |
| <table class="priceListTable">  <tr><th>Product</th><th>Category</th><th>Price</th><th>Currency</th></tr>  <tr><td>*8 GB DDR3*</td><td>*RAM*</td><td>*33.50*</td><td>*BGN*</td></tr>  <tr><td>*16 GB DDR3*</td><td>*RAM*</td><td>*28.28*</td><td>*EUR*</td></tr>  …  </table> |

The output JSON should hold all **categories** in **alphabetical order** and the **products** in each category. For each product, list its **product** **name**, **price** and **currency**. Order the products in each category **alphabetically**. If multiple products have the same name, preserve their original order.

### Input

The input will be read from an **HTTP GET** **request** holding a parameter named **priceList**. It may hold **whitespace** anywhere around the HTML tags. The input will be **valid HTML** fragment in the above described format. Ensure you correctly **decode all HTML entities** from the input table cells (e.g. **&amp;** 🡪 **&** ; **&quot;** 🡪 **"**; **&lt;** 🡪 **<**).

### Output

The output should hold the result **JSON** **string**.

### Constraints

* **Product names** and **category names** and **currencies** will be valid HTML-encoded text.
* **Product prices** will be valid numbers in the range [0…100 000]. The symbol '**.**' will be used as decimal point.
* Allowed working time: 0.2 seconds. Allowed memory: 16 MB.

### Example

|  |
| --- |
| **Input** |
| <table class="priceListTable"> <tr> <th>Product</th> <th>Category</th> <th>Price</th> <th>Currency</th></tr><tr> <td>8GB DDR3L 1600 KINGSTON SODIMM</td><td>RAM</td><td>87.00</td> <td> USD</td></tr> <tr> <td>500GB Toshiba, SATA 6Gb/s, 7200rpm, 32MB</td> <td>HDD</td> <td>88.41</td> <td>BGN </td>  </tr><tr><td>AMD A10-5800K X4 3.8GHz, 4MB Cache</td><td>CPU</td> <td> 186.00</td> <td>BGN</td></tr> <tr> <td> SSD 2.5&quot;, 120GB, Corsair F120 LS, SATA3</td> <td> HDD</td> <td> 180.50</td> <td> BGN </td> </tr> <tr> <td>ASRock B75M-GL R2.0</td><td>motherboard</td> <td> 47.55</td> <td>EUR</td> </tr> <tr> <td>1TB Toshiba, SATA 6Gb/s, 7200rpm, 32MB</td> <td>HDD</td><td> 52.82 </td> <td>EUR</td></tr><tr><td>16GB Micro SDHC, A-Data, Class10</td><td>RAM  </td><td>15.03</td><td>BGN</td></tr></table> |
| **Output** |
| {"**CPU**":[{"product":"AMD A10-5800K X4 3.8GHz, 4MB Cache","price":"186.00","currency":"BGN"}],"**HDD**":[{"product":"1TB Toshiba, SATA 6Gb\/s, 7200rpm, 32MB","price":"52.82","currency":"EUR"},{"product":"500GB Toshiba, SATA 6Gb\/s, 7200rpm, 32MB","price":"88.41","currency":"BGN"},{"product":"SSD 2.5\", 120GB, Corsair F120 LS, SATA3","price":"180.50","currency":"BGN"}],"**RAM**":[{"product":"16GB Micro SDHC, A-Data, Class10","price":"15.03","currency":"BGN"},{"product":"8GB DDR3L 1600 KINGSTON SODIMM","price":"87.00","currency":"USD"}],"**motherboard**":[{"product":"ASRock B75M-GL R2.0","price":"47.55","currency":"EUR"}]} |