

Final Answer Key 15sp

```
var count = 0;
var size = 3;

window.onload = function() {
    createBoxes(3);
    document.getElementById("again").onclick = clear;
    document.getElementById("sizeButton").onclick = create;
}

function create() {
    createBoxes(document.getElementById("size").value);
    size = document.getElementById("size").value;
}

function createBoxes(size) {
    document.getElementById("game").innerHTML = "";
    count = 0;
    for(var i = 0; i < size; i++) {
        var tr = document.createElement("tr");
        for(var j = 0; j < size; j++) {
            var td = document.createElement("td");
            td.onclick = play;
            tr.appendChild(td);
        }
        document.getElementById("game").appendChild(tr);
    }
    document.getElementById("game").style.color = "black";
}

function clear() {
    var boxes = document.querySelectorAll("td");
    for(var i = 0; i < boxes.length; i++) {
        boxes[i].innerHTML = "";
    }
    document.getElementById("game").style.color = "black";
}

function play() {
    if (count % 2 == 0) {
        this.innerHTML = "X";
    } else {
        this.innerHTML = "O";
    }
    count++;
    if(count == size * size) {
        document.getElementById("game").style.color = "red";
    }
}
```

2.

```
<?php
$category = "";
if (isset($_GET["category"])) {
    $category = $_GET["category"];
} else {
    header("HTTP/1.1 400 missing parameter");
    die("ERROR 400: missing mandatory parameter category");
}

$file = file("books.txt");

$json_data = array(
    "count" => count($file),
    "books" => array()
);

foreach ($file as $line) {
    # Bachelor Chow in 20 Minutes|Gloria Demartelaere|cooking|2005|30.00
    list($title, $author, $book_category, $year, $price) = explode("|",
trim($line));
    if ($book_category == $category) {
        $json_data["books"][] = array(
            "category" => $category,
            "year" => $year,
            "price" => $price,
            "title" => $title,
            "author" => $author
        );
    }
}

header("Content-type: application/json");
print json_encode($json_data);
?>
```

3.

```
window.onload = function() {
    makeRequest("begin");
};

function makeRequest(nodeid) {
    var request = new XMLHttpRequest();
    request.onload = processData;
    request.open("GET", "adventure.php?nodeid=" + nodeid, true);
    request.send();
}

function processData() {
    var question = this.responseXML.querySelector("question");
    if(question) {
        document.getElementById("questionparagraph").innerHTML =
            question.textContent;
        var answers = this.responseXML.querySelectorAll("answer");
        document.getElementById("answer").innerHTML = "";
        for(var i = 0; i < answers.length; i++) {
            var button = document.createElement("button");
            button.innerHTML = answers[i].textContent;
            button.onclick = go;
            console.log(button);
            document.getElementById("answer").appendChild(button);
        }
    } else {
        document.getElementById("questionparagraph").innerHTML =
            this.responseXML.querySelector("died").textContent;
        document.getElementById("answer").innerHTML = "";
    }
}

function go() {
    makeRequest(this.innerHTML);
}
```

4.

a) `/([0-9]+m [0-9]+cm)|([0-9]+ft [0-9]+in)/`

b) `/[a-zA-Z0-9.\-]+@[a-zA-Z]+\.[a-zA-Z]{2,4}/`

c) `/[0-9]?[0-9]\|[0-9]?[0-9]\|[0-9][0-9]([0-9][0-9])?/`

5.

```
SELECT DISTINCT c.name
FROM cities c
JOIN cities c2 ON c.name = c2.name
JOIN languages l1 ON l1.country_code = c1.code
JOIN languages l2 ON l2.country_code = c2.code
WHERE c.population > 1000000 AND c2.population > 1000000 AND
      l1.official = 'T' AND l2.official = 'T' AND
      l1.language = l2.language AND c.code <> c2.code
ORDER BY c.name
```