

This is an open-book exam. You may use any resources except another person. You may use your notes, your computer, your browser, Share Out, textbooks, etc. Fill in your answers on this paper and submit it to your instructor before the end of lesson 6.

Name: __ALAN COLQUHOUN_____

Student Number: _____

Question	Total Marks	Your Score
1 from lesson 1	6	
2 from lesson 2	6	
3 from lesson 3	6	
4 from lesson 4	6	
5 from lesson 5	6	
6 from lesson 6	6	
Total	36	

Show all the HTML and JavaScript code to do the following (do not use jQuery):

Use DOM 0, in an external JavaScript file, to resize the width of the first image on the document to 100.

Include a JavaScript comment to include:

- Your name

Use a second type of JavaScript comment to include:

- A description of what the document, navigator, window, and style objects are

Use a third type of JavaScript comment to include:

- Your student number

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <title>Question 1</title>
  </head>
  <body>
    <div>
      </img>
      </img>
      </img>
    </div>
    <script>
      onload = function () {
        var images = document.images;
        images[0].width = 100;
      }
      // Alan Colquhoun
      /*
        Document - the HTML web page - from <html> to </html>
        Navigator - the browser itself
        Window - the current containing window
        Style Object - the CSS properties of an element
      */
      // A00390667
    </script>
  </body>
</html>
```

Question 2: From Lesson 2

Show all the HTML and JavaScript code to do the following (do not use jQuery):

At the end of the <body> section, using DOM 1, put a red solid 1px wide CSS border around all images.

Also: in the head section, after the window is finished loading, alert how many days are left until Christmas later this year.

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <title>Question 2</title>
  </head>
  <body>
    </img>
    </img>
    </img>
    <script>
      onload = function(){
        var imgs = document.getElementsByTagName('img');
        for (let i = 0; i < imgs.length; i++) {
          imgs[i].style.border = "red solid 1px";
        }
      }
      function christmas() {
        var target = new Date();
        target.setFullYear(2017,11,25);
        var today = new Date();
        var difference = target.getTime() - today.getTime();
        var minutes = 1000*60;
        var hours = minutes*60;
        var days = hours*24;
        alert(Math.round(difference/days) + " days until Christmas")
      }
      document.onload = christmas();
    </script>
  </body>
</html>
```


Question 3: From Lesson 3

Show all the HTML and JavaScript code to do the following (do not use jQuery):

Write a function that loops through all of a page's hyperlinks and disables any link that has the word "bcit" in its href attribute.

Also, write code that prevents the following form from being submitted if its textbox is empty. Do not use jQuery:

```
<form action="f.php">
  <input type="text" id="t">
  <input type="submit">
</form>
```

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="utf-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <title>Question 3</title>
  <script src="https://code.jquery.com/jquery-3.1.1.min.js"></script>
    $(function(){
      document.forms[0].onsubmit = function() {
        if(!document.getElementById('t').value){
          return false;
        }
      }
      var links = document.getElementsByTagName('a');
      for (let i = 0; i < links.length; i++) {
        links[i].onclick = function(event) {
          if (links[i].href.includes("bcit")) {
            event.preventDefault();
            alert("This link is prohibited.");
          }
        }
      }
    });
  </script>
</head>
```

```
<body>
  <div>
    <p>
      Need to search for something? Use <a href="http://www.goole.com"
      target="_blank">Google.com</a>. It is the leading search engine.
    </p>
    <p>
      Visit <a href="http://www.bcit.com" target="_blank">BCIT</a> for all
      your technical needs.
    </p>
  </div>
  <form action="f.php">
    <input type="text" id="t">
    <input type="submit">
  </form>
</body>

</html>
```

Question 4: From Lesson 4

Show all the HTML and JavaScript code to do the following (use jQuery):

When the document is ready, put a red solid 2px red border around every image.

Show all the HTML and JavaScript code to do the following (use jQuery):

When an image is clicked, change its width attribute to 50.

Show all the HTML and JavaScript code to do the following (do not use jQuery):

When an image is clicked, change its width attribute to 50.

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <title>Question 4</title>
    <script src="js/ jquery.min.js"></script>
    <script>
      $(document).ready(function(){
        $('img').css('border', 'solid red 2px');
      })

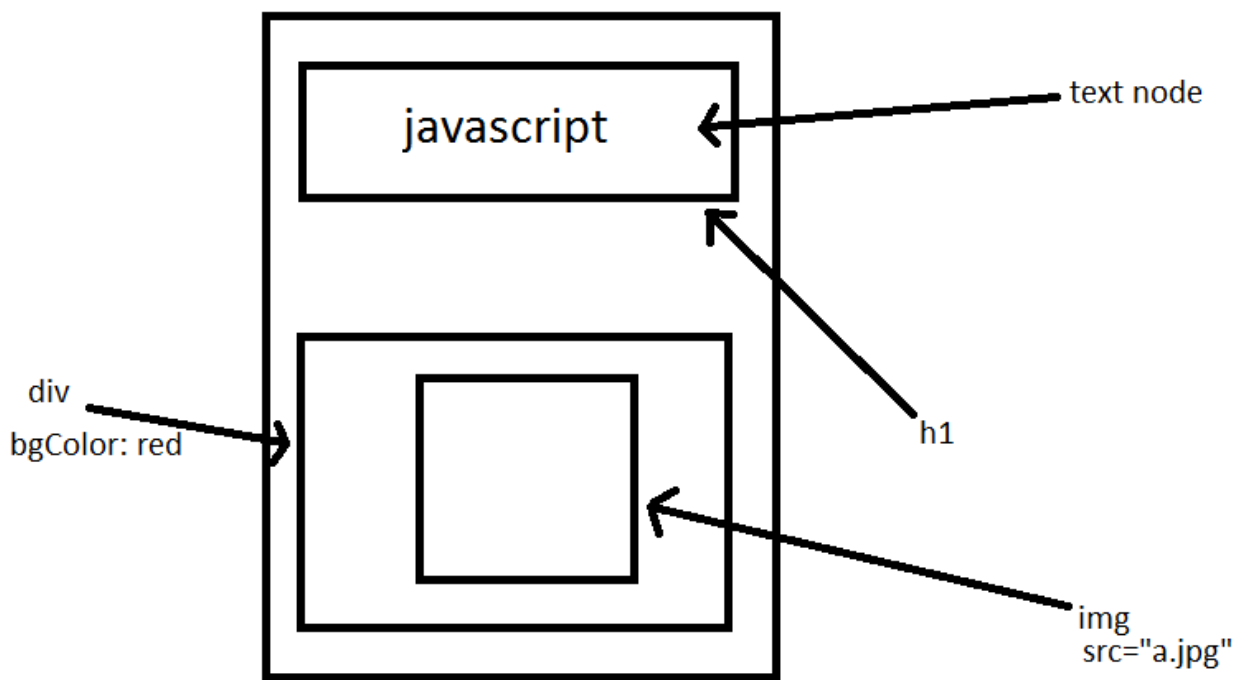
      $(function(){
        $("img").click(function(){
          $(this).width("50px");
        })
      })

      onload = function() {
        var imgs = document.getElementsByTagName("img");
        for (let i = 0; i < imgs.length; i++) {
          imgs[i].onclick = function() {
            imgs[i].width = "50px";
          }
        }
      }
    </script>
  </head>
```

```
<body>
  <div>
    </img>
    </img>
    </img>
  </div>
</body>
</html>
```

Question 5: From Lesson 5

Show all the HTML and JavaScript code to do the following (do not use jQuery):
 What is the JavaScript code to create the following page using only JavaScript (e.g. **document.createElement**, etc...):



Also, show all of the code that would move an image with ID "x" one pixel to the right every 100 milliseconds.

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width,
      initial-scale=1">
    <title>Question 5</title>
```

/* </head is after the <script> section */

<script>

```
timer = null;
```

```
function move() {  
    var imx = document.getElementById("x");  
    imx.style.left = parseInt(imx.style.left) + 1 + "px";  
}
```

```
onload = function() {  
  
    var acH1 = document.createElement('h1');  
    acH1.appendChild(document.createTextNode("JavaScript"));  
  
    var brk = document.createElement('br');  
    var div1 = document.createElement('div');  
    div1.style.background = "red";  
  
    var acImg1 = document.createElement('img');  
    acImg1.src = "images/a.jpg";  
    acImg1.style.width = "200px";  
    acImg1.style.margin = "100px";  
    div1.appendChild(acImg1);  
  
    var acImg2 = document.createElement('img');  
    acImg2.src = "images/x.jpg";  
    acImg2.id = "x";  
    acImg2.style.width = "150px";  
    acImg2.style.position = "absolute";  
    acImg2.style.left = "1px";  
  
    document.body.appendChild(acH1);  
    document.body.appendChild(div1);  
    document.body.appendChild(brk);  
    document.body.appendChild(acImg2);  
}
```

```
        acImg2.onclick = function() {  
            if (timer == null) {  
                timer = setInterval("move()", 100);  
            } else {  
                clearInterval(timer);  
                timer = null;  
            }  
        }  
    }  
  
</script>  
</head>  
  
<body>  
</body>  
  
</html>
```

Question 6: From Lesson 6

Show all the HTML and JavaScript code to do the following (do not use jQuery): Create a Book object with fields for title (e.g. "harry potter"), author ("jk rowling"), yearPublished (2000), and a function/method called readBook, which logs to the console "You're a wizard, Harry".

Use all four techniques we learned:

- Literal
- Constructor
- Constructor pattern
- Prototype pattern

Then use the for/in loop to display all enumerable data.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="utf-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <title>Question 6</title>
  <script>

    onload = function(){

      // Literal

      var HP1 = {
        title: "harry potter",
        author: "jk rowling",
        yearPublished: "2000",
        readBook: function() {
          console.log("You're a wizard, Harry");
        }
      }
    }
  </script>
```

```
for (var key in HP1) {  
    console.log("Key for HP1:", key, "-- Value:", HP1[key]);  
}
```

// Constructor

```
function HP() {  
    var HP2 = new Object();  
    HP2.title = "harry potter";  
    HP2.author = "jk rowling";  
    HP2.yearPublished = "2000";  
    HP2.readBook = function() {  
        console.log("You're a wizard, Harry");  
    }  
    for (var key in HP2) {  
        console.log("Key for HP2:", key, "-- Value:",  
            HP2[key]);  
    }  
}
```

HP();

// Constructor Pattern

```
function HPBook(bkTitle, bkAuthor, bkPublished) {  
    this.title = bkTitle;  
    this.author = bkAuthor;  
    this.yearPublished = bkPublished;  
    this.readBook = function() {  
        console.log("You're a wizard, Harry");  
    }  
}
```

```
var HP3 = new HPBook("harry potter", "jk rowling", 2000);

for (var key in HP3) {
    console.log("Key for HP3:", key, "-- Value:", HP3[key]);
}
```

```
// Prototype Pattern
```

```
function HarryPotter() {
    this.title = "harry potter";
    this.author = "jk rowling";
    this.yearPublished = 2000;
    this.readBook = function() {
        console.log("You're a wizard, Harry");
    }
}
```

```
var HP4 = new HarryPotter();
```

```
for (var key in HP4) {
    console.log("Key for HP4:", key, "-- Value:", HP4[key]);
}
```

```
}
```

```
</script>
```

```
</head>
```

```
<body>
```

Values are stored in the console.

```
</body>
```

```
</html>
```