Lab Programming Exercise (Week 12)

(this is not an assignment)

Question 1. Create a web page and display the following:

Enter coordinate for 1st point: X= 120   Y= 20

Enter coordinate for 2nd point: X= 30   Y= 130

Enter coordinate for 3rd point: X= 250   Y= 140
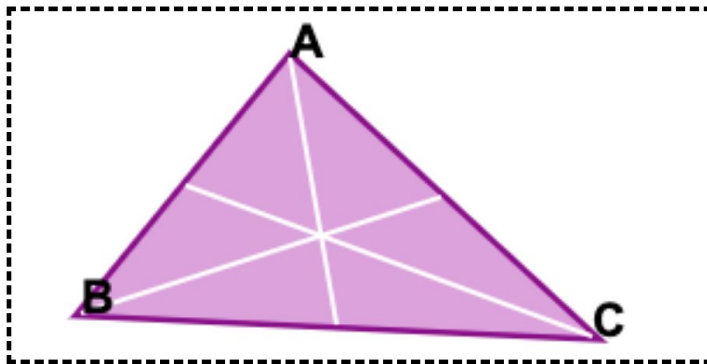
Draw triangle

The web page allows the user to enter the coordinates of the 3 vertices of a triangle.
When the user clicks the button, then draw the triangle on the canvas as above.

A median of a triangle is a straight line from a vertex to the midpoint of the opposite side.
The drawing demonstrates a mathematical fact that: the 3 median lines intersect in a single point
(which is called the triangle's centroid).

This is a sample code for draggable elements:

```
<tagName id="..."
         draggable="true"
         onDragStart="dragStart(event)">
 ...
</tagName>

function dragStart(event)
{
  // get the drag element id
  var dragId = event.target.id;
  console.log("dragId=" + dragId);

  // store the drag element id into the dataTransfer object
  event.dataTransfer.setData("dragId", dragId);
}
```

This is a sample code for droppable elements:

```
<tagName id="..."
         onDrop="drop(event)"
         onDragOver="dragOver(event)">
 ...
</tagName>

function dragOver(event)
{
  event.preventDefault();
}

function drop(event)
{
  // get the drop element ID
  var dropId = event.target.id;
  console.log("dropId=" + dropId);

  // retrieve the drag element id from the dataTransfer object
  var dragId = event.dataTransfer.getData("dragId");
  console.log("dragId=" + dragId);

  // do the dropping logic
  // TO-DO
}
```
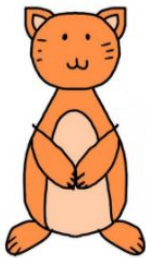
Question 2. Create a web page and display the following:
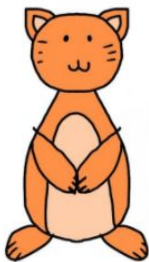
Drag an animal and drop it on the corresponding text.

When an animal is dropped into a matching text then the corresponding counter is increased by 1. For example, if the cat is dropped correctly 3 times and the dog is dropped correctly 11 times then the web page shows the following:

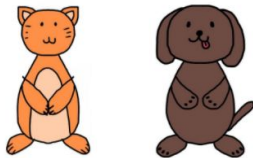Drag an animal and drop it on the corresponding text.

Question 3. Create a web page and display the following:

Drag an animal and drop it on the corresponding text.
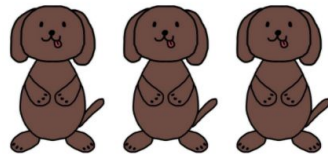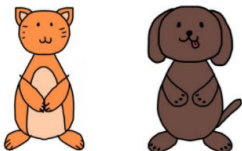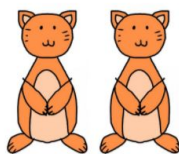
DOG

CAT

When an animal is dropped into a matching text then the web page will be updated in the following manner. For example, if the cat is dropped correctly 2 times and the dog is dropped correctly 3 times then the web page shows the following:

Drag an animal and drop it on the corresponding text.

DOG

CAT

END OF THE PROGRAMMING EXERCISE