Examen Javascript

IES Luis Simarro, 2 DAW, Curs 2021-2022

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Penja un document com aquest amb el codi copiar/pegat. No cal que entregues el JS a banda.

1 (1 punt) Observa aquest codi:

```
suma(10,20);
resta(20,10);

let suma = (a,b)=> a+b;
function resta(a,b){return a-b;}
```

Perquè fallarà? Escriu una solució.
Fallara la funció suma perque no te hoising. La variable suma, que dins te una funció, esta inicializada després de haver-la cridat, i com no te hoising realment el JS ens diu que no esta definida.Al contrari, la funcio resta, al no estar guardada dins de una variable el compilador de javascript posa les funcions al principi del tot per a que podam cridarla inclos antes de haverla declarat.

La solució sería declarar la funció suma igual que la resta.

suma(10,20);
resta(20,10);

function suma(a,b){return a+b};
function resta(a,b){return a-b;}

2 (1 punt) Explica línia per línia què passa en les variables en aquest codi i perquè:

```
function a(b,c){ console.log(b,c,d); return b+c; }
a(b=8,d=40);
console.log(b,c,d);
```

El que està passant és que quan es crida la funció i li passes per paràmetres la variable d, encara que no estiga declara dins la funció agarra el valor que li passes amb «d=40».També encara que no li passes un valor concret per a c, com la funció requereix de un valor c agarra al segón com a valor c.
Si per exemple posarem a(b=8,x=40), c continuaria sent 40 però «d» donaria error perque no ha sigut definida prèviament perquè per paràmetres no es necessària.
Al console log del final com «c» ha sigut declarada dins de una funció és una closure i no es accessible desde fora de la propia funció

3 (1 punt) Observa el codi:

```
class Clock{
   constructor(){
        let hora = new Date();
        this.hour = hora;
        this.getDate = function(){return {hora: hora, hour: this.hour}};
   }
}

let reloj1 = new Clock();
let getDate = reloj1.getDate;
console.log(reloj1.getDate()); // 1er
console.log(getDate());        // 2on
```

Perquè funciona el primer console.log i no el segon?
No funciona perque estas asignant a getDate la funcio reloj1.getDate, i aquesta funció dins te un this on fa referencia a una variable de la clase Clock que la variable «getDate» no te.

3 (7 punts) Amb aquestes dades de la climatología de Xàtiva en 2019:

```
let clima = [
 { month: 1, maxTemp: "16.3", minTemp: "3.7", meanTemp: null, maxTempF: "61.3", minTempF: "38.7", meanTempF: null, raindays: null, rainfall: "58.0", climateFromMemDate: "2019-05-13" },
 { month: 2, maxTemp: "17.7", minTemp: "4.4", meanTemp: null, maxTempF: "63.9", minTempF: "39.9", meanTempF: null, raindays: null, rainfall: "36.1", climateFromMemDate: "2019-05-13" },
 { month: 3, maxTemp: "21.0", minTemp: "6.2", meanTemp: null, maxTempF: "69.8", minTempF: "43.2", meanTempF: null, raindays: null, rainfall: "39.6", climateFromMemDate: "2019-05-13" },
 { month: 4, maxTemp: "23.3", minTemp: "8.3", meanTemp: null, maxTempF: "73.9", minTempF: "46.9", meanTempF: null, raindays: null, rainfall: "39.6", climateFromMemDate: "2019-05-13" },
 { month: 5, maxTemp: "26.7", minTemp: "11.6", meanTemp: null, maxTempF: "80.1", minTempF: "52.9", meanTempF: null, raindays: null, rainfall: "43.3", climateFromMemDate: "2019-05-13" },
 { month: 6, maxTemp: "31.5", minTemp: "15.9", meanTemp: null, maxTempF: "88.7", minTempF: "60.6", meanTempF: null, raindays: null, rainfall: "25.7", climateFromMemDate: "2019-05-13" },
 { month: 7, maxTemp: "34.6", minTemp: "19.0", meanTemp: null, maxTempF: "94.3", minTempF: "66.2", meanTempF: null, raindays: null, rainfall: "10.2", climateFromMemDate: "2019-05-13" },
 { month: 8, maxTemp: "34.4", minTemp: "19.6", meanTemp: null, maxTempF: "93.9", minTempF: "67.3", meanTempF: null, raindays: null, rainfall: "14.7", climateFromMemDate: "2019-05-13" },
 { month: 9, maxTemp: "30.6", minTemp: "16.7", meanTemp: null, maxTempF: "87.1", minTempF: "62.1", meanTempF: null, raindays: null, rainfall: "81.4", climateFromMemDate: "2019-05-13" },
 { month: 10, maxTemp: "25.5", minTemp: "12.5", meanTemp: null, maxTempF: "77.9", minTempF: "54.5", meanTempF: null, raindays: null, rainfall: "83.2", climateFromMemDate: "2019-05-13" },
 { month: 11, maxTemp: "20.0", minTemp: "7.8", meanTemp: null, maxTempF: "68.0", minTempF: "46.0", meanTempF: null, raindays: null, rainfall: "53.1", climateFromMemDate: "2019-05-13" },
 { month: 12, maxTemp: "16.8", minTemp: "5.0", meanTemp: null, maxTempF: "62.2", minTempF: "41.0", meanTempF: null, raindays: null, rainfall: "56.3", climateFromMemDate: "2019-05-13" },
];
```

- Crea una pàgina web generada dinàmicament en Javascript que mostre cada mes en un div.
- Crea la classe ***Mes*** amb un constructor adequat i una funció de renderitzat del mes.
- El color de fons de cada mes serà més o menys càlid en funció de la temperatura mitjana (entre la màxima i mínima).
- No cal mostrar les temperatures en Fahrenheit.
- Si la pluja d'aquest mes ha superat la mitjana de tot l'any, es mostrarà aquest caràcter damunt: 🌧, en cas contrari, aquest:
- Utilitza un array amb el nom dels mesos per mostrar el nom en compte del número del mes.
- No pots utilitzar cap while(), for() o foreach(), sols pots utilitzar funcions d'alt ordre com .map(), filter() o reduce().
- Quan l'usuari passa el ratolí per damunt de cada mes, canvia l'estil CSS de manera que es note que està passant. Aquesta funcionalitat també serà declarada en la classe *Mes.*

```
(function () {


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"62.2", minTempF: "41.0", meanTempF: null, raindays: null, rainfall: "56.3",
climateFromMemDate: "2019-05-13" },
  ];


class Mes{
  constructor(mes,nombre){
    this.mes=mes;
    this.nombre=nombre;
    this.divMes=document.createElement("div");
```

```
  }

  renderMes(){

    let tempMedia=(parseInt(this.mes.maxTemp)+parseInt(this.mes.minTemp))/2;
    this.divMes.innerHTML+="<br><h1>"+this.nombre+"</h1><br>Max
temp:"+this.mes.maxTemp+"<br>Min temp: "+this.mes.minTemp+"<br>Temp
Media:"+tempMedia+"<br>LLuvia "+this.mes.rainfall+"<br>  Date:
"+this.mes.climateFromMemDate;
    this.divMes.style="margin:10px;width:250px;height:300px;text-
align:center;";


    //COLOR
    let hue = 15+ 240 * (30 - tempMedia) / 60;
    let color='hsl(' + [hue, '100%', '50%'] + ')';
    this.divMes.style.backgroundColor =color;

    this.divMes.addEventListener("mouseover",function(){
      this.style.border="3px solid black";

    });
   this.divMes.addEventListener("mouseout",function(){
    this.style.border="";
    })
    document.body.style.display="flex";
    document.body.style.flexDirection="row";
    document.body.style.flexWrap="wrap";
    document.body.append(this.divMes);
  }

  plutjaMedia(plutjaMediaTotal){
    if(this.mes.rainfall>plutjaMediaTotal)
      this.divMes.innerHTML="<p style=font-size:40px;margin:0px>🌩</p>";
    else
      this.divMes.innerHTML="<p style=font-size:40px;margin:0px>☸</p>";
  }
}



document.addEventListener("DOMContentLoaded",function(){

  let
nombreMesos=["Enero","Febrero","Marzo","Abril","Mayo","Junio","Julio","Agosto"
,"Septiembre","Octubre","Noviembre","Diciembre"];
```

```
  let mitjana=(clima.reduce((anterior,nuevo)=>
anterior+parseInt(nuevo.rainfall),0))/clima.length;

  clima.map(function(mes,i){

    let mesos=new Mes(mes,nombreMesos[i]);
    mesos.plutjaMedia(mitjana);
    mesos.renderMes();

  });



});
})();
```