

```

3   <head>
7   </head>
8   <body>
9       <h1>To do list</h1>
10      <div class="contain">
11          <ul id="res">
12              <li></li>
13          </ul>
14      </div>
15      <script>
16          let students=[
17              {name:"Lê Mèo",age:4},
18              {name:"Lê Thỏ",age:7},
19              {name:"Lê Nai",age:7},
20              {name:"Lê Gà",age:7}
21          ]
22          function loadStudents(){
23              // for(let i=0;i<students.length;i++){
24              //     let li=document.createElement("li")
25              //     li.innerHTML=students[i].name
26              //     res.appendChild(li)
27              // }
28
29
30          }
31          loadStudents();
32          const obj1={name:"Mèo",age:2}
33          const arr1=[1,2,3]
34          const arr2=[4,5,6]
35          const arr3=[arr1,arr2] //arr3=[[1,2,3],[4,5,6]]
36          const arr4=[...arr1,...arr2,{...obj1}] //arr3=[1,2,3,4,5,6]
37          console.log(arr4)
38          const arr5={...students}
39          console.log(arr5)
40          let sum=0;
41          arr2.map(item=>{
42              sum+=item;
43          })
44          console.log(sum)
45          console.log(arr2.reduce((item,sum)=>sum+item,0))
46          //filter
47      </script>
48
49
50 </body>
51 </html>

```

```
buoi51.htm > html > body > script
2  <html lang="en">
8  <body>
15  <script>
16      let students=[
17          {name:"Lê Mèo",age:4},
18          {name:"Lê Thỏ",age:7},
19          {name:"Lê Nai",age:7},
20          {name:"Lê Gà",age:8}
21      ]
22      function loadStudents(){
23          // for(let i=0;i<students.length;i++){
24          //     let li=document.createElement("li")
25          //     li.innerHTML=students[i].name
26          //     res.appendChild(li)
27          // }
28
29
30      }
31      loadStudents();
32      let obj1={name:"Mèo",age:2}
33      const arr1=[1,2,3]
34      const arr2=[4,5,6]
35      const arr3=[arr1,arr2] //arr3=[[1,2,3],[4,5,6]]
36      const arr4=[...arr1,...arr2,...obj1] //arr3=[1,2,3,4,5,6]
37      console.log(arr4)
38      const arr5={...students}
39      console.log(arr5)
40      let sum=0;
41      arr2.map(item=>{
42          sum+=item;
43      })
44      console.log(sum)
45      console.log(arr2.reduce((item,sum)=>sum+item,0))
46      console.log(arr2.filter(item=>item>4))
47      console.log(students.filter(item=>item.age>6))
48      obj1={...obj1,id:2,name:"Thỏ",name:"nai"}
49      console.log(obj1)
50      //filter
51  </script>
52
53
54  </body>
55  </html>
```

```

function minimax(arr, depth, ismax){
    let Result=checkWin();
    if(Result !==null){
        let score=sc[Result];
        return score;
    }
    if(ismax){
        let bestScore=-Infinity;
        for(let i=0;i<9;i++){
            if(arr[i]==""){
                arr[i]='X';
                let score=minimax(arr,depth+1,false)
                arr[i]="";
                if(score>bestScore){
                    bestScore=score
                }
            }
        }
        return bestScore;
    }
    else
    {
        let bestScore=Infinity;
        for(let i=0;i<9;i++){
            if(arr[i]==""){
                arr[i]='O';
                let score=minimax(arr,depth+1,true)
                arr[i]="";
                if(score<bestScore){
                    bestScore=score
                }
            }
        }
        return bestScore;
    }
}

```

```
<ul id="res">
</ul>
</div>
<script>
  let students=[
    {id:1,name:"Lê Mèo",age:4},
    {id:2,name:"Lê Thỏ",age:7},
    {id:3,name:"Lê Nai",age:7},
    {id:4,name:"Lê Gà",age:8}
  ]
  function loadStudents(){
    res.innerHTML=""
    students.map(student=>{
      let li=document.createElement("li")
      li.innerHTML=student.name
      res.appendChild(li)
    })
  }
  addNew.addEventListener("keydown",function(e){
    if(e.key==="Enter"){
      addStudent();
      console.log("vô chưa")
    }
  })
  function addStudent(){
    let idMax=students.reduce((a, b) => Math.max(a.id, b.id), -Infinity);
    students=[...students,{id:idMax+1,name:addNew.value,age:20}]
    loadStudents();
    addNew.value=""
    console.log(students)
  }
  loadStudents();
</script>
```

```

    </ul>
</div>
<script>
    let students=[
        {id:1,name:"Lê Mèo",age:4,checked:true},
        {id:2,name:"Lê Thỏ",age:7,checked:true},
        {id:3,name:"Lê Nai",age:7,checked:false},
        {id:4,name:"Lê Gà",age:8,checked:false}
    ]
    if(localStorage.getItem("students")){
        students=JSON.parse(localStorage.getItem("students"))
    }
    function loadStudents(){
        res.innerHTML=""
        students.map(student=>{
            let li=document.createElement("li")
            li.innerHTML=student.name
            res.appendChild(li)
        })
    }
    addNew.addEventListener("keydown",function(e){
        if(e.key==="Enter"){
            addStudent();
        }
    })
    function addStudent(){
        let idMax=students.reduce((max_value, student) => Math.max(max_value, student.id), -Infinity);
        students=[...students,{id:idMax+1,name:addNew.value,age:20}]
        loadStudents();
        addNew.value=""
        console.log(students)
        localStorage.setItem("students",JSON.stringify(students))
    }
    loadStudents();

```

```

body>
</div>
<script>
  let students=[
    {id:1,name:"Lê Mèo",age:4,checked:true},
    {id:2,name:"Lê Thỏ",age:7,checked:true},
    {id:3,name:"Lê Nai",age:7,checked:false},
    {id:4,name:"Lê Gà",age:8,checked:false}
  ]
  if(localStorage.getItem("students")){
    students=JSON.parse(localStorage.getItem("students"))
  }
  function loadStudents(){
    res.innerHTML=""
    students.map(student=>{
      let li=document.createElement("li")
      let p=document.createElement("p")
      p.innerHTML=student.name
      if(student.checked){
        p.className="active"
      }
      p.addEventListener("click",()=>{
        editStudent(student.id)
      })
      li.appendChild(p)
      let i=document.createElement("i")
      i.className="fa-solid fa-xmark"
      i.addEventListener("click",()=>{
        removeById(student.id)
      })
      li.appendChild(i)
      res.appendChild(li)
    })
  }
  function editStudent(id){
    students=students.map(st=>st.id==id?{...st,checked:!st.checked}:st)
    console.log(students)
    loadStudents();
    localStorage.setItem("students",JSON.stringify(students))
  }
  function removeById(id){
    console.log(id)
    students= students.filter(st=>st.id!=id)
    loadStudents();
    localStorage.setItem("students",JSON.stringify(students))
  }
  addNew.addEventListener("keydown",function(e){
    if(e.key=="Enter"){
      addStudent();
    }
  })
  function addStudent(){
    let idMax=students.reduce((max_value, student) => Math.max(max_value, student.id), -Infinity);
    students=[...students,{id:students.length==0?1:idMax+1,name:addNew.value,age:20}]
    loadStudents();
    addNew.value=""
    console.log(students)
    localStorage.setItem("students",JSON.stringify(students))
  }
  loadStudents();
</script>
</body>

```