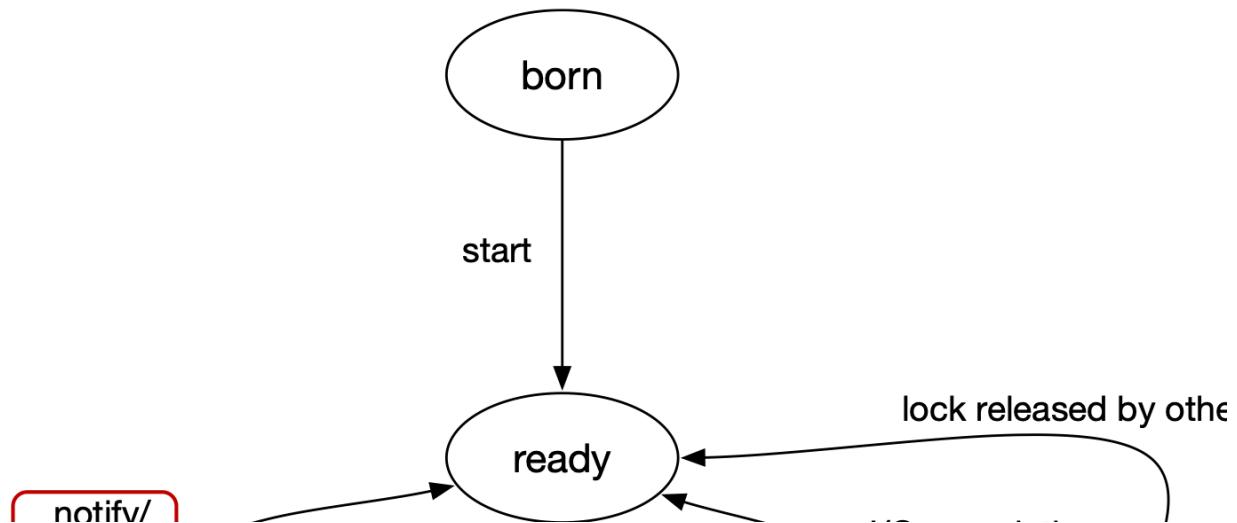
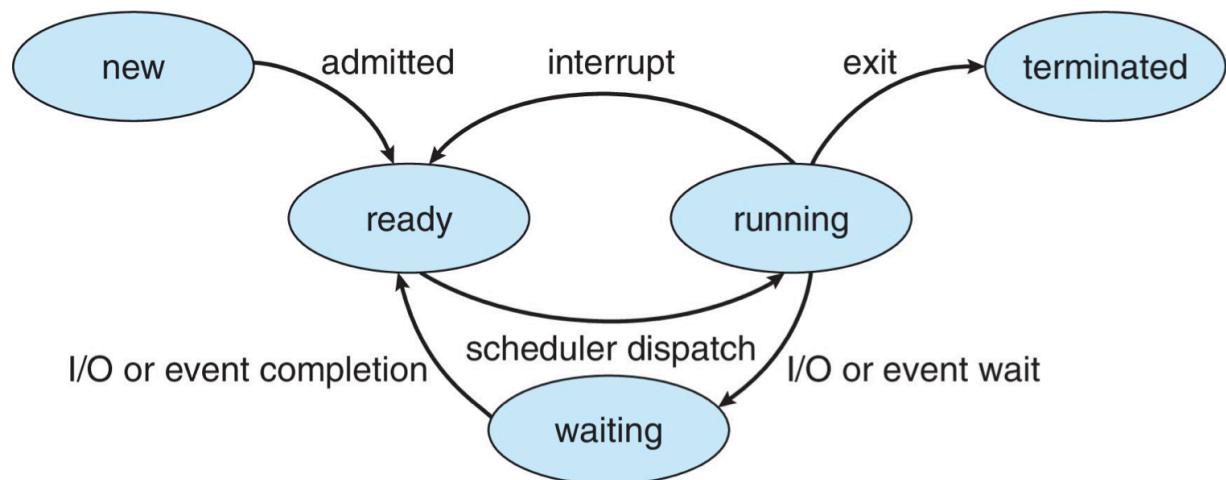
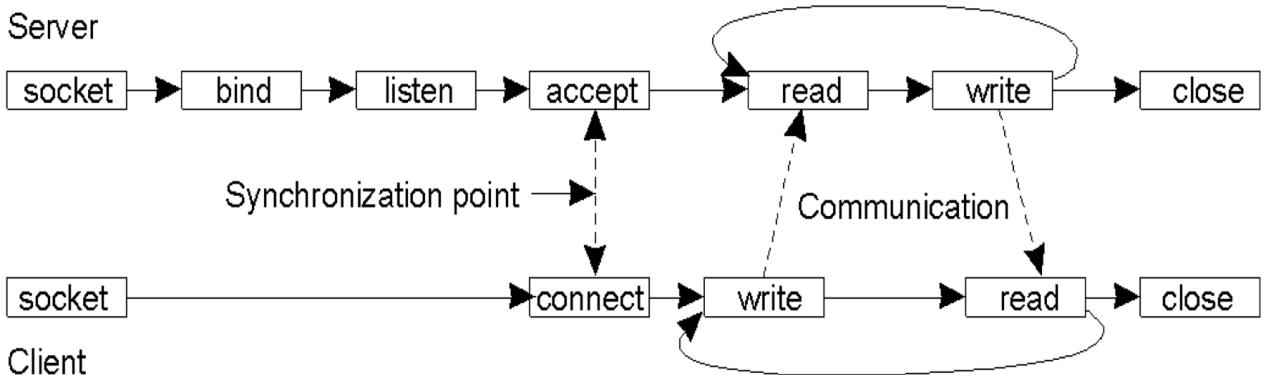
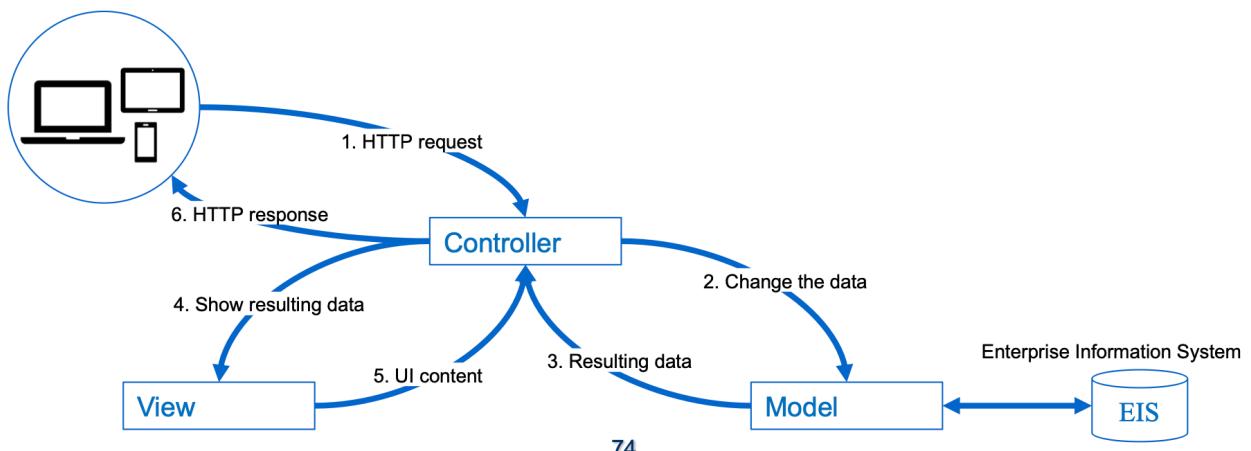
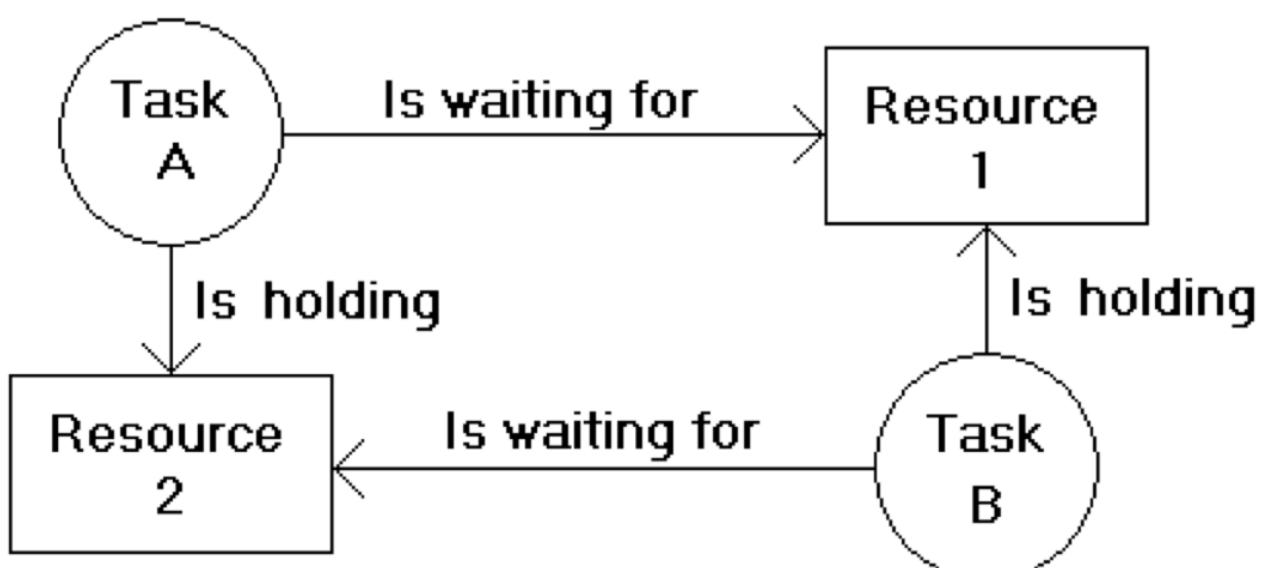
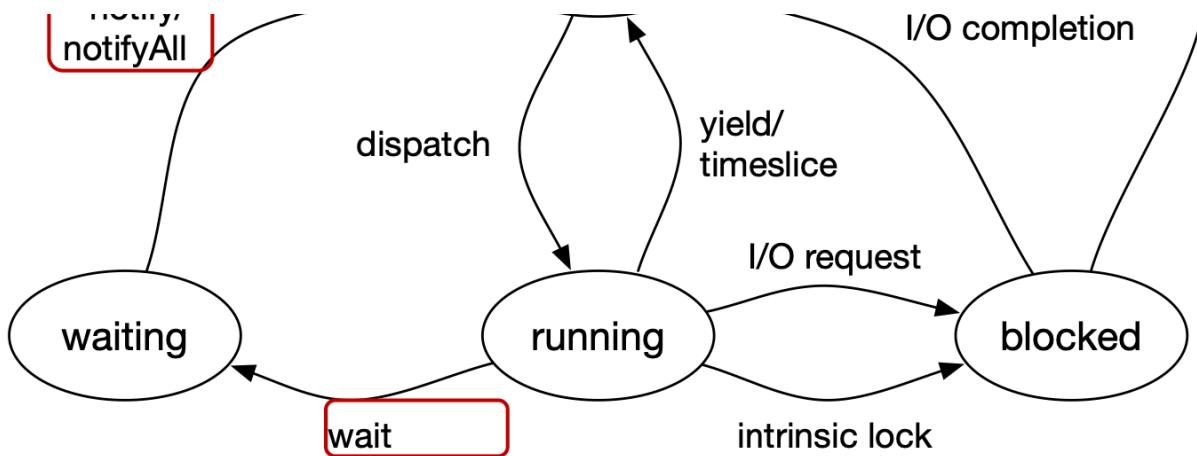


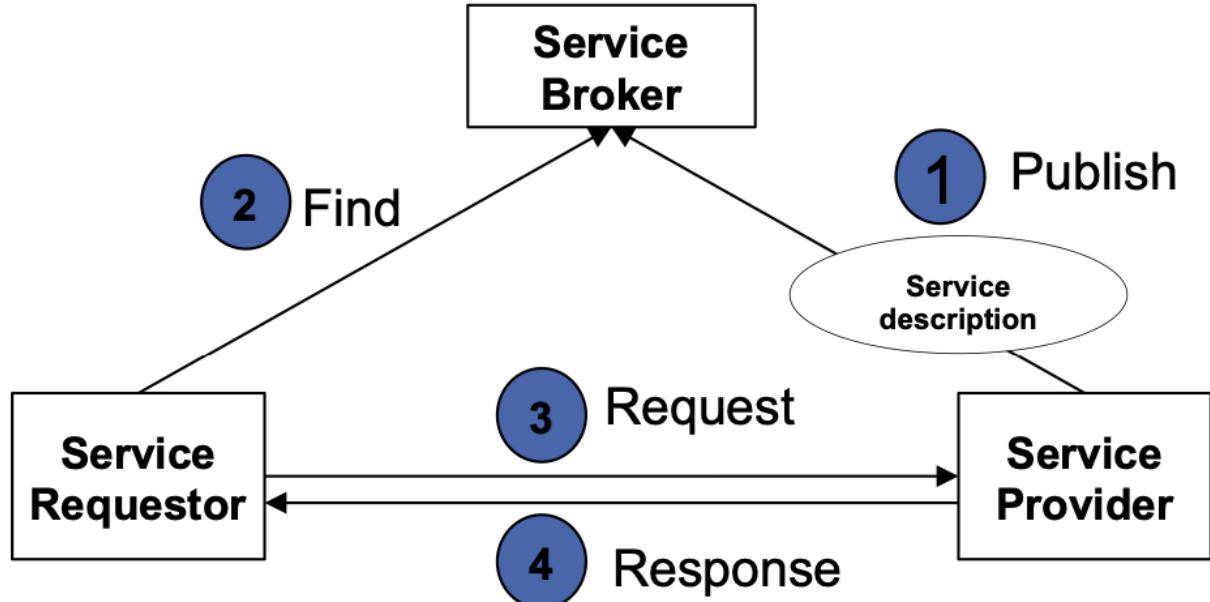
Immagini

Friday, 7 July 2023 10:18

All'esame vi capiteranno minimo 3/4 domande su immagini, quindi eccovi una lista







Nota: all'esame request/response sono unificati in "message", find/publish/broker hanno un nome strano italianoizzato

Code snippet showing NioChat server setup:

```

this.ssc = ServerSocketChannel.open();
this.ssc.socket().bind(new InetSocketAddress(port));
this.ssc.configureBlocking(false);
this.selector = Selector.open();
this.ssc.register(selector, SelectionKey.OP-ACCEPT);

public void startChat() { ... }

public static void main(String[] args) throws IOException {
    new NioChatServer(10523);
}
    
```

Code snippet showing NioChat server handling connections:

```

private void handleAccept(SelectionKey key) throws IOException {
    SocketChannel sc = ((ServerSocketChannel) key.channel());
    String address = ...;
    sc.configureBlocking(false);
    sc.register(selector, SelectionKey.OP-READ);
    sc.write(welcomeBuf);
    welcomeBuf.rewind();
}

Screenshot
    
```

Code snippets for Buffer and synchronized methods:

```

public class Buffer {
    private final int MaxBuffSize;
    private char[] store;
    private int BufferStart, BufferEnd, BufferSize;
}

public synchronized char delete() {
    try {
        while (BufferSize == 0) {
            Thread t = Thread.currentThread();
        }
    } catch (Exception e) {
        e.printStackTrace();
    }
    BufferSize--;
    return store[BufferStart];
}
    
```

```

public Buffer(int size) {
    MaxBufferSize = size;
    BufferEnd = -1;
    BufferStart = 0;
    BufferSize = 0;
    store = new char[MaxBufferSize];
}

public synchronized void insert(char ch) {
    try {
        while (BufferSize == MaxBufferSize) {
            Thread t = Thread.currentThread();
            wait();
        }
        BufferEnd = (BufferEnd + 1) % MaxBufferSize;
        store[BufferEnd] = ch;
        BufferSize++;
        notifyAll();
    } catch (InterruptedException e) {
        System.out.println("Thread interrupted.");
    }
}

```

INUTILE →

wait();

Screenshot

Commentare l'uso di **static synchronized** in Java (1 punto)

To-do

→ **LOCK A LIVELLO CLASSE**

Risveglia tutti i thread che si erano in attesa volontaria

→ **NOTIFYALL**

Rilascia il lock sull'oggetto e sospende il thread

→ **WAIT**

→ **FUTURE**

È un generico che rappresenta un risultato futuro di un'operazione asincrona

Rende l'attivazione di metodi mutuamente esclusiva per uno specifico oggetto Java

→ **SYNCHRONIZED**

Risveglia un thread tra quelli che si erano in attesa volontaria

→ **NOTIFY**

Spiegare brevemente la soluzione proposta al problema dei filosofi a cena (2 punti).

To-do

class Philosopher extends Thread {

```

    int identity;
    boolean stopRequested = false;
    Fork left, right;
    Philosopher(int id, Fork left, Fork right) {
        this.identity = id;
        this.left = left;
        this.right = right;
    }
}

```

→ **DIJKSTRA**

class Fork {

```

    private boolean taken = false;
    private int identity;

    Fork(int identity) {
        this.identity = identity;
    }
}

```

```
public void run() {
    while (!stopRequested) {
        try {
            //thinking
        } catch (Exception e) {
            e.printStackTrace();
        }
    }
}
```

Synchronized void put() {
 taken=false;
 notify(); ← SE NON C'È
 ALLORA notifyAll

```
    }
}

Synchronized void get() throws
java.lang.InterruptedException
{
    while (taken)
        wait();
    taken=true;
}
}
```

TO DO

```
1.function loadDoc() {
2. var xhttp = new XMLHttpRequest();
3. xhttp.onreadystatechange = function() {
4. if (xhttp.readyState == 4 && xhttp.status == 200) {
5. document.getElementById("demo").innerHTML = xhttp.responseText;
6. }
7. };
8. xhttp.open("GET", "ajax_text.html", true);
9. xhttp.send();
10.}
```

xhttp.responseText

xhttp.responseXML xhttp.readyState == 4

xhttp.readyState == 4 && xhttp.status == 200 xhttp.status == 200

NOTA: il trattino “_” indica che la casella deve rimanere vuota.

```

3.     throws IOException, ServletException, HttpServletRequest request, HttpServletResponse response)
4.     int num = Integer.parseInt(request.getParameter("value"))
5.     Student[] studentList;
6.     StringBuffer buf = new StringBuffer();
7.     buf.append("<html><body>");
8.     buf.append("<h2>Elenco studenti</h2>");
9.     File f = new File(fileName);
10.    if (f.exists()) {
11.        try {
12.            ObjectInputStream storedList = new ObjectInputStream(new FileInputStream(f));
13.            studentList = (Student[]) storedList.readObject(); (Student [])
14.            storedList.close();
15.            buf.append("Nome Cognome Matricola<br>");
16.            buf.append(studentList[num].toString() + "<br>");
17.        } catch (ClassNotFoundException cnfe) {
18.            cnfe.printStackTrace();
19.        }
20.    } else {
21.        buf.append("La lista è vuota<br>");
22.    }
23.    buf.append("</html></body>");
24.    response.setContentType("text/html");
25.    Response.getWriter().append(buf.toString());

```

```

1.     protected void doPost(HttpServletRequest request, HttpServletResponse response)
2.         throws ServletException, IOException {
3.         String cognome = 1; ;
4.         int matricola = 2; ;
5.         Student s = new Student(cognome, matricola);
6.         File f = new File(fileName);
7.         if (f.exists()) {
8.             try {
9.                 ObjectInputStream storedList = new ObjectInputStream(new FileInputStream(f));
10.                Student[] studentList = 3; storedList.readObject();
11.                storedList.close(); // close stream
12.            } catch (ClassNotFoundException cnfe) {
13.                cnfe.printStackTrace();
14.            }
15.            // create a new ArrayList and add the new element
16.            List<Student> arrlist = new ArrayList<Student>(Arrays.asList(studentList));
17.            arrlist.add(s);
18.            // Convert the ArrayList to array
19.            studentList = arrlist.toArray(new Student[studentList.length]);
20.        } else {
21.            studentList = new Student[1];
22.            studentList[0] = s;
23.        }
24.        ObjectOutputStream output = new ObjectOutputStream(new FileOutputStream(f));
25.        4; output.flush();
26.        output.close();
27.        doGet(request, response);
28.    }
29. }

```

Double.parseDouble(request.getParameter("value"))	integer.parseInt(request.getParameter("value")) 2
request.getParameter("cognome") 1	(Student)
output.println(studentList)	response.setContentType("text/html") 4
request.getParameter("value")	(Student[])

