Topics proposed for the Homework Deliverable

Computadors – Grau en Ciència i Enginyeria de Dades – 2019-2020 Q2

Facultat d'Informàtica de Barcelona – Dept. d'Arquitectura de Computadors

Due date: June 19th, 2020

Submission: RACO web site (in the delivery slot of this homework)

The assignment consists of writing a document with, at least, the following sections. The length of the document can be about 3-4 pages (NOT more), and please submit it in PDF format:

1) Introduction to the particular topic;

2) background (introduction of concepts related and to understand the document);

3) the topic;

4) summary/major findings;

and references;

In total, there are five possible topics:

a) **Process management in Windows:** explain the basics (e.g. process, thread, ...) of this OS, as well as the key System Calls (e.g. those equivalent to fork, exit, waitpid, ...). Finally, compare your findings to the contents explained in the lectures.

b) **Process management in Android:** explain the basics (e.g. process, thread, ...) of this OS, as well as the key System Calls (e.g. those equivalent to fork, exit, waitpid, ...). Finally, compare your findings to the contents explained in the lectures.

c) **Hardware components in Android handheld devices:** identify common hardware components of an Android mobile Device (e.g. camera, accelerometer, GPS, temperature, other sensors, etc), as well as briefly describe, explain how are used, and relate them to the computer components explained in lesson 2, Computer Structure. Observe that some of the hardware components in mobile devices are new, compared to the traditional components of a computer. For those new devices, please explain briefly what are the new features incorporated, and if there are actions to incorporate them to laptop computers.

d) **Parallel programming packages/libraries for the R Language:** indicate the different approaches to implement parallel code for the R language. Briefly explain each one, as well as do a brief comparison among them.

e) Parallel programming packages/libraries for the Python Language: indicate the different approaches to implement parallel code for the Python language. Briefly explain each one, as well as do a brief comparison among them.

In this document we attach a table that binds each topic to persons. In case anyone is interested to change his/her topic to a different one, send the request by email indicating what is the suggested alternative topic and the reason for your request (why you are interested on that topic):

DNI	Topic
10738430	Windows Process Management
12028503	Android Process Management
21705422	Android Device Components
21765052	Parallel Programming with R
21789259	Parallel Programming with Python
23895267	Windows Process Management
23897181	Android Process Management
24491604	Android Device Components
26063786	Parallel Programming with R
26611111	Parallel Programming with Python
39402918	Windows Process Management
39413434	Android Process Management
39470421	Android Device Components
39967775	Parallel Programming with R
40563393	Parallel Programming with Python
41557080	Windows Process Management
41565425	Android Process Management
41592065	Android Device Components
41603794	Parallel Programming with R
41628533	Parallel Programming with Python
41630095	Windows Process Management
41703770	Android Process Management
41717361	Android Device Components
45125356	Parallel Programming with R
45129881	Parallel Programming with Python
45181771	Windows Process Management
46415145	Android Process Management
46420345	Android Device Components
46484063	Parallel Programming with R
46488064	Parallel Programming with Python
46492360	Windows Process Management
47192560	Android Process Management
47481991	Android Device Components

47752812	Parallel Programming with R
47916523	Parallel Programming with Python
47953313	Windows Process Management
47960453	Android Process Management
47966213	Android Device Components
47979088	Parallel Programming with R
47995840	Parallel Programming with Python
48015425	Windows Process Management
48016156	Android Process Management
48034869	Android Device Components
48061515	Parallel Programming with R
48069101	Parallel Programming with Python
48092763	Windows Process Management
49487860	Android Process Management
49932341	Android Device Components
53298218	Parallel Programming with R
53299589	Parallel Programming with Python
53322258	Windows Process Management
53865992	Android Process Management
53868086	Android Device Components
53869306	Parallel Programming with R
54177953	Parallel Programming with Python
54326750	Windows Process Management
77750885	Android Process Management