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Assignment C4

Title: Process Scheduling Algorithms: Android & Tizen

Date of Completion

Problem Statement:
Study assignment on process scheduling algorithms in Android & Tizen

Objectives:
To understand Android OS
To understand Tizen OS
To understand Process Scheduling.

Outcomes: I will be able to
Understand Android OS & Tizen OS
Understand Process Scheduling

Software & Hardware Requirements:
Fedora 20 OS, i5 processor, 8GB RAM,
500 GB HDD.

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Theory

Android OS :

It is a mobile OS developed by Google
It is based on a modified linux kernel
It is designed for touch screen smartphones / tablets
Android Inc. was bought by Google in 2005.
It was subsequently unveiled in 2007
The 1st commercial device was launched in Sept 2008.
It has gone through multiple releases.
The latest version of Android is 10.0
Android 10.0 was released on 3rd September 2019.

The hardware that supports Android is based on ARM architecture
Android Development supports java programming language as well as Kotlin.
Other packages like API & JSE are supported too.

Some Versions of Android

Gingerbread	(2.3)
Honeycomb	(3.0)
Ice Cream Sandwich	(4.0)
Jellybean	(4.1/4.2/4.3)
Kitkat	(4.4.1)
Lollipop	(5.0)
Marshmallow	(6.0)
Nougat	(7.0)
Oreo	(8.0)

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Advantages
Support 2D & 3D Graphics
Supports multiple languages
Faster Web Browser
Supports Audio, Video, etc

Disadvantages
Slow Response
Heating Issues
Prone to pop up advertisements

Tizen OS :
It is mobile OS developed by Samsung
It runs on smartphones, tablets, in vehicle infotainments, etc.
Tizen Association guides the industry role of Tizen like requirement gathering, identifying, facilitating service models & overall industry marketing & education

It is preempted by a higher priority real time task. It has no time slices
SCHED_PP is similar to SCHED_FIFO. Except that tasks are alloted time slices on the basis of priority.
Real-Time tasks use SCHED_NORMAL scheduling policy.

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Fixed Priority Preemptive Scheduling
It is used in real time systems.
At any given time, the scheduler executes the highest priority task.
It is differentiated with cooperative scheduling to have a task switch.
The task must explicitly call the scheduler.
Cooperative Scheduling is used by Salvo / Tiny OS.

Conclusion:
We have successfully studied concept of process scheduling of Android & Tizen OS.

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