DPU
Dr. D. Y. Patil Institute of Technology

ASSIGNMENT NO. 4

(*) TITLE : study assignment on process schedule in Android and Tizen.

(*) OBJECTIVES : study about scheduling process in Android and Tizen.

(*) HARDWARE AND SOFTWARE REQUIREMENTS :
PC, Web Browser etc.

(*) THEORY :
Android mobile operating system which is based on Linux Kernel 2.6, has open source license & adaptability to user driven application. As all other O.S it has all the basic features like process scheduling, memory management, process management etc. Any mobile platform works smoothly when the process scheduling is performed in a proper way.

⊙ PREEMPTIVE TASK SCHEDULING :
Task scheduling is the core which refers to the way different processes are allowed to share the common CPU. Scheduler and dispatcher are the software which helps to carry out this assignments.
Android operating system uses O(1) scheduling algorithm as it is based on Linux Kernel 2.6. Therefore the scheduler names as completely fair scheduler as the process can schedule, within a constant amount

of time regardless of how many processes are running on the O.S.

It involves interrupting the low priority task when high priority task are present in the queue. It is particularly used for mobile O.S as the CPU utilization is medium turnaround time & response time is high. Mobile phones are required to trust specific time deadlines for tasks to occur.

⑧ Experimental steps :

There are steps implemented to achieve the fixed priority preemptive task scheduling is described.

Step 1 : The application would first register to the class called ListActivity that displays a list items by binding to a data source such as an array or cursor & exposes event handles when the user selects on items.

Step 2 : The application would show an interface by which the user can set priority to certain contacts as 'High' & others will be kept as default.

Step 3 : In case there is SMS from high priority person while some activity is running on the phone, that message being sent by the high prioritized person, will get finished on active screen.

Step 4 : At same time this particular message will be redirected & stored in priority manager inbox as well as default inbox.

Step 5 : If SMS is received from the contacts which are default priority contacts ; then no running activity

will be distributed & SMS will go to the default inbox.
Step 6: Android Broadcast Receiver class could be used for this purpose.
Step 7: The Broadcast Receiver class would be used for this purpose.
Step 8: Application can use the methods in this class to determine SMS services.
Step 9: A file will be created which will act as an intermediate messager b/w the different classes as well as different function.

(*) PROCESS SCHEDULING IN TIZEN:

(*) TIZEN:

It is a mobile O.S based developed by samsung. Tizen works on a wide range of samsung devices such as smartphones, tablets, invehicle infotainment devices, smart TV's, PC's, smart cameras, wearable computing Blue-ray players, printers & smart phone, home appliances etc.

(*) STEPS:

(1) Display the list of Running application.
(2) Kill a selected application.
(3) Monitor the resources used by system & other applications
(4) Determine the battery level.

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Platform.	Android	Tizen.
Model Name.	Galaxy S3.	RD-PQ.
Processor	Samsung Exynos 4412.	
CORE	Quad core 1.4 GHz cortex-A9	
RAM	1GB Mobile DDR2.	
Display	4.8 inch HD AMOLED.	
Sensors.	Gyro, Proximity, Compass.	
storage	eMMC 32GB.	eMMC 16GB.
Kernel	Linux 3.0.31.	Linux 3.0.15
Platform	Android 4.1.2	Tizen 2.2.1.
SQLite.	3.7.14	3.7.13.

(*) CONCLUSION :

Hence, we studied about process scheduling in Android & Tizen.

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