

Smart Device & Mobile Emerging Technologies Assignment

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1. For the Smartphone project, setup the project suitable to your smartphone and conduct the experiment on both Android and iPhone smartphones. Describe the smartphone types and the specs of the CPU, SoC, number of cores, memory types & sizes of each smartphone.

- (a) [Android Smartphone_HTC U12+]

Device Type: Phablet

Specs of the CPU: 4x Qualcomm Kryo 385 Silver@1766MHz, Gold@2803MHz

SoC Model: Qualcomm Snapdragon 845

Number of Cores: 8

Memory types: RAM 6GB LPDDR4X

Total Memory: 5680MB

AIDA64 / System		AIDA64 / CPU	
Device Model	HTC U12+	SoC Model	Qualcomm Snapdragon 845
Device Type	Phablet	Core Architecture	4x Qualcomm Kryo 385 Silver @ 1766 MHz 4x Qualcomm Kryo 385 Gold @ 2803 MHz
Manufacturer	HTC	Manufacturing Process	10 nm
Model	HTC U12+	Instruction Set	64-bit ARMv8-A
Brand	htc	CPU Revision	r6p13
Board	sdm845	CPU Cores	8
Device	htc_imeuhl	CPU Clock Range	300 - 2803 MHz
Hardware	htc_ime	Core 1 Clock	576 MHz
Platform	sdm845	Core 2 Clock	576 MHz
Product	imeuhl_00617	Core 3 Clock	576 MHz
Serial	FA88N1F00574	Core 4 Clock	576 MHz
Installed RAM	6 GB LPDDR4X	Core 5 Clock	825 MHz
Total Memory	5680 MB	Core 6 Clock	825 MHz
Available Memory	2394 MB	Core 7 Clock	825 MHz
Internal Storage Total Space	48.43 GB	Core 8 Clock	825 MHz
Internal Storage Free Space	32.04 GB	L3 Cache	2 MB
External Storage Total Space	238.23 GB	Scaling Governor	schedutil
External Storage Free Space	186.58 GB	Supported ABIs	arm64-v8a, armeabi-v7a, armeabi
Bluetooth Version	5.0	Supported 32-bit ABIs	armeabi-v7a, armeabi

(b) [iPhone 6]

CPU Type: Apple A8

Specs of the CPU: Speed 1400MHz, Manufacturer TSMC, Instruction Set 64-bit ARMv8-A, Microarchitecture Cyclone 2, Technology 20nm.

Number of Cores: 2

Memory: 64GB Storage, 1987MB RAM

Carrier	1:02 PM	Carrier	1:02 PM
Device	AIDA64	Processor	
BASIC PROPERTIES		CPU PROPERTIES	
Device	iPhone 6	CPU	Apple A8
Dock Connector	Lightning	Speed	1400 MHz
SIM Card Type	Nano-SIM	Manufacturer	TSMC
Device String	iPhone7,2	Instruction Set	64-bit ARMv8-A
Device Id	N61AP	Microarchitecture	Cyclone 2
CAPABILITIES		Technology	20 nm
Cellular	Yes	Core Count	2
GPS	Yes	Active Core Count	2
NFC	Yes	GPU PROPERTIES	
Force Touch	No	GPU Type	PowerVR GX6450
BLUETOOTH		GPU Cores	4
Version	4.0	GPU Speed	450 MHz
Controller	Broadcom BCM4345	... Processor Properties	

- For the Mobile Network project, setup the project suitable to your smartphone and conduct the experiments. Describe the location of where you experienced the largest number of Neighbor Base Stations, and how many were there. In addition, describe the PCI, RSSI, RSRP, RSRQ, RSSNR, ASU, and CQI values measured.

Only one neighbor base stations,

PCI: 256

RSRP: -83,

RSRQ: -11

RSSNR: 300

ASU: 57

CQI: N/A

