



Bahria University
Discovering Knowledge

Department of Computer Science
CSC-341: Mobile Application Development
Semester 6 Section A (Fall 2023)
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BSCS-6A

ASSIGNMENT 01

Marks:

/05

Name: Ashir Azeem

Enrollment # 02-134211-039

Class: BSCS-6A

Theoretical Assignment (Mobile Application Development) (CSC-341)

Read Carefully:

- The deadline for this assignment is *before or on* **October 24, 2023 (submit on LMS)** and submit the hardcopy during the lecture.
WARNING: This is an individual assignment; you must solve it by yourself. Any form of plagiarism will result in receiving zero in the assignment.

WARNING: Late submission will not be accepted. Any assignment submitted after the cutoff time will be evaluated from 5 marks.

Ms Fasiha Ikram (Section A,)



Clo-3

Question #1

Marks

- a. Discuss the information about mobile operating systems (android, IOS and fuchsia) and do full comparisons study with **citation**. The comparison must be from different aspect such as **technical, performance, specification, market, security, price and program language** required to develop its applications.
Discuss the comparison in a form of report (Maximum 4 pages) with citations/references.

CITATIONS/REFERENCES:

Android: <https://en.wikipedia.org/wiki/Android>

iOS: <https://en.wikipedia.org/wiki/IOS>

Fuchsia OS: https://en.wikipedia.org/wiki/Fuchsia_OS

ANDROID

Android is the most popular mobile operating system, with a global market share of over 70%. It is an open-source platform, which means that anyone can develop and distribute Android apps. This has led to a huge ecosystem of apps and devices, with Android devices available at a wide range of price points.

Android is known for its flexibility and customization options. Users can change almost every aspect of the Android experience, from the look and feel of the interface to the features and apps that are available.

IOS

iOS is the second most popular mobile operating system, with a global market share of over 25%. It is developed and distributed by Apple, and it is only available on Apple devices, such as the iPhone and iPad.

iOS is known for its simplicity and ease of use. It also has a reputation for being more secure and reliable than Android. Apple has a tight control over the iOS ecosystem, which allows the company to ensure that all apps are high quality and that they work well on all Apple devices.



FUCHSIA

Fuchsia is a new mobile operating system that is still under development. It is being developed by Google, and it is based on a new microkernel called Zircon.

Fuchsia is designed to be more secure and versatile than Android or iOS. It is also designed to be more modular and extensible, which means that it can be easily adapted to run on a variety of different devices.

However, Fuchsia is still in its early stages of development, so it is not yet clear when it will be released to the public. Additionally, the Fuchsia app ecosystem is very limited at this time.

TECHNICAL COMPARISON

Feature	Android	iOS	Fuchsia
Kernel	Linux	XNU	Zircon
UI framework	Native, Flutter	UIKit, SwiftUI	Flutter
Programming language	Java, Kotlin	Swift, Objective-C	Dart
Open source	Yes	No	Yes

PERFORMANCE COMPARISON:

Feature	Android	iOS	Fuchsia
Startup time	Varies by device	Fast	Unknown
App performance	Varies by app	Good	Unknown
Battery life	Varies by device	Good	Unknown



SPECIFICATION COMPARISON:

Feature	Android	iOS	Fuchsia
Supported devices	Smartphones, tablets, smart TVs, wearables, etc.	iPhones, iPads, Apple Watches, etc.	Unknown
Minimum hardware requirements	Varies by device	Varies by device	Unknown

MARKET COMPARISON:

Feature	Android	iOS	Fuchsia
Global market share	71.9%	26.2%	Negligible
Top manufacturers	Samsung, Xiaomi, OPPO, Vivo, etc.	Apple	None yet

SECURITY COMPARISON:

Feature	Android	iOS	Fuchsia
Security track record	Good, but has been vulnerable to malware attacks	Excellent	Unknown
Security features	Sandboxing, encryption, etc.	Sandboxing, encryption, etc.	Unknown



Name: Ashir Azeem

Feature	Android	iOS	Fuchsia
Device cost	Varies by device	Generally, more expensive than Android devices	Unknown
App cost	Free or paid	Free or paid	Unknown

Feature	Android	iOS	Fuchsia
Primary programming language	Java, Kotlin	Swift, Objective-C	Dart
Other supported languages	C/C++, Python, etc.	C/C++, Python, etc.	C/C++, etc.

[illegible]