

**Author**: Jagjeet Reehal

**Project**: Media Oasis Commercial Mobile App

**GitHub Repository**: <https://github.com/jagree03/media-oasis-mobile>

**Description:**

Media Oasis is a stand-alone Android-based mobile app expansion to the fictional “Oasis” brand, built on top of my previous Café Oasis project from 2023/2024 that aims to be a coffee shop mobile application for Android that sells different types of coffee, biscuits & drinks. Media Oasis is essentially a reformed version Café Oasis now selling entertainment products such as Movies, Video Games, DVD’s and other visual media in physical form. Media Oasis aims to be an improvement over Café Oasis and will fix problems and missing content that was in the Café Oasis Mobile App.

# Analysis and design

1. **Functional requirements**
2. **Non-functional requirements**
3. **Use cases with descriptions and diagrams**
4. **UML designs**
5. **User interface designs**

# Database

1. **How databases will be associated with this application**
2. **Database tables**
3. **ERD – Entity Relationship Diagram**

# Software architectural patterns used for developing the application including UI Logic, Input Logic and Business Logic

# Testing and security considerations

1. **Testing**
2. **Security considerations and practices**

# Final reflection

1. **An evaluation of the system and reflection**

The development for this application started slowly in August 2024 as it was still in its planning stages with brief drafts, but the development started in October 2024

1. **Overview of the software development life cycle (SDLC) used for the application**

Tools

* Android Studio
* Figma to design user-interface
* Google Images to locate images for items that will be sold
* Doxygen for documentation

Planned UI Design on Figma are located in the Media Oasis UI Screen Designs From Figma.pdf file, which displays all the planned user-interface activity designs in terms of colour, font, positioning, spacing and UI controls.

A screenshot of a phone

Description automatically generatedA screenshot of a phone

Description automatically generatedA person looking at a shelf

Description automatically generated

Figure 3 Example of UI Design for Payment

Figure 2 Example of UI Design for Menu

Figure 1 Example of UI Design for Login

**References**

* Rounded Button Tutorial [*https://medium.com/swlh/rounded-button-in-android-studios-fbd1ee0b3161#:~:text=Color%20and%20corner%20radius%20for,%E2%80%9D%40drawable%2Frounded\_corner%20%E2%80%9D%20.*](https://medium.com/swlh/rounded-button-in-android-studios-fbd1ee0b3161%23:~:text=Color%20and%20corner%20radius%20for,%E2%80%9D%40drawable%2Frounded_corner%20%E2%80%9D%20.)
* White Border Layout Code <https://stackoverflow.com/questions/38787794/android-adding-border-around-textview>

*<?xml version="1.0" encoding="utf-8"?>*

*<shape xmlns:android="http://schemas.android.com/apk/res/android"*

*android:shape="rectangle" >*

*<stroke*

*android:width="2dp"*

*android:color="#cdcdcd" />*

*</shape>’*

* Adding custom fonts <https://developer.android.com/develop/ui/views/text-and-emoji/fonts-in-xml>
* Changing the launcher icon of your Android app in Android Studio <https://www.youtube.com/watch?v=bJjHgWjiAKw>
* Showing / Hiding password in editText of type textPassword <https://www.scribd.com/document/716398701/Android-Show-Hide-Password-in-Edittext>
* Changing spinner text size and colour <https://stackoverflow.com/questions/9476665/how-to-change-spinner-text-size-and-text-color>
* Changing the colour of the ratingBar <https://stackoverflow.com/questions/32810341/android-change-color-of-ratingbar-to-golden>
* Slidable Navigation Drawer Tutorial and Explanation <https://www.youtube.com/watch?v=do4vb0MdLFY>
* Fragments Tutorial and Explanation <https://www.youtube.com/watch?v=-vAI7RSPxOA>
* Alert Dialog and Buttons + Status Bar Colour modification <https://www.geeksforgeeks.org/how-to-set-buttons-inside-an-alert-dialog-in-android/>
* Reducing size of the ratingBar <https://smartandroidians.blogspot.com/2020/02/how-to-reduce-size-of-ratingbar.html>
* CountDown Timer <https://stackoverflow.com/questions/54095875/how-to-create-a-simple-countdown-timer-in-kotlin>
* Fixing canvas drawing too large issue: <https://www.reddit.com/r/androiddev/comments/px384u/javalangruntimeexception_canvas_trying_to_draw/>

*“u/CaptainRoger10 - Because the image size is too large, reduce the image size.”*

* Using findViewById() method within a fragment<https://www.repeato.app/how-to-use-findviewbyid-in-a-fragment/>
* Using the Kotlin addTextChangeListener <https://stackoverflow.com/questions/40569436/kotlin-addtextchangelistener-lambda>

**Image Sources**

* Media Oasis logo [*https://logo.com/logos/artificial-intelligence*](https://logo.com/logos/artificial-intelligence)
* Man looking at DVD Section (Splash) [*https://www.istockphoto.com/photo/this-better-have-loads-of-action-in-it-gm158220812-22390209*](https://www.istockphoto.com/photo/this-better-have-loads-of-action-in-it-gm158220812-22390209)
* Logout Button *<https://www.flaticon.com/free-icon/log-out_7756285?term=logout&page=1&position=29&origin=tag&related_id=7756285>*
* [placeholder image](https://www.flaticon.com/free-icon/log-out_7756285?term=logout&page=1&position=29&origin=tag&related_id=7756285) *[https://archive.org/details/placeholder-image](https://www.flaticon.com/free-icon/log-out_7756285?term=logout&page=1&position=29&origin=tag&related_id=7756285)*
* Checkmark [*https://commons.wikimedia.org/wiki/File:Eo\_circle\_green\_checkmark.svg*](https://commons.wikimedia.org/wiki/File:Eo_circle_green_checkmark.svg)
* PayPal [*https://upload.wikimedia.org/wikipedia/commons/a/a4/Paypal\_2014\_logo.png*](https://upload.wikimedia.org/wikipedia/commons/a/a4/Paypal_2014_logo.png)
* Credit / debit card [*https://www.kindpng.com/picc/m/13-130835\_credit-card-credit-card-vector-png-transparent-png.png*](https://www.kindpng.com/picc/m/13-130835_credit-card-credit-card-vector-png-transparent-png.png)
* Shopping Cart Icon[*https://www.flaticon.com/free-icon/shopping-cart\_1413908*](https://www.flaticon.com/free-icon/shopping-cart_1413908)