**COURSEWORK SUBMISSION FORM**

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| **STUDENT USE** | | **STAFF USE** | |
| Module Name | Mobile Applications Development | First Marker’s  (acts as signature) |  |
| Module Code | **4BUIS011C-n** | Second Marker’s  (acts as signature) |  |
| Lecturer Name | Ayubhan | Agreed Mark |  |
| UoW Student IDs |  | **For Registrar’s office use only (hard copy submission)** | |
| WIUT Student IDs | 00010174 |
| Deadline Date | 12/7/2021 11:59:59 PM |
| Assignment Type | ☐ Group ☑ Individual |
| Word Count | 630 |

**SUBMISSION INSTRUCTIONS**

**COURSEWORKS *must* be submitted in *both* HARD COPY (to the Registrar’s Office) *and* ELECTRONIC unless instructed otherwise.**

For hardcopy submission instructions refer to: <http://intranet.wiut.uz/Shared%20Documents/Forms/AllItems.aspx> - Coursework hard copy submission instructions.doc

For online submission instructions refer to: <http://intranet.wiut.uz/Shared%20Documents/Forms/AllItems.aspx> - Coursework online submission instructions.doc

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| --- |
| **MARKERS FEEDBACK (Continued on the next page)** |
|  |

Report

**Requirement’s catalogue**

There are some requirements to use this app and first of them is phone’s android sdk version should be minimal 24 (Android 7.0). There must be at least 10 MB of free space in the phone memory for the program to run smoothly. All created information are saved in phone’s memory. Above requirements are non-functional requirements.

App helps to save workout exercises notes and in app user can read news but to read user need internet connection. It is functional requirement.

**UML Activity Diagram**

Main Activity

Repository

Gets data from local or remote sources and give it to use case or save it

Use Case

Gets data from view model. Do logic here and save to repository or gets from repository

ViewModel  
get data from ui and set data to ui

Add Program Page

Update Program Page

News Page

About program page

Splash (checks is it first launch time or not

Home Page

Shows all program

Welcome Page

Create sample data

Every fragment has own viewModel and Use Case

**Prototyping**

The application has 7 screens and they are splash, welcome page, home page, add and update workout exercise page, News page and about app page. I have used jetpack navigation library to communicate fragments and show app screens. In every screen, I have used Material components (MaterialTextView, MaterialCardView…) to make the program look beautiful. In app, only seven colors are used. To make UI more beautiful I have used some drawable and some of them downloaded from <https://www.flaticon.com/> (in this cite you can download images for free but in png format). For all texts used custom font (Gilroy). I have created some styles to avoid repeat myself and they are stored themes.xml. App can work night and light modes.

**Mobile Application Development Cycle**

App has begun with some ideas. I have bunch of ideas at first then I made it all come together. My idea was app should write workout exercises and the user should not get bored of the program. Then I searched some UI from <https://www.behance.net/> and <https://dribbble.com/> and then started with android studio. I focused more on UX.

After some screens finished I started coding part. While coding I have tested all finished screens and at last I have tested whole application.

**Application Portability**

Application is optimized for landscape mode. I have used sp for all text fields (sp is similar to the dp unit but additionally it is also scaled according to the font size preference of the user) and for other views, dp is used. ConstraintLayout is used for complex designs to fit all phones. I stored application icon to different mipmap packages according to screen resolution but I have not used this method to drawables because most of drawable items are svg.

**System and Hardware Requirements**

Application need at least 10 MB free space and 120 MB ram to work. Phone’s android version must be at least 7.0. To read news from internet application only need internet permission. (It is not required).

**Black box testing**

I have not write any UI testing or Unit testing for this application. However, I have tested it by Profile ‘app’. The results were as I expected. Results are below.

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| --- | --- | --- | --- |
| Test description | Expected results | Actual results | Comments |
| CPU | 20% | 30% | While using app it uses 20-25% CPU, if user don’t touch screen I will not use CPU |
| RAM | 130MB | 125MB | After loading application fully I used 125MB ram |
| Energy | Light | Light |  |

**References**

1. Behance (2021). *Behance.net*. Available from https://www.behance.net/ [Accessed 4 December 2021].
2. Dribbble - Discover the World’s Top Designers & Creative Professionals (2021). *Dribbble.com*. Available from https://dribbble.com/ [Accessed 6 December 2021].
3. Free Icons and Stickers - Millions of resources to download (2021). *Flaticon*. Available from https://www.flaticon.com/ [Accessed 5 December 2021].