**COURSEWORK SUBMISSION FORM**

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| **STUDENT USE** | | **STAFF USE** | |
| Module Name | Mobile Applications Development | First Marker’s  (acts as signature) |  |
| Module Code | **5BUIS012C-n** | Second Marker’s  (acts as signature) |  |
| Lecturer Name | **Said Abduvaliev** | Agreed Mark |  |
| UoW Student IDs |  | **For Registrar’s office use only (hard copy submission)** | |
| WIUT Student IDs | 00010023 |
| Deadline Date | 12/7/2021 11:59:59 PM |
| Assignment Type | ☐ Group ☑ Individual |
| Word Count | 505 |

**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)** |
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**Coursework Report by 00010023**

**Requirement’s catalogue**

The application doesn’t consume that much resource as it uses native approach to do particularly everything. As it can be seen in the performance test blow, it’s using maximum 30% of CPU for calculations at peak stage getting 90-100 mb of RAM warmed up.

A screenshot of a computer

Description automatically generated with medium confidence

Also, the application uses Android SDK at level 24 till the latest which means that this application can be installed and executed on 89% devices worldwide.

**UML Activity Diagram**

**Graphical user interface

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**Prototyping**

The application has only 4 layouts whereas they are main, splash and two sub layouts which are combined with main layout as widgets. I wanted to make it clean and aesthetic as the To-do applications don’t require fancy animations or designs. In order to make this come true, I used overall 2 colors which are black and white. When the application is executed, it loads the splash screen which consists of only white colored logo and black background. The main layout has 2 widgets which uses various Views as TextView, Recycler or Buttons. They are also colored with only 2 colors. The application doesn’t have dark theme, but it can be added via dark scheme colors prefane in a matter of time.

**Mobile Application Development Cycle**

I created the modals of data in order to avoid serializing unknown type of data on my storage. Modal consists of all required columns as name, id, date, additional data, and status with its priority on all string except integer unique id. Then I proceeded with creating adapters which would manage all my server-side things with storage using modals. Also, I created Database Handler to let my “server” side use SQLite manager which gives my app an ability to store user’s data into hard storage. After that, I finished my project by creating views with its handlers for clicks and renders.

**Application Portability**

The application already uses dp and automated design structure, it can be only layout extended to improve the portability of this application as some of the ratio or exponents of my app won’t be suitable. Also, my application uses only portrait mode, so optimizing it for landscape mode would be proficient whereas TV users might be able to use my app.

**System and Hardware Requirements**

The application doesn’t need any third-party API as GPS, Camera Access, or Phone Book. It’s just a to-do whereas everything is saved into local storage. All this application need is just 10 mb of hard storage for saving up to 40 to-dos in storage and 100 mb of ram.

**Black box testing**

As this application not meant for productions uses, doing unit tests is like trying to find a mistake from garbage. Therefore, I didn’t write any unit tests for this application, besides I did a benchmark test and see how much resource my app consumes.

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| Test description | Expected results | Actual results | Comments |
| RAM Usage | 50mb | 90mb | Pretty sad… Expectations versus Fantasy |
| CPU Usage (Heap) | 50% | 30% | Not bad to be honest |
| Energy consumes | Low level | Low level | As expected from a clean to-do app |

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