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Design and Implementation of Social Event Application Based on Android

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| Over the years, more and more tourists come to Helsinki to travel, in order to let more people know about the events happening in Helsinki area, with the help of the “City of Helsinki” organization, a social events viewing application based on Android platform is born. The main goal of this thesis is to produce a public events information platform based on Android to make it easier for people to find activities happening in the moment or in the future and make people participate in activities, integrate into local life and learn about Helsinki culture.  During the development process, back-end data is provided from the organization's open data which covers public data in the Helsinki region. The major application case used in this thesis is a completed social event application written in Kotlin and the specific location of the event will be marked on Google Maps. Besides, RecyclerView is wildly used in this application to display specific event information, such as date, price, event publisher and so on.  Design pattern, as an essential part of computer science, is beneficial for keeping projects architecture scalable and testable. This thesis introduces Model View Presenter, a design pattern encouraged by Google for Android development. In addition, MVP design pattern will be demonstrated along with the extracted code from the application case.  In summary, this thesis implements a social event application based on MVP design pattern and the UI of application conforms to the “Material Design” specification. | | |
| Keywords | | Material Design, Model View Presenter, MVP, Android Development, Kotlin |

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Appendices

Appendix 1. Title of the Appendix

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List of Abbreviations

ORM Object-relational mapping. The set of rules for mapping objects in a programming language to records in a relational database, and vice versa.

DBMS Database management system. Software for maintaining, querying and updating data and metadata in a database.

# Introduction

Write the introduction of your thesis here. Use the Body text style for normal text. Likewise, use styles Heading 1, Heading 2, and Heading 3 for headings. As you apply the predefined styles, the text will automatically format correctly: the line spacing will be 1.5, both edges will be justified, and the text will be hyphenated.

The last line of a paragraph can be left hanging, that is, it does not have to reach the right margin.

Begin a new paragraph at the left margin, that is, do not indent the first line.

# Theoretical Background

## Open Data

There must always be text or a new subheading below each heading. Do not place a figure or table below a heading with no text in between.

Label each figure and table appropriately. Provide a number, title and reference (if needed) below each figure and above each table. Make sure to mention all figures and tables in the text. Each figure and table must be explained in the text and referred to by its number (… as figure 1 illustrates. /as summarized in table 1.).

Apply the Figure style for each image. This is necessary in order to prevent a page break from occurring between the figure and its caption. The Figure caption style is applied for the figure’s caption. This causes the figures to be numbered automatically.

1. Virtual studies completed by Metropolia students in the academic year 2009-2010.

There must always be text between a figure or table and a new heading.

## Model View Presenter (MVP)

## Android Components

### Activity

There must always be text or a new subheading below each heading. Do not place a figure or table below a heading with no text in between.

1. Virtual studies completed by Metropolia students in the academic year 2009-2010.

|  |  |
| --- | --- |
| Field of study | Studies completed, ECTS |
| Culture | 131 |
| Technology, Communication and Transport | 552 |
| Health Care and Social Services | 175 |
| Business and Administration | 52 |
| Not bound to a field of study | 18 |
| Metropolia total | 928 |

There must always be text between a figure or table and a new figure or table or a new heading.

### Intent

There must always be text or a new subheading below each heading.

Use the Quotation style for an indented quotation. For the last paragraph immediately before the quotation, use the Body Text before Quotation or List style.

If a direct quotation is several lines long, indent the quotation and use single (1.0) line spacing. No quotation marks are used then. Always provide a reference to the source. If the direct quotation is shorter than two lines, include it in the body of the text in quotation marks, and provide a reference to the source.

After an indented direct quotation, continue the text at the left margin using the Body text style.

Use the Bulleted list style for an in-text list:

* This is the first list item.
* The second item of the list contains a long text that spans more than one row. The left margin will be automatically justified.
* This is the third list item.
* This is the fourth list item.

The items on the bulleted list begin with a capital letter. An item ends in a full stop if each item on the list is a full sentence.

The list items begin with a lower-case letter if the list items are not sentences. The last item is followed by a full stop. Thus, a thesis consists of

* words
* sentences
* paragraphs
* sections.

After the list, the text continues from the left margin in the Body text style.

You can insert numbered formulas that are displayed on separate rows:

(1)

Insert a new formula by selecting Insert/Quick parts/Formula (using the formula function). If you want to use Microsoft equation editor instead of the newer formula function, select Insert/Quick parts/Formula (using MS Equation).

An example of a listing is given below. Use Code line style to mark code lines, and create indentations with the Tab key. The caption should follow the Listing caption style.

def inventory():

cur = db.cursor()

sql = "SELECT Description FROM OBJECT WHERE Location='PLAYER'"

cur.execute(sql)

if cur.rowcount>=1:

print("You carry the following items:")

for row in cur.fetchall() :

print (" - " + row[0])

else:

print("You don't carry anything.")

return

1. A Python subroutine that outputs information about objects in possession of a player.

### ViewPager

### RecyclerView and Adapter

# Implementation

## Application Outline

### Description

### Material Design and Layout

### Development and Process

## Project Requirements

### Feature A

### Feature B

### Feature C

## Technology Stacks

### Data Flow

### Kotlin over java

### Unit Testing

# Results

# Conclution

# References

References

Details of the references are given here. Use the referencing system required in your degree programme or as agreed with your supervisor.

Layout of this page in the author-date (Harvard) referencing system:

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Layout of this page in the number (Vancouver) referencing system:

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2. Details of the reference Details of the reference Details of the reference Details of the reference Details of the reference.

**Title of the Appendix**

The contents of the appendix are placed here. Below are the instructions for removing and adding appendices in a way that maintains the headers and footers in their correct form.

Instructions for removing an unwanted appendix:

1. Select the entire page(s) that form the appendix and delete the contents by hitting the Delete key.
2. As you are in the beginning of the empty appendix page (see the image below), double-click the header of the empty page and press Link to Previous button in the ribbon. The following dialogue window opens:



Click Yes.

1. If necessary, make hidden format information visible by pressing .
2. Delete the section break immediately before the appendix to be removed (see image below).



Instructions for adding a new appendix:

1. Place the cursor at the end of the last appendix.
2. Select Page Layout from the menu bar. From the ribbon, select Breaks/Section Breaks/Next Page. This causes a new appendix to appear, but the appendix number in the header is not yet correct.
3. Double click the header of the new appendix with the wrong appendix number. If the option “Link to Previous” is selected, click the corresponding button to deselect it.
4. Replace the appendix number with the correct number.

Note that the appendices need to be updated in the table of contents manually.

**Title of the appendix**

The contents of the appendix are placed here.