

**Final Year Project Report**

**Android pc controller**



**Project Advisor: Rao Faizan Ali**

**Submitted By:**

**Isfahan Abid: 13005065024**

**Anum Khan: 12003065121**

**Session**

**2013-2017**

**University of Management and Technology**

**C-II Johar Town Lahore Pakistan**

## **Dedication**

I owe this project to my parents who taught me to work hard as its the key to success and this is because of them who kept me motivated throughout this task with their concerned behavior.

## Final Approval

### Panel of Examiners

- **Head of Department** \_\_\_\_\_  
Department of Computer Science  
UMT Lahore
  
- **Program Director ( Final Year Projects)** \_\_\_\_\_  
Department of Computer Science  
UMT Lahore
  
- **Supervisor** \_\_\_\_\_  
Department of Computer Science  
UMT Lahore
  
- **Co-Supervisor** \_\_\_\_\_

## **Acknowledgment**

I've done my best for this project but indeed it wasn't possible for me to make it done without the help of many kind people and respected organizations. I highly contribute the credit of this completed project to all of them. All of above Special thanks to my Sir Rao Faizan who made it easier for me by sharing his information and knowledge regarding this project. Also I am grateful to my University (UMT) who provided me with this opportunity and members who helped me in completion of this project by their kind cooperation and encouragement.

**Project Title****Android PC Controller****Objective**

This document will tell about the use of this application. The objective of this application is to control the computer using mobile phone such as to control keyboard and mouse, to start and stop application. It will help teachers, bank employees and students for demonstration purpose as well as it will provide help for the people who like to sit in one corner and want to use their PC on mobile.

**Undertaken by**

Isfahan Abid 13005065024

Anum Khan 12003065121

**Supervised by**

Rao Faizan Ali

**Starting Date 15/1/2017****Completion Date 29/1/2017****Tools Used**

Android Studio SDK, Eclipse

**Operating System**

Android, windows

**Documentation**

## **Abstract**

This application is android oriented. For operating this app some steps like Port Assigning and socket programming have to be performed. For the connection of two processes Interprocess Communication Technique will be used. The functionality is simple as soon as the pairing of devices is done then by using socket programming one can send commands to the server.

# Thesis Similarity Report

Turnitin Originality Report

Android PC Controller by Isfahan Abid and Anum Khan

From learning resource development (LRD)

- Processed on 27-Sep-2017 17:12 PKT
- ID: 853293543
- Word Count: 4193

Similarity Index

6%

Similarity by Source

Internet Sources:

4%

Publications:

3%

Student Papers:

5%

Sources:

2% match (Internet from 18-Dec-2012)

[http://eprints.undip.ac.id/17249/1/Eva\\_Kris\\_Diana\\_Devi.pdf](http://eprints.undip.ac.id/17249/1/Eva_Kris_Diana_Devi.pdf)

1% match (student papers from 21-Aug-2014)

[Submitted to Glyndwr University on 2014-08-21](#)



Checked by



Verified by CLO

Note:

- Sometimes the overall similarity index may be a smaller than the repository percentages combined. This would be due to overlapping text within the repositories.
- It is a system generated report.

## REVISION CHART

---

Version	Primary Author(s)	Description of Version	Date Completed
<i>Draft</i>	Anum Khan	Mention tables and figures and list the tables and figures and motivations, objectives, requirements etc. according to template.	9/9/2016
<i>Preliminary</i>	Isfahan Abid	Implement diagrams using tools and write extended use cases according to the use case diagram.	20/10/2016
<i>Final</i>	Isfahan Abid	Implement use cases as implemented in revised use case diagram.	16/8/2017
<i>Revision 1</i>	Isfahan Abid	Check all the diagrams and use cases	20/8/2017
<i>Revision 2</i>	Anum Khan	Check all the requirements and other things	26/8/2017
<i>Revision 3</i>	Anum Khan	Check the plagiarism of the document	30/8/2017

# CONTENTS

---

Contents .....	1
Definitions and Acronyms .....	3
List of Figures .....	4
List of Tables .....	5
1. Introduction.....	6
1.1 Motivations .....	6
1.2 Project Overview .....	6
1.3 Problem Statement .....	6
1.4 Objectives .....	6
2. Domain Analysis.....	7
2.1 Customer .....	7
2.2 Stakeholders.....	7
2.3 Affected Groups with social or economic impact.....	7
2.4 Dependencies/ External Systems .....	7
2.5 Reference Documents .....	7
2.5.1 <i>Related Projects</i> .....	8
2.5.2 <i>Feature Comparison</i> .....	8
3. Requirements analysis .....	9
3.1 Requirements .....	9
3.2 List of Actors.....	10
3.3 List of use cases.....	11
3.4 System use case diagram.....	12
3.5 Extended use cases.....	14
3.6 User interfaces (mock screens) .....	21
4. Data flow diagram (optional).....	23
4.1 Data Flow Diagram Level 0 .....	23
4.2 Data Flow Diagram Level 1 .....	24
4.3 Data Flow Diagram Level 2 .....	24
5. System Design.....	25
5.1 System Architecture Diagram .....	25
5.2 Class Diagram.....	26
5.3 Collaboration Diagrams .....	28
5.4 Other UMLs .....	28
5.5 Data Dictionary.....	29
6. Implementation details .....	30
6.1 Development Setup.....	30
6.2 Deployment setup .....	30

6.3	Algorithms .....	30
6.4	Constraints .....	32
6.4.1	Assumptions.....	32
6.4.2	System constraints .....	32
6.4.3	Restrictions.....	32
6.4.4	Limitations .....	32
7.	Testing.....	33
7.1	Extended Test Cases .....	33
7.2	Decision Table.....	40
7.2.1	Code snippet .....	40
7.2.2	Decision coverage table.....	54
7.3	Traceability Matrix.....	54
7.3.1	RID vs UCID (requirements vs use cases).....	55
7.3.2	Prototypes (RID vs PID).....	55
7.3.3	Test Cases (RID vs TID).....	55
7.3.4	Coverage (UCID vs TID).....	55
8.	Results/Output/Statistics .....	<b>Error! Bookmark not defined.</b>
8.1	%completion .....	56
8.2	%accuracy.....	56
8.3	%correctness.....	56
9.	Conclusion .....	57
10.	Future work.....	58
11.	Bibliography.....	59
11.1	Books .....	59
11.2	Journals .....	59
11.3	Articles .....	59
11.4	Research papers .....	59
11.5	Other References.....	59
12.	Appendix.....	60
12.1	Glossary of terms.....	60
12.2	Pre-requisites.....	60

## Definitions and Acronyms

<b>Acronym</b>	<b>Definition</b>
APC	Android PC controller
IPC	Inter Process Communication
IP Address	Internet Protocol Address

**Table 1: table of acronyms and definitions**

## List of Figures

Figure 1: Use Case Diagram.....	<b>Error! Bookmark not defined.</b>
Figure 2: Use Case Diagram 2.....	<b>Error! Bookmark not defined.</b>
Figure 3: Login Screen Snippet.....	<b>Error! Bookmark not defined.</b>
Figure 4: Establish Connection Snippet .....	<b>Error! Bookmark not defined.</b>
Figure 5: System Operation Screen Snippet.....	<b>Error! Bookmark not defined.</b>
Figure 6: Data Flow Diagram Level 0.....	<b>Error! Bookmark not defined.</b>
Figure 7: Data Flow Diagram Level 1 .....	<b>Error! Bookmark not defined.</b>
Figure 8: System Architecture Diagram.....	<b>Error! Bookmark not defined.</b>
Figure 9: Class Diagram.....	<b>Error! Bookmark not defined.</b>
Figure 10: Sequence Diagram .....	<b>Error! Bookmark not defined.</b>
Figure 11: Collaboration Diagram.....	<b>Error! Bookmark not defined.</b>

## List of Tables

Table 1: table of acronyms and definitions .....	3
Table 2: list of stakeholders.....	<b>Error! Bookmark not defined.</b>
Table 3: Requirement Analysis .....	<b>Error! Bookmark not defined.</b>
Table 4: UC 1.0 .....	<b>Error! Bookmark not defined.</b>
Table 5: UC 1.1 .....	<b>Error! Bookmark not defined.</b>
Table 6: UC 1.2 .....	<b>Error! Bookmark not defined.</b>
Table 7: UC 1.3 .....	<b>Error! Bookmark not defined.</b>
Table 8: UC 1.4 .....	<b>Error! Bookmark not defined.</b>
Table 9: UC 1.5 .....	<b>Error! Bookmark not defined.</b>
Table 10: Data Dictionary .....	<b>Error! Bookmark not defined.</b>
Table 11: Test Case 1.1 .....	<b>Error! Bookmark not defined.</b>
Table 12: Test Case 1.2 .....	<b>Error! Bookmark not defined.</b>
Table 13: Test case 1.3 .....	<b>Error! Bookmark not defined.</b>
Table 14: Test Case 1.4 .....	<b>Error! Bookmark not defined.</b>
Table 15: Test case 1.5 .....	<b>Error! Bookmark not defined.</b>
Table 16: Test Case 1.6 .....	<b>Error! Bookmark not defined.</b>
Table 17: Test Case 1.7 .....	<b>Error! Bookmark not defined.</b>
Table 18: Decision coverage table .....	<b>Error! Bookmark not defined.</b>
Table 19: RID vs UCID.....	<b>Error! Bookmark not defined.</b>
Table 20: RID vs TID.....	<b>Error! Bookmark not defined.</b>
Table 21: UC vs TC.....	<b>Error! Bookmark not defined.</b>

# 1. INTRODUCTION

---

## 1.1 Motivations

*Motivation behind this project is to establish a connection between android device and computer.*

## 1.2 Project Overview

*The objective of this application are to control the computer using mobile such as to control keyboard and mouse, to start and stop application. It will help people to sit back and control their PC on android.*

- *Everyone needs comfort which using pc stuck on a chair with mouse and keyboard in your hands can't provide. This application will give users a better platform to use their pc without the use of mouse and keyboard.*
- *Android pc controller will allow its user to save a lot of effort by using their android device as a controller of pc*
- *The goal is to make this application user friendly and effective*
- *The system is first connected to a WI-FI router and then mentions the IP address of the computer which is running the host application and mentions the port number. After successful connection the system can now be controlled from an android device.*
- *The system is flexible and excludes the use of mouse and keyboard*