

INTISARI

Aplikasi *remote administration* memiliki 2 bagian, yaitu *client (Remote Admin)* berperan sebagai penerima dan *server (ThisIsServer)*. berperan sebagai pengontrol Remote Admin ialah aplikasi berbasis Android. Remote Admin akan menjadi aplikasi yang dapat menampilkan *desktop* dan mengontrol komputer. Sedangkan ThisIsServer (TIS) ialah aplikasi yang dikembangkan sebagai *server* untuk aplikasi Remote Admin. Aplikasi *server* mengontrol dan mengawasi setiap aktivitas dari komputer. *Server* juga dapat mengendalikan dan mengambil alih sumber daya dari komputer. Aplikasi *client* harus dapat melakukan koneksi dengan *server* untuk dapat me-*remote* komputer.

Kata kunci : *remote administration, client, server*

ABSTRACT

Remote administration application has 2 parts, the client (Remote Admin) serves as the receiver and the server (ThisIsServer) act as controllers. Remote Admin is Android-based application. Remote Admin will be a desktop application that can display and control the computer. While ThisIsServer (TIS) is an application that was developed as an application server for Remote Admin. Application server control and supervise every activity of the computer. The server also can control and take over the resources of the computer. The application client must be able to connect with the server to be able to remote computer.

Keywords : *remote administration, client, server*

DAFTAR ISI

| | |
|---|------|
| LEMBAR PENGESAHAN | i |
| PERNYATAAN PUBLIKASI LAPORAN PENELITIAN | ii |
| PERNYATAAN ORISINALITAS LAPORAN..... | iii |
| PENELITIAN | iii |
| KATA PENGANTAR..... | iv |
| INTISARI | vi |
| ABSTRACT..... | vii |
| DAFTAR ISI..... | viii |
| DAFTAR GAMBAR..... | xii |
| DAFTAR TABEL | xvi |
| BAB I PENDAHULUAN | 1 |
| 1.1 Latar Belakang | 1 |
| 1.2 Rumusan Masalah | 2 |
| 1.3 Tujuan | 2 |
| 1.4 Batasan Masalah..... | 2 |
| 1.5 Sistematika Pembahasan..... | 3 |
| BAB II DASAR TEORI | 4 |
| 2.1 Proses Bisnis | 4 |
| 2.2 Pemodelan..... | 5 |
| 2.3 Unified Modelling Language (UML)..... | 5 |
| 2.3.1 Use Case Diagram | 6 |
| 2.3.2 Class Diagram..... | 7 |
| 2.3.3 Statechart Diagram..... | 8 |
| 2.3.4 Activity diagram | 9 |
| 2.3.5 Sequence Diagram..... | 10 |
| 2.3.6 Collaboration Diagram..... | 11 |
| 2.3.7 Component Diagram..... | 12 |
| 2.3.8 Deployment Diagram..... | 12 |

| | |
|--|----|
| 2.4 JAVA | 13 |
| 2.4.1 Dasar Pemrograman | 13 |
| 2.4.2 Variabel dan Tipe Data..... | 15 |
| 2.4.3 Kelebihan dan Kekurangan JAVA | 18 |
| 2.5 C++ | 20 |
| 2.6 Android | 21 |
| 2.6.1 Versi-versi Android | 22 |
| 2.7 <i>Remote Administration</i> | 23 |
| 2.8 Remote Framebuffer (RFB)..... | 24 |
| 2.8.1 Protokol Tampilan..... | 24 |
| 2.8.2 Protokol Input | 25 |
| 2.8.3 Representasi Data <i>Pixel</i> | 25 |
| 2.9 Windows API..... | 26 |
| 2.10 Pengujian | 27 |
| 2.10.1 Pengujian <i>White-Box</i> | 27 |
| 2.10.2 Pengujian <i>Black-Box</i> | 28 |
| BAB III ANALISA DAN PEMODELAN..... | 29 |
| 3.1 Analisa Kebutuhan..... | 29 |
| 3.2 Proses Bisnis | 29 |
| 3.3 <i>Use Case Diagram</i> | 30 |
| 3.3.1 <i>Use Case Diagram Client</i> | 30 |
| 3.3.2 <i>Use Case Diagram Controller</i> | 31 |
| 3.4 <i>Activity Diagram</i> | 32 |
| 3.4.1 <i>Activity Diagram Client</i> | 32 |
| 3.4.1.1 Proses Melakukan Koneksi | 33 |
| 3.4.1.2 Proses Memutuskan Koneksi | 34 |
| 3.4.1.3 Proses Melihat <i>Desktop</i> | 34 |
| 3.4.1.4 Proses Memperbesar Tampilan..... | 35 |
| 3.4.1.5 Proses Memperkecil Tampilan | 36 |
| 3.4.1.6 Proses Menampilkan <i>Keyboard</i> | 37 |
| 3.4.1.7 Proses Mengontrol Sumber Daya – <i>Log Off</i> | 38 |

| | | |
|----------|---|----|
| 3.4.1.8 | Proses Mengontrol Sumber Daya – <i>Restart</i> | 39 |
| 3.4.1.9 | Proses Mengontrol Sumber Daya – <i>Shutdown</i> | 40 |
| 3.4.1.10 | Proses Meng-inputkan Teks | 41 |
| 3.4.1.11 | Proses <i>Transfer File</i> | 41 |
| 3.4.1.12 | Proses Mengubah Kedalaman Warna | 42 |
| 3.4.2 | <i>Activity Diagram Controller</i> | 43 |
| 3.4.2.1 | Proses Menyediakan Koneksi | 43 |
| 3.4.2.2 | Proses Mengontrol Komputer | 44 |
| 3.4.2.3 | Proses Menulis <i>Registry Autorun</i> | 45 |
| 3.4.2.4 | Proses <i>Hide Folder Server</i> | 47 |
| 3.4.2.5 | Proses <i>Share File</i> | 47 |
| 3.5 | <i>Class Diagram</i> | 48 |
| 3.5.1 | <i>Class Diagram Remote Admin</i> | 48 |
| 3.5.2 | <i>Class Diagram TIS</i> | 50 |
| 3.6 | <i>Layout</i> | 51 |
| 3.6.1 | <i>Layout Login</i> | 51 |
| 3.6.2 | <i>Layout View Desktop</i> | 52 |
| 3.6.3 | <i>Layout Power</i> | 52 |
| 3.6.4 | <i>Layout Send Text</i> | 53 |
| 3.6.5 | <i>Layout File Share</i> | 54 |
| 3.6.6 | <i>Layout Color</i> | 54 |
| 3.6.7 | <i>Layout Controller TIS</i> | 55 |
| BAB IV | PERANCANGAN DAN IMPLEMENTASI | 56 |
| 4.1 | Realisasi Program..... | 56 |
| 4.1.1 | Remote Admin (<i>Client</i>)..... | 56 |
| 4.1.1.1 | Tampilan <i>Login</i> | 56 |
| 4.1.1.2 | Tampilan <i>Loading</i> | 57 |
| 4.1.1.3 | Tampilan View Desktop..... | 58 |
| 4.1.1.4 | Tampilan Menu <i>Power</i> | 59 |
| 4.1.1.5 | Tampilan File Share | 60 |
| 4.1.1.6 | Tampilan <i>Send Text</i> | 63 |

| | |
|---|-----|
| 4.1.1.7 Tampilan <i>Color</i> | 64 |
| 4.1.2 ThisisServer(<i>Controller</i>) | 65 |
| BAB V PENGUJIAN | 67 |
| 5.1 Black-Box Testing..... | 67 |
| 5.1.1 Pengujian <i>Login</i> | 67 |
| 5.1.2 Pengujian Menu <i>Remote Admin</i> | 69 |
| 5.1.3 Pengujian Menu <i>Power</i> | 70 |
| 5.1.4 Pengujian Menu <i>Send Text</i> | 70 |
| 5.1.5 Pengujian Menu <i>File Share</i> | 71 |
| 5.1.6 Pengujian Menu <i>Color</i> | 71 |
| 5.1.7 Pengujian Controller (TIS)..... | 72 |
| 5.2 White-Box Testing | 74 |
| 5.2.1 Pengujian Proses <i>Login</i> | 74 |
| 5.2.2 Pengujian Proses <i>Power</i> | 75 |
| 5.2.3 Pengujian Proses <i>Send Text</i> | 75 |
| 5.2.4 Pengujian Proses <i>File Share</i> | 76 |
| 5.2.5 Pengujian Proses <i>Color</i> | 76 |
| 5.2.6 Pengujian Proses <i>Disconnect</i> | 77 |
| 5.2.7 Pengujian Proses Mengambil Keyboard dan Mouse | 78 |
| 5.3 Platform Testing | 78 |
| 5.3.1 Pengujian <i>Client</i> (Remote Admin)..... | 78 |
| 5.3.2 Pengujian <i>Controller</i> | 86 |
| 5.4 Kuisoner | 91 |
| BAB VI SIMPULAN DAN SARAN | 92 |
| 6.1 Simpulan | 92 |
| 6.2 Saran | 92 |
| DAFTAR PUSTAKA | 95 |
| A. LAMPIRAN DATA PENULIS | A-1 |
| B. LAMPIRAN USER MANUAL..... | B-1 |
| C. LAMPIRAN INSTALASI EMULATOR ANDROID..... | C-1 |
| D. LAMPIRAN..... | D-1 |

DAFTAR GAMBAR

| | |
|--|----|
| Gambar II.1. Alir proses bisnis. | 4 |
| Gambar II.2 Contoh Use Case. | 7 |
| Gambar II.3. Contoh Class Diagram. | 8 |
| Gambar II.4. Contoh Statechart Diagram. | 9 |
| Gambar II.5. Contoh <i>Activity</i> Diagram. | 10 |
| Gambar II.6. Contoh <i>Sequence</i> Diagram. | 11 |
| Gambar II.7. Contoh Collaboration Diagram. | 11 |
| Gambar II.8. Contoh Component Diagram | 12 |
| Gambar II.9. Contoh Deployment Diagram. | 13 |
| Gambar II.10. Protokol RFB. | 24 |
| Gambar III.1. <i>Use Case</i> Sistem <i>Remote Administration</i> | 31 |
| Gambar III.2. <i>Use Case</i> Sistem <i>Controller</i> | 32 |
| Gambar III.3. Proses Melakukan Koneksi. | 33 |
| Gambar III.4. Proses Memutuskan Koneksi. | 34 |
| Gambar III.5. Proses Melihat <i>Desktop</i> | 35 |
| Gambar III.6. Proses Memperbesar Tampilan. | 36 |
| Gambar III.7. Proses Memperkecil Tampilan. | 36 |
| Gambar III.8. Proses Menampilkan <i>Keyboard</i> | 37 |
| Gambar III.9. Proses Mengontrol Sumber Daya- <i>Log Off</i> | 38 |
| Gambar III.10. Proses Mengontrol Sumber Daya- <i>Restart</i> Komputer. | 39 |
| Gambar III.11. Proses Mengontrol Sumber Daya- <i>Shutdown</i> Komputer. | 40 |
| Gambar III.12. Proses Meng- <i>Inputkan</i> Teks. | 41 |
| Gambar III.13. <i>Transfer File</i> | 42 |
| Gambar III.14. Proses Mengubah Kedalaman Warna. | 43 |
| Gambar III.15. Proses Menyediakan Koneksi. | 44 |
| Gambar III.16. Proses Mengontrol Komputer. | 45 |
| Gambar III.17. Proses Menulis Registry Autorun. | 46 |
| Gambar III.18. Proses <i>Hide Folder Server</i> | 47 |

| | |
|---|----|
| Gambar III.19. Proses <i>Share File</i> . | 48 |
| Gambar III.20. Class Diagram <i>Client</i> . | 49 |
| Gambar III.21. Class Diagram <i>Controller</i> . | 50 |
| Gambar III.22. <i>Layout Login</i> . | 51 |
| Gambar III.23. <i>Layout View Desktop</i> . | 52 |
| Gambar III.24. <i>Layout Menu Power</i> . | 53 |
| Gambar III.25. <i>Layout Menu Send Text</i> . | 53 |
| Gambar III.26. <i>Layout Menu File Share</i> . | 54 |
| Gambar III.27. <i>Layout Menu Color</i> . | 55 |
| Gambar III.28. <i>Layout Controller TIS</i> . | 55 |
| Gambar IV.1. Tampilan <i>Login</i> . | 56 |
| Gambar IV.2. Tampilan <i>Loading</i> . | 58 |
| Gambar IV.3. Tampilan <i>View Desktop</i> . | 59 |
| Gambar IV.4. Tampilan <i>Menu Power</i> . | 60 |
| Gambar IV.5. Tampilan <i>Menu File Share</i> . | 61 |
| Gambar IV.6. Tampilan <i>Menu File Share – Copy</i> . | 61 |
| Gambar IV.7. Tampilan <i>Menu File Share – Copy Progress</i> . | 62 |
| Gambar IV.8. Tampilan <i>Menu File Share – Copy Status</i> . | 63 |
| Gambar IV.9. Tampilan <i>Menu Send Text</i> . | 63 |
| Gambar IV.10. Tampilan <i>Menu Color 1</i> . | 64 |
| Gambar IV.11. Tampilan <i>Menu Color 2</i> . | 64 |
| Gambar IV.12. Tampilan <i>Controller TIS</i> . | 65 |
| Gambar V.1. <i>Screenshot Hasil Keluaran Aksi 2 login</i> . | 68 |
| Gambar V.2. <i>Screenshot Hasil Keluaran Aksi 4 login</i> . | 68 |
| Gambar V.3. <i>Screenshot Hasil Keluaran Aksi 5 login</i> . | 68 |
| Gambar V.4. <i>Screenshot Hasil Keluaran Aksi 1 Menu</i> . | 69 |
| Gambar V.5. <i>Screenshot Hasil Keluaran Aksi 2 Menu</i> . | 69 |
| Gambar V.6. <i>Screenshot Hasil Keluaran Aksi 5 Menu</i> . | 70 |
| Gambar V.7. <i>Screenshot Hasil Masukan Aksi 2 Send Text</i> . | 71 |
| Gambar V.8. <i>Screenshot Hasil Keluaran Aksi 2 Send Text</i> . | 71 |
| Gambar V.9. <i>Screenshot Hasil Keluaran Aksi 6 Menu Color</i> . | 72 |
| Gambar V.10. <i>Screenshot Hasil Keluaran Aksi 2 Controller</i> . | 74 |

| | |
|---|----|
| Gambar V.11. Grafik Aliran Proses <i>Login</i> | 74 |
| Gambar V.12. Grafik Aliran Proses <i>Login</i> | 75 |
| Gambar V.13. Grafik Aliran Proses <i>Login</i> | 76 |
| Gambar V.14. Grafik Aliran Proses <i>File Share</i> | 76 |
| Gambar V.15. Grafik Aliran Proses <i>Color</i> | 77 |
| Gambar V.16. Grafik Aliran Proses <i>Disconnect</i> | 77 |
| Gambar V.17. Grafik Aliran Proses Mengambil Key Keyboard Dan Mouse..... | 78 |
| Gambar V.18. Pengujian <i>Client</i> Mengaktifkan <i>Controller</i> | 80 |
| Gambar V.19. Pengujian Client Tampilan Windows | 80 |
| Gambar V.20. Pengujian Android 1.6. | 81 |
| Gambar V.21. Pengujian Android 1.6 <i>Login</i> | 81 |
| Gambar V.23. Pengujian Tampilan Android 1.6..... | 81 |
| Gambar V.23. Pengujian Android 2.1. | 82 |
| Gambar V.24. Pengujian Android 2.1 <i>Login</i> | 82 |
| Gambar V.25. Pengujian Tampilan Android 2.1..... | 83 |
| Gambar V.26. Pengujian Android 2.2. | 83 |
| Gambar V.27. Pengujian Android 2.2 <i>Login</i> | 84 |
| Gambar V.28. Pengujian Tampilan Android 2.2..... | 84 |
| Gambar V.29. Pengujian Android 2.3.3. | 85 |
| Gambar V.30. Pengujian Android 2.3.3 <i>Login</i> | 85 |
| Gambar V.31. Pengujian Tampilan Android 2.3.3..... | 85 |
| Gambar V.32. Pengujian <i>Controller</i> Win XP SP3. | 87 |
| Gambar V.33. Pengujian Win XP <i>Registry</i> Autorun..... | 87 |
| Gambar V.34. Pengujian Win XP <i>Hide Folder Server</i> | 87 |
| Gambar V.35. Pengujian <i>Controller</i> Win 7 SP1. | 88 |
| Gambar V.36. Pengujian <i>Controller</i> Win 7 <i>Registry</i> Autorun. | 88 |
| Gambar V.37. Pengujian <i>Controller</i> Win 7 <i>Hide Folder Server</i> | 88 |
| Gambar V.38. Pengujian <i>Controller Server</i> 2003 R2. | 89 |
| Gambar V.39. <i>Testing – Controller Server</i> 2003 <i>Registry</i> Autorun..... | 89 |
| Gambar V.40. Pengujian <i>Controller Server</i> 2003 <i>Hide Folder Server</i> | 89 |
| Gambar V.41. Pengujian <i>Controller</i> Linux Ubuntu 10.10..... | 90 |
| Gambar V.42. Pengujian <i>Controller</i> Ubuntu <i>Registry</i> Autorun. | 90 |

| | |
|--|----|
| Gambar V.43. Pengujian <i>Controller Ubuntu Hide Folder Server</i> | 90 |
| Gambar V.45. <i>Form Kuisoner</i> | 91 |

DAFTAR TABEL

| | |
|---|----|
| Tabel II.1. Tipe Data Integer..... | 15 |
| Tabel II.2. Tipe Data Float. | 16 |
| Tabel II.3. Tipe Data Char..... | 17 |
| Tabel III.1. Kriteria <i>Login</i> | 51 |
| Tabel IV.1. Fungsi Menu..... | 59 |
| Tabel V.1. Pengujian <i>Login</i> | 67 |
| Tabel V.2. Pengujian Menu <i>Remote Admin</i> | 69 |
| Tabel V.3. Pengujian Menu <i>Power</i> | 70 |
| Tabel V.4. Pengujian Menu <i>Send Text</i> | 70 |
| Tabel V.5. Pengujian Menu <i>File Share</i> | 71 |
| Tabel V.6. Pengujian Menu <i>Color</i> | 72 |
| Tabel V.7. Pengujian <i>Controller (TIS)</i> | 73 |
| Tabel V.8. Pengujian <i>Client Android</i> | 79 |
| Tabel V.9. Pengujian <i>Controller (TIS)</i> | 86 |