

ABSTRAK

Pengisian ulang pulsa *mobile* adalah salah satu pilihan cara mudah untuk mengisi pulsa secara *online* dimana saja. Sebuah aplikasi *mobile* dapat dikembangkan dengan memanfaatkan jalur komunikasi seperti sms atau koneksi socket. Walaupun sudah terdapat aplikasi yang memfasilitasi isi pulsa secara *mobile*, saat ini belum ada aplikasi yang memudahkan pengguna di sisi *client* untuk mengisi pulsa dengan memanfaatkan koneksi socket sebagai protokolnya.

Tujuan utama dari penelitian ini adalah untuk membuat aplikasi yang dapat diinstall di ponsel pengguna dengan layanan pengisian pulsa didalamnya.

ABSTRACT

Pulse recharging mobile is one of the easy way choices to fill an online pulse anywhere. A mobile application can be developed by utilizing communication channels such as sms or a socket connection. Although there is already an application that facilitates the pulse charging mobile, there is currently no application that facilitates users on the client side to fill the pulse by using a socket connection as a protocol.

The main purpose of this research is to make applications that can be installed in users phone with charging pulse service inside.

DAFTAR ISI

PRAKATA.....	I
ABSTRAK	II
ABSTRACT	III
DAFTAR ISI.....	IV
DAFTAR GAMBAR.....	VIII
DAFTAR TABEL	X
DAFTAR LAMPIRAN	XI
BAB I PENDAHULUAN	1
1.1 LATAR BELAKANG	1
1.2 RUMUSAN MASALAH	1
1.3 TUJUAN	2
1.4 BATASAN MASALAH	2
1.5 SISTEMATIKA PEMBAHASAN	3
BAB II DASAR TEORI.....	4
2.1 TEORI PENUNJANG	4
2.1.1 Metode Pengisian Pulsa.....	4
2.1.2 Layanan Host to Host (H2H)	5
2.1.3 Protokol HTTP	5
2.2 TEKNOLOGI YANG DIGUNAKAN	5
2.2.1 Teknologi Java ME.....	5
2.2.2 PHP.....	6
2.2.3 Sign in with Twitter	6
2.2.4 Database Management System (DBMS).....	6
2.2.4.1 Database Relasional	7
2.2.4.1.1 MySQL.....	7
2.2.5 Pemrograman Soket	7
2.2.5.1 phpSocketDaemon.....	7
2.2.6 Pemodelan.....	7
2.2.6.1 Unified Modeling Language	7
2.2.6.1.1 Use Case diagram	8
2.2.6.1.2 Activity Diagram.....	8
2.2.6.1.3 Class diagram.....	9
2.2.6.1.4 Sequence diagram.....	10
2.2.6.1.5 Deployment diagram	11
2.2.6.2 ER diagram.....	11
BAB III ANALISA DAN PEMODELAN.....	12
3.1 ARSITEKTUR APLIKASI.....	12
3.1.1 Arsitektur Fisik.....	12

3.1.2	Fitur Aplikasi.....	13
3.1.3	Use Case Diagram	14
3.1.3.1	Skenario Guest Use Case Diagram.....	15
3.1.3.2	Skenario Member Use Case Diagram.....	16
3.1.3.3	Skenario Operator Use Case Diagram.....	21
3.1.4	Activity Diagram	25
3.1.4.1	Activity Diagram Sign In via Twitter	25
3.1.4.2	Activity Diagram Login with Mobile Application.....	26
3.1.4.3	Activity Diagram Pulse Refill	27
3.1.4.4	Activity Diagram Add Account Balance.....	28
3.1.5	Class Diagram.....	28
3.1.5.1	Class Diagram Aplikasi Client.....	28
3.1.5.2	Class Diagram Aplikasi Socket Server.....	30
3.1.6	Sequence Diagram	31
3.1.6.1	Sequence Diagram Pulse Refill.....	31
3.1.6.2	Sequence Diagram Read Notification Messages.....	32
3.1.6.3	Sequence Diagram Delete Notification Messages	33
3.2	RELASI ANTAR TABEL.....	34
3.3	WEB MAP DAN LAYOUT.....	36
3.3.1	Web Map	36
3.3.1.1	Web Map Guest.....	36
3.3.1.2	Web Map Member.....	37
3.3.1.3	Web Map Back Office	38
3.3.2	Layout.....	39
3.3.2.1	Layout Guest.....	39
3.3.2.2	Layout Member	40
3.3.2.3	Layout Back-Office	40
3.4	PERANCANGAN USER INTERFACE.....	41
3.4.1	User Interface Aplikasi Web.....	41
3.4.1.1	User Interface Guest Home.....	41
3.4.1.2	User Interface Member Home.....	42
3.4.1.3	User Interface Edit Profile.....	43
3.4.1.4	User Interface Lihat Harga.....	43
3.4.1.5	User Interface Setting Password.....	44
3.4.2	User Interface Aplikasi Client.....	44
3.4.2.1	Member Authentication.....	44
3.4.2.2	Inbox Member	45
3.4.2.3	Tambah Saldo	46
3.4.2.4	Isi Pulsa	48
3.4.2.5	Tukar Poin	49
3.4.2.6	Komplain.....	49
BAB IV PERANCANGAN DAN IMPLEMENTASI.....		50
4.1	IMPLEMENTASI WEBSITE	50
4.1.1	Homepage.....	50
4.1.1.1	Penggalan Source Code.....	50
4.1.2	Sign in with Twitter	51
4.1.2.1	Penggalan Source Code.....	52

4.1.3	Login Member	53
4.1.3.1	Penggalan Source Code.....	53
4.1.4	Registration / Edit Profile	54
4.1.4.1	Penggalan Source Code.....	54
4.1.5	Member Area.....	56
4.1.5.1	Penggalan Source Code.....	56
4.1.6	Member Lihat Harga.....	57
4.1.6.1	Penggalan Source Code.....	57
4.1.7	Set Supplier	58
4.1.7.1	Penggalan Source Code.....	58
4.1.8	Tambah Deposit	59
4.1.8.1	Penggalan Source Code.....	60
4.1.9	Manage Status Items	61
4.1.9.1	Penggalan Source Code.....	61
4.1.10	Approve / Reject Tambah Saldo.....	62
4.1.10.1	Penggalan Source Code.....	63
4.1.11	Manage Complaints.....	64
4.1.11.1	Penggalan Source Code.....	64
4.1.12	Kirim Pesan Notifikasi.....	65
4.1.12.1	Penggalan Source Code.....	66
4.2	IMPLEMENTASI APLIKASI CLIENT (JAVA ME)	67
4.2.1	Member Authentication	67
4.2.1.1	Penggalan Source Code.....	68
4.2.2	Fitur Pesan Inbox Member.....	69
4.2.2.1	Penggalan Source Code.....	69
4.2.3	Fitur Tambah Saldo.....	72
4.2.3.1	Penggalan Source Code.....	74
4.2.4	Fitur Isi Pulsa.....	78
4.2.4.1	Penggalan Source Code.....	79
4.2.5	Fitur Tukar Poin.....	80
4.2.5.1	Penggalan Source Code.....	80
4.2.6	Fitur Komplain.....	82
4.2.6.1	Penggalan Source Code.....	82
BAB V PENGUJIAN		84
5.1	METODA PENGUJIAN	84
5.2	PENGUJIAN APLIKASI JAVA ME	84
5.2.1	Hasil Pengujian Aplikasi Java ME.....	85
5.3	PENGUJIAN APLIKASI WEB.....	85
5.3.1	Hasil Pengujian Aplikasi Web.....	86
5.4	PENGUJIAN APLIKASI SERVER SOCKET	91
5.4.1	Hasil Pengujian Aplikasi Server Socket	91
5.4.1.1	Fungsi Login	91
5.4.1.2	Fungsi Autentikasi Topup	92
5.4.1.3	Fungsi Autentikasi Modul	92
5.4.1.4	Fungsi Topup Request.....	93
5.4.1.5	Fungsi Topup Cancel.....	93
5.4.1.6	Fungsi Topup	94

5.4.1.7	<i>Fungsi Member Info</i>	96
5.4.1.8	<i>Fungsi Member Komplain</i>	96
5.4.1.9	<i>Fungsi Request Tambah Saldo</i>	97
5.4.1.10	<i>Fungsi Tambah Saldo</i>	97
5.4.1.11	<i>Fungsi Tambah Saldo Default</i>	98
5.4.1.12	<i>Fungsi Set Payment Default</i>	98
5.4.1.13	<i>Fungsi Konversi Poin</i>	99
BAB VI KESIMPULAN DAN SARAN		100
6.1	KESIMPULAN	100
6.2	SARAN	100
DAFTAR PUSTAKA		102

DAFTAR GAMBAR

Gambar II. 1 Use Case Diagram.....	8
Gambar II. 2 Activity Diagram Dengan Swimlane Separator	9
Gambar II. 3 Class Diagram	10
Gambar II. 4 Sequence diagram.....	10
Gambar II. 5 Deployment Diagram	11
Gambar II. 6 ER Diagram	11
Gambar III. 1 Arsitektur Fisik.....	12
Gambar III. 2 Use Case Diagram Aplikasi Isi Pulsa	14
Gambar III. 3 Guest Use Case Diagram	15
Gambar III. 4 Member Use Case Diagram.....	16
Gambar III. 5 Operator Use Case Diagram.....	21
Gambar III. 6 Activity Diagram Sign In via Twitter	25
Gambar III. 7 Activity Diagram Login with Mobile Application.....	26
Gambar III. 8 Activity Diagram Pulse Refill.....	27
Gambar III. 9 Activity Diagram Add Account Balance	28
Gambar III. 10 Class Diagram Aplikasi Client	29
Gambar III. 11 Class Diagram Aplikasi Socket Server.....	30
Gambar III. 12 Sequence Diagram Pulse Refill.....	31
Gambar III. 13 Sequence Diagram Read Notification Messages.....	32
Gambar III. 14 Sequence Diagram Delete Notification Messages	33
Gambar III. 15 ERD Aplikasi Isi Pulsa	34
Gambar III. 16 Transformasi ERD-Table	35
Gambar III. 17 Web Map Guest	36
Gambar III. 18 Web Map Member.....	37
Gambar III. 19 Web Map Back Office.....	38
Gambar III. 20 Layout Guest	39
Gambar III. 21 Layout Member.....	40
Gambar III. 22 Layout Back-Office	40
Gambar III. 23 User Interface Guest Home.....	41
Gambar III. 24 User Interface Member Home	42
Gambar III. 25 User Interface Edit Profile	43

Gambar III. 26 User Interface Lihat Harga	43
Gambar III. 27 User Interface Setting Password	44
Gambar III. 28 User Interface Member Authentication.....	44
Gambar III. 29 User Interface List Pesan Notifikasi Inbox Member.....	45
Gambar III. 30 User Interface Permintaan Tambah Saldo	46
Gambar III. 31 User Interface Konfirmasi Tambah Saldo.....	46
Gambar III. 32 User Interface Set Cara Pembayaran Default	47
Gambar III. 33 User Interface Isi Pulsa	48
Gambar III. 34 User Interface Tukar Poin.....	49
Gambar III. 35 User Interface Komplain	49
Gambar IV. 1 Halaman Homepage.....	50
Gambar IV. 2 Sign in With Twitter	51
Gambar IV. 3 Tampilan Login	53
Gambar IV. 4 Halaman Registration / Edit Profile	54
Gambar IV. 5 Member Area	56
Gambar IV. 6 Member Lihat Harga	57
Gambar IV. 7 Set Supplier	58
Gambar IV. 8 Tambah Deposit.....	59
Gambar IV. 9 Manage Status Items	61
Gambar IV. 10 Approve / Reject Tambah Saldo	62
Gambar IV. 11 Manage Complaints	64
Gambar IV. 12 Form Kirim Pesan	65
Gambar IV. 13 List Pesan Notifikasi	66
Gambar IV. 14 Member Authentication	67
Gambar IV. 15 Pesan Inbox Member	69
Gambar IV. 16 Permintaan Tambah Saldo.....	72
Gambar IV. 17 Konfirmasi Tambah Saldo	73
Gambar IV. 18 Set Mode Bayar.....	74
Gambar IV. 19 Fitur Isi Pulsa	78
Gambar IV. 20 Fitur Tukar Poin.....	80
Gambar IV. 21 Fitur Komplain.....	82
Gambar V. 1 Hasil Uji JUnit	85

DAFTAR TABEL

Tabel III. 1 Skenario UCD-01.....	15
Tabel III. 2 Skenario UCD-02.....	17
Tabel III. 3 Skenario UCD-03.....	17
Tabel III. 4 Skenario UCD-04.....	17
Tabel III. 5 Skenario UCD-05.1	18
Tabel III. 6 Skenario UCD-05.2	18
Tabel III. 7 Skenario UCD-06.....	19
Tabel III. 8 Skenario UCD-07.....	19
Tabel III. 9 Skenario UCD-08.....	19
Tabel III. 10 Skenario UCD-09	20
Tabel III. 11 Skenario UCD-16	20
Tabel III. 12 Skenario UCD-10	21
Tabel III. 13 Skenario UCD-11	22
Tabel III. 14 Skenario UCD-12	22
Tabel III. 15 Skenario UCD-13	23
Tabel III. 16 Skenario UCD-14	23
Tabel III. 17 Skenario UCD-15	24
Tabel III. 18 Skenario UCD-17	24
Tabel V. 1 Hasil Uji Aplikasi Web.....	86
Tabel V. 2 Hasil Uji Fungsi Login.....	91
Tabel V. 3 Hasil Uji Fungsi Autentikasi Topup.....	92
Tabel V. 4 Hasil Uji Fungsi Autentikasi Modul.....	92
Tabel V. 5 Hasil Uji Fungsi Topup Request.....	93
Tabel V. 6 Hasil Uji Fungsi Topup Cancel	93
Tabel V. 7 Hasil Uji Fungsi Topup	94
Tabel V. 8 Hasil Uji Fungsi Member Info	96
Tabel V. 9 Hasil Uji Fungsi Member Komplain	96
Tabel V. 10 Hasil Uji Fungsi Request Tambah Saldo	97
Tabel V. 11 Hasil Uji Fungsi Tambah Saldo	97
Tabel V. 12 Hasil Uji Fungsi Tambah Saldo Default.....	98
Tabel V. 13 Hasil Uji Fungsi Set Payment Default	98
Tabel V. 14 Hasil Uji Fungsi Konversi Poin	99

DAFTAR LAMPIRAN

LAMPIRAN A INFORMASI PENUNJANG.....	A-1
LAMPIRAN B KODE PROGRAM.....	B-1
LAMPIRAN C RIWAYAT HIDUP PENULIS.....	C-1