

ABSTRAK

Pada saat ini perkembangan teknologi *mobile* sudah sangat maju, *smartphone* dan *tablet* mulai menggantikan *notebook*. Namun walaupun teknologi *mobile* sudah berkembang pesat, *short message service* masih diminati sebagai salah satu alat komunikasi utama yang digunakan oleh masyarakat. Android sebagai salah satu pemilik pasar *smartphone* terbesar didunia masih memiliki fitur *short message service* yang dapat diakses dengan aplikasi *message* dari android. Aplikasi *message* dari android masih memiliki fitur standar. Dengan adanya aplikasi *auto foward*, *auto reply* dan *scheduler* dapat memudahkan user untuk melakukan pengiriman *short message service* otomatis. Pengembangan aplikasi *short message service* pada android memiliki keuntungan karena pada umumnya android sudah memiliki slot *SIM card* lain dari komputer yang memerlukan perangkat tambahan. Aplikasi ini diharapkan dapat mengurangi interaksi user dalam pengiriman *short message service* dan menggantikan aplikasi *short message service* otomatis yang sudah ada pada komputer. Dan dengan pengiriman otomatis pengguna dapat dimudahkan dalam pengiriman *short message service*.

Kata kunci : android, *short message service*, *autofoward*, *autoreply*, *scheduler*.

ABSTRACT

At this time the development of mobile technology is very advanced, smartphone and tablet start replacing notebook. But although mobile technology has developed rapidly, short message service still in demand as one of the main communication tools used by many people. Android as the one of the owners of the world's largest smartphone market still have the short message service that can be accessed using message from android application. Message application from android still has a standard feature. With the application of auto forward, auto reply and scheduler can allow a user to perform automated short message service. Short message service on android application development has the advantage because most android already has a SIM card slot on the other hand computer still need peripheral device. This application is expected to reduce the user interaction in sending of short message service and replace short message service applications on the computer. And with the automated delivery, user can be facilitated in the process of sending short message service.

Keywords : android, *short message service*, *autofoward*, *autoreply*, *scheduler*.

DAFTAR ISI

LEMBAR PENGESAHAN	I
LEMBAR PERNYATAAN PERSETUJUAN PUBLIKASI KARYA ILMIAH.....	II
SURAT PERNYATAAN ORISINALITAS KARYA.....	III
KATA PENGANTAR	IV
ABSTRAK.....	V
ABSTRACTION	VI
DAFTAR ISI.....	VII
DAFTAR GAMBAR	XII
DAFTAR TABEL	XVI
BAB I.....	1
PENDAHULUAN.....	1
1.1 LATAR BELAKANG.....	1
1.2 IDENTIFIKASI MASALAH	2
1.3 TUJUAN PEMBAHASAN.....	2
1.4 BATASAN MASALAH	2
1.5 SISTEMATIKA PENYAJIAN	2
BAB II.....	4
DASAR TEORI	4
2.1 SHORT MESSAGE SERVICE	4
2.2 ANDROID	4
2.2.1 Sejarah dan Perkembangan Android	5
2.2.2 Arsitektur Android.....	6
2.2.2.1 Linux Kernel	7
2.2.2.2 Libraries.....	8
2.2.2.3 Android Runtime	8
2.2.2.4 Application Framework	9
2.2.3 Anatomi Aplikasi Android.....	9

2.2.3.1 Activity.....	10
2.2.3.2 Services.....	11
2.2.3.3 Intents	11
2.2.3.4 Content Providers.....	12
2.2.3.5 Broadcast Receiver	12
2.2.4 Sifat Android	12
2.2.5 Tipe Aplikasi Android.....	13
2.2.6 Siklus Hidup Aplikasi Android	14
2.3 UNIFIED MODELING LANGUAGE (UML).....	15
2.3.1 Diagram UML.....	15
2.3.2 Use Case Diagram	16
2.3.3 Activity Diagram	18
2.4 CLASS DIAGRAM	20
2.4.1 Class	21
2.4.2 Class Relationship	21
2.5 ENTITY RELATIONSHIP DIAGRAM (ERD)	23
BAB III.....	27
3.1 ANALISIS	27
3.1.1 Perbandingan Aplikasi Messages Google	27
3.1.2 Perbandingan Aplikasi SMS Scheduler	29
3.1.3 Kesimpulan perbandingan aplikasi	31
3.2 Desain	32
3.2.1 Use Case Diagram	33
3.2.2 Activity Diagram	33
3.2.2.1 Add Scheduler	33
3.2.2.2 Update Scheduler	34
3.2.2.3 Delete Scheduler	36
3.2.2.4 Trigger Scheduler	37
3.2.2.5 Activity Boot Scheduler	38
3.2.2.5 Add Auto Foward	39
3.2.2.6 Update Auto Foward	40
3.2.2.7 Delete Auto Foward	41
3.2.2.8 Trigger Auto Foward.....	42
3.2.2.9 Add Auto Reply.....	43
3.2.2.10 Update Auto Reply	44
3.2.2.11 Delete Auto Reply.....	45

3.2.2.12 Trigger Auto Reply	46
3.2.2.13 View Log	47
3.2.2.14 Setting Scheduler Counter.....	48
3.2.2.15 Setting Auto Foward Counter.....	49
3.2.2.16 Setting Auto Reply Counter	50
3.2.2.17 View About.....	51
3.2.3 ERD.....	52
3.2.4 User Interface.....	53
3.2.4.1 User Interface Menu Utama.....	53
3.2.4.2 User Interface Tampilan Utama Scheduler.....	54
3.2.4.3 User Interface Add Scheduler.....	55
3.2.4.4 User Interface Update Scheduler	56
3.2.4.5 User Interface Tampilan Utama Auto Foward.....	57
3.2.4.6 User Interface Add Auto Foward.....	58
3.2.4.7 User Interface Update Auto Foward	59
3.2.4.8 User Interface Tampilan Utama Auto Reply	60
3.2.4.9 User Interface Add Auto Reply	61
3.2.4.10 User Interface Update Auto Reply.....	62
3.2.4.11 User Interface Log	63
3.2.4.12 User Interface Setting.....	64
3.2.4.13 User Interface Contact	65
3.2.5 Class Diagram	66
3.2.5.1 Class Diagram Auto Foward.....	66
3.2.5.2 Class Diagram Auto Reply.....	67
3.2.5.3 Class Diagram Scheduler	68
3.2.5.3 Receive SMS dan Send SMS.....	69
BAB IV.....	70
HASIL PENELITIAN	70
4.1 IMPLEMENTASI PADA ANDROID ICE CREAM SANDWICH	70
4.1.1 Tampilan Menu Utama	70
4.1.2 Tampilan Scheduler.....	71
4.1.2.1 Tampilan Add Scheduler.....	74
4.1.2.2 Tampilan Update Scheduler	76
4.1.3 Tampilan Auto Foward.....	77
4.1.3.1 Tampilan Add Auto Foward.....	79
4.1.3.2 Tampilan Update Auto Foward	81
4.1.4 Tampilan Auto Reply	82

4.1.4.1 Tampilan Add Auto Reply	84
4.1.4.2 Tampilan Update Auto Forward	86
4.1.5 Tampilan Add Contact.....	87
4.1.6 Tampilan Notifikasi	88
4.1.7 Tampilan Log.....	89
4.1.8 Tampilan Setting	90
4.1.9 Tampilan About.....	92
4.2 PENJELASAN FUNGSI UTAMA DENGAN PENGGALAN PROGRAM	93
4.2.1 Fitur Receiver SMS.....	93
4.2.2 Fitur Send SMS	93
4.2.3 Fitur Sent Receiver SMS.....	94
4.2.4 Fitur Delivered Receiver SMS	95
4.2.5 Fitur Auto Forward	96
4.2.6 Fitur Auto Reply.....	96
4.2.7 Fitur Set Alarm	97
4.2.8 Fitur Receiver Alarm.....	98
4.2.9 Fitur Cancel Alarm.....	99
4.2.10 Fitur Boot Receiver Scheduler	99
BAB V.....	101
PENGUJIAN	101
5.1 BLACKBOX TESTING	101
5.1.1 Menu Utama	101
5.1.2 Add Scheduler	102
5.1.3 Add Auto Forward	102
5.1.4 Add Auto Reply.....	103
5.1.5 Update Scheduler.....	103
5.1.6 Update Auto Forward.....	104
5.1.7 Update Auto Reply	105
5.1.8 Trigger Scheduler	105
5.1.9 Trigger Auto Forward	107
5.1.10 Trigger Auto Reply	108
5.1.11 SMS Send Report.....	109
5.1.12 SMS Delivered Report.....	109
5.1.13 Log.....	110

5.1.14 Setting	111
5.1.15 Boot Scheduler	112
5.1.16 Kesimpulan dari Blackbock Testing.....	112
5.2 KUISIONER.....	112
5.2.1 Kuisioner Fungsionalitas	113
5.2.2 Kuisioner User Interface	115
5.2.3 Kesimpulan dari kuisioner.....	118
BAB VI.....	119
KESIMPULAN DAN SARAN	119
6.1 SIMPULAN	119
6.2 SARAN	120
DAFTAR PUSTAKA	XVIII
LAMPIRAN	XIX

DAFTAR GAMBAR

GAMBAR 2.1 PERANGKAT ANDROID.....	6
GAMBAR 2.2 ARSITEKTUR ANDROID.....	7
GAMBAR 2.3 SIKLUS HIDUP ANDROID	14
GAMBAR 2.4 CONTOH PENGGUNAAN DEPENDENSI INCLUDE.....	17
GAMBAR 2.5 CONTOH PENGGUNAAN DEPENDENSI EXTEND	17
GAMBAR 2.6 CONTOH PENGGUNAAN GENERALISASI PADA USE CASE	18
GAMBAR 2.7 CONTOH PENGGUNAAN KOMPONEN DALAM ACTIVITY DIAGRAM	20
GAMBAR 2.8 LAMBANG CLASS.....	21
GAMBAR 2.9 RELASI ANTAR KELAS	22
GAMBAR 2.10 CONTOH WEAK ENTITY	23
GAMBAR 2.11 CONTOH STRONG ENTITY	23
GAMBAR 2.12 CONTOH ATRIBUT	23
GAMBAR 2.13 CONTOH ATRIBUT KOMPOSIT.....	24
GAMBAR 2.14 CONTOH ATRIBUT BERNILAI BANYAK	24
GAMBAR 2.15 CONTOH RELASI	25
GAMBAR 2.16 RELASI SATU KE SATU	25
GAMBAR 2.17 RELASI SATU KE BANYAK	26
GAMBAR 2.18 RELASI BANYAK KE SATU	26
GAMBAR 2.19 RELASI BANYAK KE BANYAK.....	26
GAMBAR 3.1 TAMPILAN UTAMA MESSAGE GOOGLE.....	28
GAMBAR 3.2 TAMPILAN SEND SMS PADA MESSAGE GOOGLE.....	29
GAMBAR 3.3 TAMPILAN UTAMA SMS SCHEDULER	30
GAMBAR 3.4 TAMPILAN INPUT SMS SCHEDULER	31
GAMBAR 3.5 USE CASE DIAGRAM.....	33

GAMBAR 3.6 ACTIVITY DIAGRAM ADD SCHEDULER	34
GAMBAR 3.7 ACTIVITY DIAGRAM UPDATE SCHEDULER	35
GAMBAR 3.8 ACTIVITY DIAGRAM DELETE SCHEDULER.....	36
GAMBAR 3.9 ACTIVITY DIAGRAM TRIGGER SCHEDULER	37
GAMBAR 3.10 ACTIVITY DIAGRAM BOOT SCHEDULER	38
GAMBAR 3.11 ACTIVITY DIAGRAM ADD AUTO FOWARD.....	39
GAMBAR 3.12 ACTIVITY DIAGRAM UPDATE AUTO FOWARD	40
GAMBAR 3.13 ACTIVITY DIAGRAM DELETE AUTO FOWARD.....	41
GAMBAR 3.14 ACTIVITY DIAGRAM TRIGGER AUTO FOWARD	42
GAMBAR 3.15 ACTIVITY DIAGRAM ADD AUTO REPLY	43
GAMBAR 3.16 ACTIVITY DIAGRAM UPDATE AUTO REPLY	44
GAMBAR 3.17 ACTIVITY DIAGRAM DELETE AUTO REPLY	45
GAMBAR 3.18 ACTIVITY DIAGRAM TRIGGER AUTO REPLY	46
GAMBAR 3.19 ACTIVITY DIAGRAM VIEW LOG	47
GAMBAR 3.20 ACTIVITY DIAGRAM SETTING SCHEDULER COUNTER.....	48
GAMBAR 3.21 ACTIVITY DIAGRAM SETTING AUTO FOWARD COUNTER	49
GAMBAR 3.22 ACTIVITY DIAGRAM SETTING AUTO REPLY COUNTER	50
GAMBAR 3.23 ACTIVITY DIAGRAM VIEW ABOUT.....	51
GAMBAR 3.24 ENTITY RELATIONSHIP DIAGRAM.....	52
GAMBAR 3.25 USER INTERFACE MENU UTAMA.....	53
GAMBAR 3.26 USER INTERFACE TAMPILAN UTAMA SCHEDULER.....	54
GAMBAR 3.27 USER INTERFACE ADD SCHEDULER.....	55
GAMBAR 3.28 USER INTERFACE UPDATE SCHEDULER.....	56
GAMBAR 3.29 USER INTERFACE TAMPILAN UTAMA AUTO FOWARD.....	57
GAMBAR 3.30 USER INTERFACE ADD AUTO FOWARD.....	58
GAMBAR 3.31 USER INTERFACE UPDATE AUTO FOWARD.....	59

GAMBAR 3.32 USER INTERFACE TAMPILAN UTAMA AUTO REPLY.....	60
GAMBAR 3.33 USER INTERFACE ADD AUTO REPLY	61
GAMBAR 3.34 USER INTERFACE UPDATE AUTO REPLY	62
GAMBAR 3.35 USER INTERFACE LOG	63
GAMBAR 3.36 USER INTERFACE SETTING.....	64
GAMBAR 3.37 USER INTERFACE CONTACT	65
GAMBAR 3.38 CLASS DIAGRAM AUTO FOWARD.....	66
GAMBAR 3.39 CLASS DIAGRAM AUTO REPLY.....	67
GAMBAR 3.40 CLASS DIAGRAM SCHEDULER.....	68
GAMBAR 3.41 CLASS DIAGRAM RECEIVE DAN SEND SMS	69
GAMBAR 4.1 TAMPILAN MENU UTAMA	71
GAMBAR 4.2 TAMPILAN SCHEDULER.....	72
GAMBAR 4.3 TAMPILAN DELETE SCHEDULER.....	73
GAMBAR 4.4 TAMPILAN ADD SCHEDULER	74
GAMBAR 4.5 TAMPILAN SET ALARM SCHEDULER	75
GAMBAR 4.6 TAMPILAN UPDATE SCHEDULER	76
GAMBAR 4.7 TAMPILAN AUTO FOWARD.....	77
GAMBAR 4.8 TAMPILAN DELETE AUTO FOWARD.....	78
GAMBAR 4.9 TAMPILAN ADD AUTO FOWARD	79
GAMBAR 4.10 TAMPILAN TOAST ADD AUTO FOWARD.....	80
GAMBAR 4.11 TAMPILAN UPDATE AUTO FOWARD	81
GAMBAR 4.12 TAMPILAN AUTO REPLY	82
GAMBAR 4.13 TAMPILAN DELETE AUTO REPLY.....	83
GAMBAR 4.14 TAMPILAN ADD AUTO REPLY	84
GAMBAR 4.15 TAMPILAN TOAST ADD AUTO REPLY.....	85
GAMBAR 4.16 TAMPILAN UPDATE AUTO REPLY	86

GAMBAR 4.17 TAMPILAN ADD KONTAK	87
GAMBAR 4.18 TAMPILAN NOTIFIKASI.....	88
GAMBAR 4.19 TAMPILAN LOG	89
GAMBAR 4.20 TAMPILAN SETTING	90
GAMBAR 4.21 TAMPILAN SETTING RESET SCHEDULER COUNTER	91
GAMBAR 4.22 TAMPILAN ABOUT	92
GAMBAR 5.1 GAMBAR PIECHART FUNGSIONALITAS SCHEDULER	113
GAMBAR 5.2 GAMBAR PIECHART FUNGSIONALITAS AUTOFOWARD	114
GAMBAR 5.3 GAMBAR PIECHART FUNGSIONALITAS AUTOREPLY	114
GAMBAR 5.4 GAMBAR PIECHART USER INTERFACE SCHEDULER.....	115
GAMBAR 5.5 GAMBAR PIECHART USER INTERFACE AUTOFOWARD	116
GAMBAR 5.6 GAMBAR PIECHART USER INTERFACE AUTO REPLY.....	116
GAMBAR 5.7 GAMBAR PIECHART USER INTERFACE LOG.....	117
GAMBAR 5.8 GAMBAR PIECHART USER INTERFACE SETTING	118

DAFTAR TABEL

TABEL 2.1 SIMBOL USE CASE DIAGRAM	16
TABEL 2.2 SIMBOL ACTIVITY DIAGRAM	19
TABEL 2.3 PERBANDINGAN APLIKASI	32
TABEL 5.1 PENGUJIAN TAMPILAN UTAMA	101
TABEL 5.2 PENGUJIAN ADD SCHEDULER	102
TABEL 5.3 PENGUJIAN ADD AUTO FOWARD	102
TABEL 5.4 PENGUJIAN ADD AUTO REPLY	103
TABEL 5.5 PENGUJIAN UPDATE SCHEDULER.....	103
TABEL 5.6 PENGUJIAN UPDATE AUTO FOWARD	104
TABEL 5.7 PENGUJIAN UPDATE AUTO REPLY	105
TABEL 5.8 PENGUJIAN TRIGGER SCHEDULER.....	105
TABEL 5.9 PENGUJIAN TRIGGER AUTO FOWARD.....	107
TABEL 5.10 PENGUJIAN TRIGGER AUTO REPLY.....	108
TABEL 5.11 PENGUJIAN SMS SEND REPORT	109
TABEL 5.12 PENGUJIAN SMS DELIVERED REPORT	109
TABEL 5.13 PENGUJIAN LOG	110
TABEL 5.14 PENGUJIAN SETTING.....	111
TABEL 5.15 PENGUJIAN BOOT SCHEDULER	112