

**PENGUJIAN PERANGKAT LUNAK SENAYAN LIBRARY
MANAGEMENT SYSTEM MENGGUNAKAN METODE MCCALL**

Skripsi

Untuk memenuhi sebagian persyaratan

Mencapai derajat Sarjana S-1

Program Studi Teknik Informatika



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Dengan ini saya menyatakan bahwa skripsi ini tidak terdapat karya yang pernah diajukan untuk memperoleh gelar kesarjanaan di suatu Perguruan Tinggi, dan sepanjang pengetahuan saya juga tidak terdapat karya atau pendapat yang pernah ditulis atau diterbitkan orang lain, kecuali yang secara tertulis diacu dalam naskah ini dan disebutkan dalam daftar pustaka.

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Yang Menyatakan,



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MOTTO

If you give up too soon, you won't know what will happen next

“Jangan menyerah, tidak ada yang memalukan dari jatuh. Yang memalukan adalah kalau tidak berdiri lagi” (midorima)

“kesabaran sangat diperlukan ketika kamu ingin mencapai kesuksesan” (light)

“kita dapat sukses apabila kita belajar dari kesalahan” (haibara)

“aku melakukan yang terbaik dengan caraku sendiri” (kirito)

“skripsine di garap sikek, le dolan sesuk meneh” (ibuk)

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PENGUJIAN PERANGKAT LUNAK SENAYAN LIBRARY MANAGEMENT SYSTEM MENGGUNAKAN METODE MCCALL

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INTISARI

Penggunaan perangkat lunak manajemen perpustakaan yang semakin banyak saat ini menjadikan pengguna harus berfikir selektif tentang kualitas dari perangkat lunak tersebut, harus ada patokan yang jelas mengenai kualitas perangkat lunak. Pengujian perangkat lunak merupakan elemen kritis dalam menentukan kualitas suatu perangkat lunak mencakup desain, spesifikasi, dan koding. Penelitian ini diharapkan dapat memberikan gambaran tentang kualitas perangkat lunak Senayan Library Management System.

Metode McCall adalah metode pengukuran kualitas perangkat lunak yang paling tepat, karena metode McCall ini memberikan pengukuran yang mendalam dan menyeluruh dibandingkan dengan metode lain semacam *ISO*, *Boehm*, dan *IEEE*. Penelitian ini menggunakan aspek *Product Operation* dengan lima matriknya yaitu: *Correctness*, *Reliability*, *Efficiency*, *Integrity*, dan *Usability*.

Berdasarkan hasil pengujian, diketahui bahwa secara keseluruhan sistem Senayan Library Management System edisi ke tujuh ini memiliki kualitas yang baik berdasarkan teori kualitas McCall. Hal tersebut ditunjukkan dengan hasil pengujian dari kelima matrik yang diuji empat diantaranya diperoleh nilai akhir lebih dari 80% yaitu: *Correctness* sebesar 99,76%, *Efficiency* sebesar 91,59%, *Integrity* sebesar 83,33%, dan *Usability* sebesar 82,33% dan training sebesar 170,96 detik yang menunjukkan nilai kebenaran, integritas, dan kemudahan perangkat lunak ini sangat baik. Sedangkan pada faktor *Reliability* diperoleh hasil terburuk yaitu sebesar 48,16% yang menunjukkan bahwa kehandalan kinerja perangkat lunak ini masih lemah.

Kata kunci : McCall, Pengujian Perangkat Lunak, dan Senayan Library Management System.

PENGUJIAN PERANGKAT LUNAK SENAYAN LIBRARY MANAGEMENT SYSTEM MENGGUNAKAN METODE MCCALL

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ABSTRACT

Use of library management software that makes the user must think more selective about the quality of the software, there should be a clear benchmark of the quality of the software. Software testing is a critical element in determining the quality of the software includes the design, specification and coding. This study is expected to provide an overview the software quality of Senayan Library Management System.

McCall method is a method of measuring the quality of software that is the most appropriate, because it gives measurement methods McCall deep and thorough comparison with other such methods ISO, Boehm, and IEEE. This research uses aspects of Product Operation with five matrices namely correctness, Reliability, Efficiency, Integrity, and Usability.

Based on test results, it is known that the overall system Senayan Library Management System to the seventh edition of this has a good quality is based on the theory of McCall quality. This is indicated by the test results of the five matrices tested four of them obtained a final value of more than 80%, namely: correctness of 99.76%, amounting to 91.59% Efficiency, Integrity amounted to 83.33%, and amounted to 82.33% Usability and training of 170.96 seconds which shows the value of truth, integrity, and simplicity of this software is very good. While on the Reliability factor obtained the worst result in the amount of 48.16%, which indicates that the reliability of the performance of the software is still weak.

Keywords : McCall, Software Testing, and Senayan Library Management System.

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BAB I

PENDAHULUAN

1.1 Latar Belakang Masalah

Penggunaan komputer yang semakin meluas sekarang ini menuntut semua bidang untuk dapat memanfaatkan komputer dengan maksimal. Komputer memudahkan manusia atau *stake holder* dalam menyelesaikan pekerjaan. Komputerisasi telah merambah semua bidang dan menjadikannya suatu perangkat yang harus dimiliki oleh semua orang dengan berbagai bidang pekerjaan.

Komputerisasi ini juga telah merambah perpustakaan sebagai sarana dalam pengelolaan data koleksi buku, pengelolaan peminjaman bahkan pada saat ini telah banyak diterbitkan buku dalam bentuk digital. Sistem Informasi Management Perpustakaan sudah jamak di gunakan di hampir semua perpustakaan. Fungsinya yang memudahkan dalam pengelolaan perpustakaan serta biaya dalam penerapannya yang relatif murah membuat sistem ini banyak digunakan, bahkan dalam perkembangannya Sistem Informasi Manajemen Perpustakaan ini di buat open source yang bahkan dapat di gunakan dengan gratis.

Penggunaan perangkat lunak manajemen perpustakaan yang semakin banyak ini menjadikan pengguna harus berfikir selektif tentang kualitas dari sistem tersebut. Oleh karena itu harus ada patokan yang jelas mengenai kualitas perangkat lunak tersebut. Salah satu parameter dalam pengukuran kualitas suatu perangkat lunak adalah dengan menggunakan *McCall's Software Quality Factor*.

Dengan pengujian ini berarti developer telah memenuhi ekspektasi dari pengguna tentang kualitas perangkat lunak yang di gunakan. (Ariawan, 2007)

Pengujian perangkat lunak merupakan elemen kritis dari jaminan kualitas perangkat lunak dan merepresentasikan kajian pokok dari spesifikasi, desain, dan pengkodean (Pressman, 2002). Pengujian perangkat lunak adalah suatu proses yang digunakan untuk mengidentifikasi ketepatan, kelengkapan dan mutu dari perangkat lunak. Untuk setiap pengujian yang dilakukan dibutuhkan tersedianya suatu ukuran kualitatif dengan menggunakan strategi dengan mengintegrasikan metode *design test case* perangkat lunak ke dalam sederetan langkah yang direncanakan dengan baik, dan hasilnya adalah konstruksi perangkat lunak yang berhasil, dalam penelitian ini penulis menerapkan metode *McCall*.

1.2 Rumusan Masalah

Berdasarkan latar belakang masalah di atas, maka rumusan masalah dalam penelitian ini sebagai berikut :

1. Bagaimana melakukan pengujian perangkat lunak Senayan Library Management System dengan menggunakan metode *McCall*?
2. Apakah perangkat lunak Senayan Library Management System memiliki kualitas perangkat lunak yang baik berdasarkan teori kualitas *McCall*?

1.3 Batasan Masalah

Adapun batasan dalam penelitian ini adalah sebagai berikut :

1. Pengujian sistem ini diimplementasikan pada Senayan Library Management System versi ke tujuh yang biasa di sebut dengan kode nama Cendana.

2. Pengujian pada sistem Senayan ini dilakukan dengan kelima matrik pada *Product Operation* pada metode *McCall*, yaitu: *Correctness*, *Reliability*, *Efficiency*, *Integrity*, dan *Usability*
3. Pengujian hanya dilakukan pada menu yang sering digunakan oleh pengguna system yaitu Bibliography, Circulation, dan Membership.
4. Responden pada penelitian ini adalah pengguna sistem Senayan ini atau orang yang setidaknya pernah menggunakan dan tahu mengenai sistem Senayan ini.

1.4 Tujuan Penelitian

Berdasarkan latar belakang dan rumusan masalah diatas, maka tujuan yang ingin diperoleh pada penelitian ini adalah :

1. Mampu mengimplementasikan metode *McCall* dalam menentukan tingkat kualitas perangkat lunak Senayan Library Management System.
2. Dapat mengetahui presentase tingkat kualitas dari hasil akhir pengujian pada perangkat lunak Senayan Library Management System

1.5 Manfaat Penelitian

Hasil dari penelitian ini adalah memberikan laporan penilaian terhadap standar kualitas perangkat lunak Senayan Library Management System berdasarkan standar penilaian *McCall's Software Quality Factor*.

1.6 Keaslian Penelitian

Penelitian yang berhubungan dengan pengujian perangkat lunak Senayan Library Management System menggunakan metode *McCall* belum pernah dilakukan sebelumnya. Penelitian yang dilakukan sebelumnya adalah melakukan

pengujian terhadap sistem yang berbeda dan dilakukan pada matrik yang berbeda namun menggunakan metode *McCall*.



BAB V

PENUTUP

Pada bab ini penulis akan menjelaskan mengenai kesimpulan-kesimpulan yang penulis dapatkan dari hasil penelitian ataupun selama melakukan penelitian ini. Penulis juga mengemukakan saran-saran untuk penelitian selanjutnya serta tindak lanjut atas penggunaan Senayan Library Management System ini.

5.1 Kesimpulan

Berdasarkan penelitian yang telah penulis lakukan, Penulis dapat memberikan kesimpulan bahwa metode *McCall* dapat di terapkan untuk pengukuran kualitas perangkat lunak Seayan Library Management System, khususnya aspek *Product Operation* dan dapat memberikan hasil yang cukup akurat.

Secara keseluruhan sistem Senayan Library Management System edisi ke tujuh dengan kode nama cendana ini sudah memiliki kualitas yang baik berdasarkan teori kualitas *McCall*. Hal tersebut ditunjukkan dengan hasil pengujian dari kelima matrik yang diuji, empat diantaranya diperoleh nilai akhir lebih dari 80% yaitu: *Correctness* sebesar 99,76%, *Efficiency* sebesar 91,59% *Integrity* sebesar 88,33%, dan *Usability* sebesar 82,33%. Sedangkan satu diantaranya berada di bawah 50% adalah faktor *Reliability* sebesar 48,16%.

Dari pengujian berdasarkan teori kualitas *McCall* ini yang memiliki kualitas terbaik adalah matrik *Correctness* dengan hasil sebesar 99,76% dan yang terburuk adalah matrik *Reliability* dengan hasil sebesar 48,16%.

5.2 Saran

Penulis menyadari sepenuhnya bahwa penelitian dan penulisan yang dilakukan penulis ini jauh dari kesempurnaan. Oleh karena itu, penulis mengajukan beberapa saran untuk penelitian selanjutnya dan untuk memperbaiki sistem Senayan agar mendapatkan hasil yang maksimal, antara lain adalah:

1. Dari hasil pengujian yang penulis lakukan, pihak *developer* diharapkan mampu meningkatkan presentase nilai dari setiap parameter pengukuran terutama pada *Reliability* dan *Efficiency*. Pada faktor *error tolerance* dapat dilakukan dengan memberika validasi pada setiap *field* isian guna meminimalisir kesalahan pada saat penginputan data.
2. Penelitian selanjutnya sebaiknya dilakukan dengan melakukan pengujian terhadap semua menu dan modul pada Senayan Library Management System sehingga hasil yang di dapatkan menjadi lebih sempurna.
3. Perlu penambahan Bahasa Indonesia sampai ke dalam semua menu di sistem Senayan ini, karena berdasarkan pengujian yang penulis lakukan banyak pengguna baru yang kesulitan memahami sistem dalam Bahasa Inggris.
4. Penelitian Selanjutnya sebaiknya dilakukan menggunakan metode pengukuran kualitas selain *McCall*, sehingga dapat menjadi pembanding terhadap hasil yang di dapatkan.

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LAMPIRAN

Lampiran 1. Rancangan Pengujian Faktor *Completeness*

No	Activity	Input	Expected Output	Remark	Note
1.	Search				
2.	Bibliography list				
3.	Add new bibliography				
4.	Delete selected data				
5.	Check all				
6.	Uncheck all				
7.	edit				
8.	Title				
9.	Author				
10.	Statement of responsibility				
11.	Edition				
12.	Specific detail info				
13.	Item code				
14.	GMD				
15.	Frequency				
16.	ISBN				
17.	Publisher				
18.	Publishing year				
19.	Publishing place				
20.	Colation				
21.	Series title				
22.	Clasification				
23.	Call number				
24.	Subject				

No	Activity	Input	Expected Output	Remark	Note
25.	Language				
26.	Abstact				
27.	Images				
28.	File attachment				
29.	Hide to opac				
30.	Promote to homepage				
31.	Label				
32.	save				
33.	Delete Selected data				
34.	Check all				
35.	Uncheck all				
36.	Edit				
37.	search				
38.	Search				
39.	Add to print queue				
40.	Check all				
41.	Uncheck all				
42.	Clear print queue				
43.	Print label for selected data				
44.	Print barcode for selected data				
45.	Print catalog for selected data				
46.	Field separator				
47.	Field enclosed with				
48.	Record separator				
49.	Number of record to export				
50.	Start from record				

No	Activity	Input	Expected Output	Remark	Note
51.	Export now				
52.	Import now				
53.	Export now				
54.	Import now				
55.	Insert item code				
56.	Loan				
57.	Return				
58.	Extend				
59.	Search				
60.	Reserve				
61.	Item ID				
62.	Return				
63.	Serach (loan rules)				
64.	Loan rules list				
65.	Add new loan rules				
66.	colection type				
67.	GMD				
68.	loan limit				
69.	loan periode				
70.	reborrow limit				
71.	fine each day				
72.	overdue grace periode				
73.	Member ID_name				
74.	Filter option				
75.	Member ID_name				
76.	Filter option				
77.	Member ID_name				
78.	Filter option				

No	Activity	Input	Expected Output	Remark	Note
79.	Member search				
80.	member list				
81.	View expired member				
82.	Add new member				
83.	Delete selected data				
84.	check all				
85.	Uncheck all				
86.	Edit				
87.	Member ID				
88.	Member name				
89.	Birth date				
90.	Member since				
91.	Register date				
92.	Expiry date				
93.	Institution				
94.	Membership type				
95.	Gender				
96.	Eddress				
97.	Postal code				
98.	Email address				
99.	Phone number				
100.	Fax number				
101.	Personal id number				
102.	Notes				
103.	Pending membership				
104.	Photos				
105.	Email				
106.	New password				

No	Activity	Input	Expected Output	Remark	Note
107.	Confirm new password				
108.	Save				
109.	search				
110.	Member type list				
111.	Add new member type				
112.	Member type				
113.	loan limit				
114.	loan periode				
115.	reserve				
116.	reserve limit				
117.	Membership periode				
118.	reborrow limit				
119.	fine each day				
120.	overdue grace periode				
121.	Edit				
122.	Delete selected data				
123.	Check all				
124.	Uncheck all				
125.	Search				
126.	Clear print queue				
127.	Print member card for selecteddata				
128.	Add to print queue				
129.	Check all				
130.	Uncheck all				
131.	Field separator				
132.	Field enclosed with				
133.	Record separator				
134.	Number of record				

No	Activity	Input	Expected Output	Remark	Note
135	Start from record				
136	Export now				
137	Import now				



Lampiran 2. Rancangan Pengujian Faktor *Traceability*

No	Activity	Product	Dok Analisis	Remark	Note
1.	Bibliography list				
2.	Add new bibliography				
3.	Delete selected data				
4.	Check all				
5.	Uncheck all				
6.	edit				
7.	save				
8.	Delete selected data				
9.	Check all				
10.	Uncheck all				
11.	Edit				
12.	Add to print queue				
13.	Check all				
14.	Uncheck all				
15.	Clear print queue				
16.	Print label for selected data				
17.	Print barcode setting				
18.	Add to print queue				
19.	Check all				
20.	Uncheck all				
21.	Clear print queue				
22.	Print barcode for selected data				
23.	Print barcode setting				
24.	Add to print queue				
25.	Check all				
26.	Uncheck all				

No	Activity	Product	Dok Analisis	Remark	Note
41.	Filter option				
42.	Apply filter				
43.	Member ID_name				
44.	Filter option				
45.	Apply filter				
46.	Member ID_name				
47.	Filter option				
48.	Apply filter				
49.	Member listh				
50.	View expired member				
51.	Add new member				
52.	Delete selected data				
53.	check all				
54.	Uncheck all				
55.	Edit				
56.	save				
57.	Member type list				
58.	Add new member type				
59.	Edit				
60.	Delete selected data				
61.	Check all				
62.	Uncheck all				
63.	Clear print queue				
64.	Print member card for selected data				
65.	Member card print setting				
66.	Add to print queue				
67.	Check all				

No	Activity	Product	Dok Analisis	Remark	Note
68.	Uncheck all				
69.	Export now				
70.	Import now				



Lampiran 3. Rancangan Pengujian Faktor *Consistency*

No	Activity	Dok Analisis	Product	Remark	Note
1.	Bibliography list				
2.	Add new bibliography				
3.	Delete selected data				
4.	Check all				
5.	Uncheck all				
6.	edit				
7.	save				
8.	Delete selected data				
9.	Check all				
10.	Uncheck all				
11.	Edit				
12.	Add to print queue				
13.	Check all				
14.	Uncheck all				
15.	Clear print queue				
16.	Print label for selected data				
17.	Print barcode setting				
18.	Add to print queue				
19.	Check all				
20.	Uncheck all				
21.	Clear print queue				
22.	Print barcode for selected data				
23.	Print barcode setting				
24.	Add to print queue				
25.	Check all				
26.	Uncheck all				
27.	Clear print queue				

No	Activity	Dok Analisis	Product	Remark	Note
28.	Print catalog for selected data				
29.	Export now				
30.	Import now				
31.	Export now				
32.	Import now				
33.	Loan				
34.	Return				
35.	Extend				
36.	Reserve				
37.	Return				
38.	Loan rules list				
39.	Add new loan rules				
40.	Member ID_name				
41.	Filter option				
42.	Apply filter				
43.	Member ID_name				
44.	Filter option				
45.	Apply filter				
46.	Member ID_name				
47.	Filter option				
48.	Apply filter				
49.	member listh				
50.	View expired member				
51.	Add new member				
52.	Delete selected data				
53.	check all				
54.	Uncheck all				
55.	Edit				

No	Activity	Dok Analisis	Product	Remark	Note
56.	save				
57.	Member type list				
58.	Add new member type				
59.	Edit				
60.	Delete selected data				
61.	Check all				
62.	Uncheck all				
63.	Clear print queue				
64.	Print member card for selected data				
65.	Member card print setting				
66.	Add to print queue				
67.	Check all				
68.	Uncheck all				
69.	Export now				
70.	Import now				

Lampiran 4. Rancangan Pengujian Faktor *Accuracy*

No	Activity	Input	Expected Output	Remark	Note
1.	Search				
2.	edit				
3.	Title				
4.	Author				
5.	Statement of responsibility				
6.	Edition				
7.	Specific detail info				
8.	Item code				
9.	GMD				
10.	Frequency				
11.	ISBN				
12.	Publisher				
13.	Publishing year				
14.	Publishing place				
15.	Colation				
16.	Series title				
17.	Clasification				
18.	Call number				
19.	Subject				
20.	Language				
21.	Abstact				
22.	Images				
23.	File attachment				
24.	Hide to opac				
25.	Promote to homepage				
26.	Label				
27.	save				

No	Activity	Input	Expected Output	Remark	Note
28.	Edit				
29.	search				
30.	Search				
31.	Search				
32.	Search				
33.	Field separator				
34.	Field enclosed with				
35.	Record separator				
36.	Number of record to export				
37.	Start from record				
38.	File to import				
39.	Field separator				
40.	Field enclosed with				
41.	Number of record to export				
42.	Start from record				
43.	Field separator				
44.	Field enclosed with				
45.	Record separator				
46.	Number of record to export				
47.	Start from record				
48.	File to import				
49.	Field separator				
50.	Field enclosed with				
51.	Number of record to export				
52.	Start from record				
53.	Insert item code				
54.	Search				

No	Activity	Input	Expected Output	Remark	Note
55.	Item ID				
56.	Serach(loan rules)				
57.	Member type				
58.	colection type				
59.	GMD				
60.	loan limit				
61.	loan periode				
62.	reborrow limit				
63.	fine each day				
64.	overdue grace periode				
65.	Edit				
66.	Member ID_name				
67.	title				
68.	item code				
69.	loan date from				
70.	loan date until				
71.	loan status				
72.	loan each page				
73.	Member ID_name				
74.	loan date from				
75.	loan date until				
76.	loan each page				
77.	Member ID_name				
78.	title				
79.	item code				
80.	reserve from				
81.	reserve until				
82.	Member search				

No	Activity	Input	Expected Output	Remark	Note
83.	Member ID				
84.	Member name				
85.	Birth date				
86.	Member since				
87.	Register date				
88.	Expiry date				
89.	Institution				
90.	Membership type				
91.	Gender				
92.	Eddress				
93.	Postal code				
94.	Email address				
95.	Phone number				
96.	Fax number				
97.	Personal id number				
98.	Notes				
99.	Pending membership				
100.	Photos				
101.	Email				
102.	New password				
103.	Confirm new password				
104.	search				
105.	Member type				
106.	loan limit				
107.	loan periode				
108.	reserve				
109.	reserve limit				
110.	membership periode				

No	Activity	Input	Expected Output	Remark	Note
111.	reborrow limit				
112.	fine each day				
113.	overdue grace periode				
114.	Edit				
115.	Search				
116.	Field separator				
117.	Field enclosed with				
118.	Record separator				
119.	Number of record to export				
120.	Start from record				
121.	File to import				
122.	Field separator				
123.	Field enclosed with				
124.	Number of record to export				
125.	Start from record				

Lampiran 5. Rancangan Pengujian Faktor *Error Tolerance*

No	Activity	Input	Output	Remark	Note
1.	Search				
2.	Title				
3.	Author				
4.	Statement of responsibility				
5.	Edition				
6.	Specific detail info				
7.	Item code				
8.	GMD				
9.	Frequency				
10.	ISBN				
11.	Publisher				
12.	Publishing year				
13.	Publishing place				
14.	Colation				
15.	Series title				
16.	Clasification				
17.	Call number				
18.	Subject				
19.	Language				
20.	Abstact				
21.	Images				
22.	File attachment				
23.	Hide to opac				
24.	Promote to homepage				
25.	Label				
26.	Field separator				

No	Activity	Input	Output	Remark	Note
27.	Field enclosed with				
28.	Record separator				
29.	Number of record To export				
30.	Start from record				
31.	Insert item code				
32.	Item ID				
33.	Member Type				
34.	collection type				
35.	GMD				
36.	loan limit				
37.	loan periode				
38.	reborow limit				
39.	fine each day				
40.	overdue grace periode				
41.	Member ID_name				
42.	title				
43.	item code				
44.	loan date from				
45.	loan date until				
46.	loan status				
47.	loan each page				
48.	Member ID_name				
49.	loan date from				
50.	loan date until				
51.	loan each page				
52.	Member ID_name				
53.	title				
54.	item code				

No	Activity	Input	Output	Remark	Note
55.	reserve from				
56.	reserve until				
57.	Member ID				
58.	Member name				
59.	Birth Date				
60.	Member since				
61.	Register date				
62.	Expiry date				
63.	Institution				
64.	Membership type				
65.	Gender				
66.	Eddress				
67.	Postal code				
68.	Email address				
69.	Phone number				
70.	Fax number				
71.	Personal id number				
72.	Notes				
73.	Pending membership				
74.	Photos				
75.	Email				
76.	New password				
77.	Confirm new password				
78.	Member type				
79.	loan limit				
80.	loan periode				
81.	reserve				
82.	reserve limit				

No	Activity	Input	Output	Remark	Note
83.	Membership periode				
84.	reborrow limit				
85.	fine each day				
86.	overdue grace periode				
87.	Field separator				
88.	Field enclosed with				
89.	Record separator				
90.	Number of record to export				
91.	Start from record				
92.	File to import				
93.	Field separator				
94.	Field enclosed with				
95.	Number of record to export				
96.	Start from record				

Lampiran 6. Rancangan Pengujian Faktor *Modularity*

No	Activity Class	Fan-In	Fan-Out	Loc	Remark
1.	Biblio_utils.inc				
2.	checkout_item				
3.	custom_fields.inc				
4.	dl_print				
5.	export				
6.	iframe_attach				
7.	iframe_author				
8.	iframe_item_list				
9.	iframe_topic				
10.	import				
11.	index				
12.	item				
13.	item_barcode_generator				
14.	item_export				
15.	item_import				
16.	marcimport				
17.	p2p				
18.	pop_attach				
19.	pop_author				
20.	pop_biblio				
21.	pop_item				
22.	pop_print_settings				
23.	pop_topic				
24.	print_settings				
25.	printed_card				
26.	submenu				
27.	ucs_update				

No	Activity Class	Fan-In	Fan-Out	Loc	Remark
28.	ucs_upload				
29.	ucs_upload_sh				
30.	z3950				
31.	z3950sru				
32.	ajax_action				
33.	circulation_action				
34.	circulation_base_lib.inc				
35.	finer_list				
36.	index				
37.	item AJAX lookup handler				
38.	loan				
39.	loan_date AJAX change				
40.	loan_list				
41.	loan_rules				
42.	member_loan_hist				
43.	pop_loan_receipt				
44.	quick_return				
45.	reserve_list				
46.	submenu				
47.	export				
48.	import				
49.	index				
50.	member AJAX response				
51.	member_base_lib.inc				
52.	member_card_generator				
53.	member_custom_fields.inc				
54.	member_type				
55.	overdue_mail				
56.	submenu				

Lampiran 7. Rancangan Pengujian Faktor *Simplicity*

No	Activity Class	Fan-In	Fan-Out	Loc	Remark
1.	Biblio_utils.inc				
2.	checkout_item				
3.	custom_fields.inc				
4.	dl_print				
5.	export				
6.	iframe_attach				
7.	iframe_author				
8.	iframe_item_list				
9.	iframe_topic				
10.	import				
11.	index				
12.	item				
13.	item_barcode_generator				
14.	item_export				
15.	item_import				
16.	marcimport				
17.	p2p				
18.	pop_attach				
19.	pop_author				
20.	pop_biblio				
21.	pop_item				
22.	pop_print_settings				
23.	pop_topic				
24.	print_settings				
25.	printed_card				
26.	submenu				
27.	ucs_update				

No	Activity Class	Fan-In	Fan-Out	Loc	Remark
28.	ucs_upload				
29.	ucs_upload_sh				
30.	z3950				
31.	z3950sru				
32.	ajax_action				
33.	circulation_action				
34.	circulation_base_lib.inc				
35.	fines_list				
36.	index				
37.	item_AJAX_lookup_handler				
38.	loan				
39.	loan_date_AJAX_change				
40.	loan_list				
41.	loan_rules				
42.	member_loan_hist				
43.	pop_loan_receipt				
44.	quick_return				
45.	reserve_list				
46.	submenu				
47.	export				
48.	import				
49.	index				
50.	member_AJAX_response				
51.	member_base_lib.inc				
52.	member_card_generator				
53.	member_custom_fields.inc				
54.	member_type				
55.	overdue_mail				
56.	submenu				

Lampiran 8. Rancangan Pengujian Faktor *Conciseness*

No	Nama Class	Jumlah Deklarasi Class	Loc	Remark	Notes
1.	Biblio_utils.inc				
2.	checkout_item				
3.	custom_fields.inc				
4.	dl_print				
5.	export				
6.	iframe_attach				
7.	iframe_author				
8.	iframe_item_list				
9.	iframe_topic				
10.	import				
11.	index				
12.	item				
13.	item_barcode_generator				
14.	item_export				
15.	item_import				
16.	marcimport				
17.	p2p				
18.	pop_attach				
19.	pop_author				
20.	pop_biblio				
21.	pop_item				
22.	pop_print_settings				
23.	pop_topic				

No	Nama Class	Jumlah Deklarasi Class	Loc	Remark	Notes
24.	print_settings				
25.	printed_card				
26.	submenu				
27.	ucs_update				
28.	ucs_upload				
29.	ucs_upload_sh				
30.	z3950				
31.	z3950sru				
32.	ajax_action				
33.	circulation_action				
34.	circulation_base_lib.inc				
35.	finer_list				
36.	index				
37.	item AJAX lookup handler				
38.	loan				
39.	loan_date AJAX change				
40.	loan_list				
41.	loan_rules				
42.	member_loan_hist				
43.	pop_loan_receipt				
44.	quick_return				
45.	reserve_list				
46.	submenu				
47.	export				
48.	import				

No	Nama Class	Jumlah Deklarasi Class	Loc	Remark	Notes
49.	index				
50.	member_AJAX_response				
51.	member_base_lib.inc				
52.	member_card_generator				
53.	member_custom_fields.inc				
54.	member_type				
55.	overdue_mail				
56.	submenu				

Lampiran 9. Rancangan Pengujian Faktor *Auditability*

No	Activity	Sistem	Dok Sistem	Remark	Note
1.	Bibliography list				
2.	Add new bibliography				
3.	Delete selected data				
4.	Check all				
5.	Uncheck all				
6.	edit				
7.	save				
8.	Delete selected data				
9.	Check all				
10.	Uncheck all				
11.	Edit				
12.	Add to print queue				
13.	Check all				
14.	Uncheck all				
15.	Clear print queue				
16.	Print label for selected data				
17.	Print barcode setting				
18.	Add to print queue				
19.	Check all				
20.	Uncheck all				
21.	Clear print queue				
22.	Print barcode for selected data				
23.	Print barcode setting				
24.	Add to print queue				
25.	Check all				
26.	Uncheck all				
27.	Clear print queue				

No	Activity	Sistem	Dok Sistem	Remark	Note
28.	Print catalog for selected data				
29.	Export now				
30.	Import now				
31.	Export now				
32.	Import now				
33.	Loan				
34.	Return				
35.	Extend				
36.	Reserve				
37.	Return				
38.	Loan rules list				
39.	Add new loan rules				
40.	Member ID_name				
41.	Filter option				
42.	Apply filter				
43.	Member ID_name				
44.	Filter option				
45.	Apply filter				
46.	Member ID_name				
47.	Filter option				
48.	Apply filter				
49.	member listh				
50.	View expired member				
51.	Add new member				
52.	Delete selected data				
53.	check all				
54.	Uncheck all				
55.	Edit				

No	Activity	Sistem	Dok Sistem	Remark	Note
56.	save				
57.	Member type list				
58.	Add new member type				
59.	Edit				
60.	Delete selected data				
61.	Check all				
62.	Uncheck all				
63.	Clear print queue				
64.	Print member card for selected data				
65.	Member card print setting				
66.	Add to print queue				
67.	Check all				
68.	Uncheck all				
69.	Export now				
70.	Import now				

Lampiran 10. Rancangan Pengujian Faktor *Instrumentation*

No	Activity	Input	Output	Instrument	Remark	Note
1.	Title					
2.	Author					
3.	Statement of responsibility					
4.	Edition					
5.	Specific Detail info					
6.	Item code					
7.	GMD					
8.	Frequency					
9.	ISBN					
10.	Publisher					
11.	Publishing year					
12.	Publishing place					
13.	Colation					
14.	Series title					
15.	Clasification					
16.	Call number					
17.	Subject					
18.	Language					
19.	Abstact					
20.	Images					
21.	File attachment					
22.	Hide to opac					
23.	Promote to homepage					
24.	Label					
25.	Insert item code					
26.	Item ID					
27.	Member ID					
28.	Member name					

No	Activity	Input	Output	Instrument	Remark	Note
29.	Birth date					
30.	Member since					
31.	Register date					
32.	Expiry date					
33.	Institution					
34.	Membership type					
35.	Gender					
36.	Eddress					
37.	Postal code					
38.	Mail address					
39.	Phone number					
40.	Fax number					
41.	Personal id number					
42.	Notes					
44.	Photos					
45.	Email					
46.	New password					
47.	Confirm new password					
48.	member type name					
49.	loan limit					
50.	loan periode					
51.	Reserve limit					
52.	Membership periode					
53.	Reborrow limit					
54.	fine each day					
55.	Overdue grace periode					
56.	Field separator					
57.	Field enclosed with					
58.	Record separator					

No	Activity	Input	Output	Instrument	Remark	Note
59.	Number of record to export					
60.	Start from record					



Lampiran 11. Hasil Pengujian Faktor *Completeness*

No	Activity	Input	Expected Output	Remark	Note
1.	Search	linux	linux (3 item)	✓	
2.	Bibliography list	tampilkan list	tampilkan list	✓	
3.	Add new bibliography	Tambah biblio baru	tambah biblio baru	✓	
4.	Delete selected data	delete	delete	✓	
5.	Check all	check all	check all	✓	
6.	Uncheck all	Uncheck all	Uncheck all	✓	
7.	edit	ubah kode	kode berubah	✓	
8.	Title	chord	chord	✓	
9.	Author	tony	tony	✓	
10.	Statement of responsibility	ditulis tony	ditulis tony	✓	
11.	Edition	1	1	✓	
12.	Specific detail info	menambah buku baru	menambah buku baru	✓	
13.	Item code	B001000	B001000	✓	
14.	GMD	music	music	✓	
15.	Frequency	3 times a year	3 times a year	✓	
16.	ISBN	ISB1000	ISB1000	✓	
17.	Publisher	merapi	merapi	✓	
18.	Publishing year	2015	2015	✓	
19.	Publishing place	yogyakarta	yogyakarta	✓	
20.	Colation	100 pages	100 pages	✓	
21.	Series title	guitar chord	guitar chord	✓	
22.	Clasification	all ages	all ages	✓	
23.	Call number	1412	1412	✓	
24.	Subject	music	music	✓	
25.	Language	indonesia	indonesia	✓	

No	Activity	Input	Expected Output	Remark	Note
26.	Abstact	tentang chord gitar	tentang chord gitar	✓	
27.	Images	karikat kkn.jpg	karikat kkn.jpg	✓	
28.	File attachment	upload	upload	✓	
29.	Hide to opac	show	show	✓	
30.	Promote to homepage	dont promote	dont promote	✓	
31.	Label	tonygunawan.com	tonygunawan.com	✓	
32.	save	simpan	simpan succes	✓	
33.	Delete Selected data	hapus	hapus	✓	
34.	Check all	Check all	Check all	✓	
35.	Uncheck all	Uncheck all	Uncheck all	✓	
36.	Edit	Edit	Edit	✓	
37.	search	B00003	B00003	✓	
38.	Search	linux	linux (3 item)	✓	
39.	Add to print queue	add	add	✓	
40.	Check all	Check all	Check all	✓	
41.	Uncheck all	Uncheck all	Uncheck all	✓	
42.	Clear print queue	clear	clear	✓	
43.	Print label for selected data	print	print	✓	
44.	Print barcode for selected data	print	print	✓	
45.	Print catalog for selected data	print	print	✓	
46.	Field separator	,	,	✓	
47.	Field enclosed with	"	"	✓	
48.	Record separator	NEWLINE	NEWLINE	✓	
49.	Number of record to export	0	0	✓	
50.	Start from record	1	1	✓	

No	Activity	Input	Expected Output	Remark	Note
51.	Export now	export	export	✓	
52.	Import now	import	import	✓	
53.	Export now	export	export	✓	
54.	Import now	import	import	✓	
55.	Insert item code	12345	12345	✓	
56.	Loan	pinjam buku	pinjam berhasil	✓	
57.	Return	kembalikan buku	kembali berhasil	✓	
58.	Extend	tambah masa pinjam	tambah 3 hari berhasil	✓	
59.	Search	linux	linux (3 item)	✓	
60.	Reserve			×	Tidak bisa Reserve
61.	Item ID	B00003	B00003	✓	
62.	Return	kembalikan buku	kembali berhasil	✓	
63.	Search (loan rules)	standard	standard	✓	
64.	Loan rules list	show list	show list	✓	
65.	Add new loan rules	tambah	tambah berhasil	✓	
66.	collection type	all	all	✓	
67.	GMD	all	all	✓	
68.	loan limit	3	3	✓	
69.	loan periode	30	30	✓	
70.	reborrow limit	10	10	✓	
71.	fine each day	1000	1000	✓	
72.	overdue grace periode	7	7	✓	
73.	Member ID_name	12345	12345	✓	
74.	Filter option	B0003	B00003	✓	
75.	Member ID_name	12345	12345	✓	

No	Activity	Input	Expected Output	Remark	Note
76.	Filter option	15/11/2015	15/11/2015	✓	
77.	Member ID_name	12345	12345	✓	
78.	Filter option	15/11/2015	15/11/2015	✓	
79.	Member search	12345	12345	✓	
80.	member list	show member	show	✓	
81.	View expired member	view	view	✓	
82.	Add new member	add	add	✓	
83.	Delete selected data	delete	delete	✓	
84.	check all	check all	check all	✓	
85.	Uncheck all	Uncheck all	Uncheck all	✓	
86.	Edit	tony g	tony g	✓	
87.	Member ID	54321	54321	✓	
88.	Member name	gunawan	gunawan	✓	
89.	Birth date	01/01/1990	01/01/1990	✓	
90.	Member since	15/11/2015	15/11/2015	✓	
91.	Register date	15/11/2015	15/11/2015	✓	
92.	Expiry date	15/11/2016	15/11/2016	✓	
93.	Institution	uin suka	uin suka	✓	
94.	Membership type	standard	standard	✓	
95.	Gender	male	male	✓	
96.	Eddress	sleman yogyakarta	Sleman yogyakarta	✓	
97.	Postal code	55583	55583	✓	
98.	Email address	RT01/RW28	RT01/RW28	✓	
99.	Phone number	8562911564	8562911564	✓	
100.	Fax number	271766321	271766321	✓	
101.	Personal id number	7652891133	7652891133	✓	

No	Activity	Input	Expected Output	Remark	Note
102.	Notes	member baru	member baru	✓	
103.	Pending membership	no	no	✓	
104.	Photos	karikat kkn.jpg	karikat kkn.jpg	✓	
105.	Email	gunawann91@gmail.com	gunawann91@gmail.com	✓	
106.	New password	yogyakarta	yogyakarta	✓	
107.	Confirm new password	yogyakarta	yogyakarta	✓	
108.	Save	simpan	simpan berhasil	✓	
109.	search	standard	standard	✓	
110.	Member type list	show	show	✓	
111.	Add new member type	add	add	✓	
112.	Member type	vip	vip	✓	
113.	loan limit	7	7	✓	
114.	loan periode	35	35	✓	
115.	reserve	enable	enable	✓	
116.	reserve limit	15	15	✓	
117.	Membership periode	720	720	✓	
118.	reborrow limit	15	15	✓	
119.	fine each day	500	500	✓	
120.	overdue grace periode	10	10	✓	
121.	Edit	loan limit 5	loan limit 5	✓	
122.	Delete selected data	delete	delete	✓	
123.	Check all	Check all	Check all	✓	
124.	Uncheck all	Uncheck all	Uncheck all	✓	
125.	Search	54321	54321	✓	
126.	Clear print queue	clear	clear	✓	

No	Activity	Input	Expected Output	Remark	Note
127	Print member card for selected data	print	print	✓	
128	Add to print queue	add	add	✓	
129	Check all	Check all	Check all	✓	
130	Uncheck all	Uncheck all	Uncheck all	✓	
131	Field separator	,	,	✓	
132	Field enclosed with	"	"	✓	
133	Record separator	NEWLINE	NEWLINE	✓	
134	Number of record to export	0	0	✓	
135	Start from record	1	1	✓	
136	Export now	export	export	✓	
137	Import now	import	import	✓	
	Total Remark			136	

Lampiran 12. Hasil Pengujian Faktor *Traceability*

No	Activity	Product	Dok Analisis	Remark	Note
1.	Bibliography list	✓	✓	✓	
2.	Add new bibliography	✓	✓	✓	
3.	Delete selected data	✓	✓	✓	
4.	Check all	✓	✓	✓	
5.	Uncheck all	✓	✓	✓	
6.	edit	✓	✓	✓	
7.	save	✓	✓	✓	
8.	Delete selected data	✓	✓	✓	
9.	Check all	✓	✓	✓	
10.	Uncheck all	✓	✓	✓	
11.	Edit	✓	✓	✓	
12.	Add to print queue	✓	✓	✓	
13.	Check all	✓	✓	✓	
14.	Uncheck all	✓	✓	✓	
15.	Clear print queue	✓	✓	✓	
16.	Print label for selected data	✓	✓	✓	
17.	Print barcode setting	✓	✓	✓	
18.	Add to print queue	✓	✓	✓	
19.	Check all	✓	✓	✓	
20.	Uncheck all	✓	✓	✓	
21.	Clear print queue	✓	✓	✓	
22.	Print barcode for selected data	✓	✓	✓	
23.	Print barcode setting	✓	✓	✓	
24.	Add to print queue	✓	✓	✓	

No	Activity	Product	Dok Analisis	Remark	Note
25.	Check all	✓	✓	✓	
26.	Uncheck all	✓	✓	✓	
27.	Clear print queue	✓	✓	✓	
28.	Print catalog for selected data	✓	✓	✓	
29.	Export now	✓	✓	✓	
30.	Import now	✓	✓	✓	
31.	Export now	✓	✓	✓	
32.	Import now	✓	✓	✓	
33.	Loan	✓	✓	✓	
34.	Return	✓	✓	✓	
35.	Extend	✓	✓	✓	
36.	Reserve	✓	✓	✓	
37.	Return	✓	✓	✓	
38.	Loan rules list	✓	✓	✓	
39.	Add new loan rules	✓	✓	✓	
40.	Member ID_name	✓	✓	✓	
41.	Filter option	✓	✓	✓	
42.	Apply filter	✓	✓	✓	
43.	Member ID_name	✓	✓	✓	
44.	Filter option	✓	✓	✓	
45.	Apply filter	✓	✓	✓	
46.	Member ID_name	✓	✓	✓	
47.	Filter option	✓	✓	✓	
48.	Apply filter	✓	✓	✓	
49.	member listh	✓	✓	✓	
50.	View expired member	✓	✓	✓	
51.	Add new member	✓	✓	✓	
52.	Delete selected data	✓	✓	✓	

53.	check all	✓	✓	✓	
54.	Uncheck all	✓	✓	✓	
55.	Edit	✓	✓	✓	
56.	save	✓	✓	✓	
57.	Member type list	✓	✓	✓	
58.	Add new member type	✓	✓	✓	
59.	Edit	✓	✓	✓	
60.	Delete selected data	✓	✓	✓	
61.	Check all	✓	✓	✓	
62.	Uncheck all	✓	✓	✓	
63.	Clear print queue	✓	✓	✓	
64.	Print member card for selected data	✓	✓	✓	
65.	Member card print setting	✓	✓	✓	
66.	Add to print queue	✓	✓	✓	
67.	Check all	✓	✓	✓	
68.	Uncheck all	✓	✓	✓	
69.	Export now	✓	✓	✓	
70.	Import now	✓	✓	✓	
	Total			70	

Lampiran 13. Hasil Pengujian Faktor *Consistency*

No	Activity	Dok Analisis	Product	Remark	Note
1.	Bibliography list	✓	✓	✓	
2.	Add new bibliography	✓	✓	✓	
3.	Delete selected data	✓	✓	✓	
4.	Check all	✓	✓	✓	
5.	Uncheck all	✓	✓	✓	
6.	edit	✓	✓	✓	
7.	save	✓	✓	✓	
8.	Delete selected data	✓	✓	✓	
9.	Check all	✓	✓	✓	
10.	Uncheck all	✓	✓	✓	
11.	Edit	✓	✓	✓	
12.	Add to print queue	✓	✓	✓	
13.	Check all	✓	✓	✓	
14.	Uncheck all	✓	✓	✓	
15.	Clear print queue	✓	✓	✓	
16.	Print label for selected data	✓	✓	✓	
17.	Print barcode setting	✓	✓	✓	
18.	Add to print queue	✓	✓	✓	
19.	Check all	✓	✓	✓	
20.	Uncheck all	✓	✓	✓	
21.	Clear print queue	✓	✓	✓	
22.	Print barcode for selected data	✓	✓	✓	
23.	Print barcode setting	✓	✓	✓	
24.	Add to print queue	✓	✓	✓	
25.	Check all	✓	✓	✓	
26.	Uncheck all	✓	✓	✓	

No	Activity	Dok Analisi	Product	Remark	Note
27.	Clear print queue	✓	✓	✓	
28.	Print catalog for selected data	✓	✓	✓	
29.	Export now	✓	✓	✓	
30.	Import now	✓	✓	✓	
31.	Export now	✓	✓	✓	
32.	Import now	✓	✓	✓	
33.	Loan	✓	✓	✓	
34.	Return	✓	✓	✓	
35.	Extend	✓	✓	✓	
36.	Reserve	✓	✓	✓	
37.	Return	✓	✓	✓	
38.	Loan rules list	✓	✓	✓	
39.	Add new loan rules	✓	✓	✓	
40.	Member ID_name	✓	✓	✓	
41.	Filter option	✓	✓	✓	
42.	Apply filter	✓	✓	✓	
43.	Member ID_name	✓	✓	✓	
44.	Filter option	✓	✓	✓	
45.	Apply filter	✓	✓	✓	
46.	Member ID_name	✓	✓	✓	
47.	Filter option	✓	✓	✓	
48.	Apply filter	✓	✓	✓	
49.	member listh	✓	✓	✓	
50.	View expired member	✓	✓	✓	
51.	Add new member	✓	✓	✓	
52.	Delete selected data	✓	✓	✓	
53.	check all	✓	✓	✓	
54.	Uncheck all	✓	✓	✓	

No	Activity	Dok Analisi	Product	Remark	Note
55.	Edit	✓	✓	✓	
56.	save	✓	✓	✓	
57.	Member type list	✓	✓	✓	
58.	Add new member type	✓	✓	✓	
59.	Edit	✓	✓	✓	
60.	Delete selected data	✓	✓	✓	
61.	Check all	✓	✓	✓	
62.	Uncheck all	✓	✓	✓	
63.	Clear print queue	✓	✓	✓	
64.	Print member card for selected data	✓	✓	✓	
65.	Member card print setting	✓	✓	✓	
66.	Add to print queue	✓	✓	✓	
67.	Check all	✓	✓	✓	
68.	Uncheck all	✓	✓	✓	
69.	Export now	✓	✓	✓	
70.	Import now	✓	✓	✓	
	Total			70	

Lampiran 14. Hasil Pengujian Faktor Accuracy

No	Activity	Input	Expected Output	Remark	Note
1.	Search	linux	linux	✓	
2.	edit	author= tony g	author= tony g	✓	
3.	Title	chord	chord	✓	
4.	Author	tony	tony	✓	
5.	Statement of responsibility	ditulis tony	ditulis tony	✓	
6.	Edition	1	1	✓	
7.	Specific detail info	menambah buku baru	menambah buku baru	✓	
8.	Item code	B001000	B001000	✓	
9.	GMD	music	music	✓	
10.	Frequency	3 times a year	3 times a year	✓	
11.	ISBN	ISB1000	ISB1000	✓	
12.	Publisher	merapi	merapi	✓	
13.	Publishing year	2015	2015	✓	
14.	Publishing place	yogyakarta	yogyakarta	✓	
15.	Colation	100 pages	100 pages	✓	
16.	Series title	guitar chord	guitar chord	✓	
17.	Clasification	all ages	all ages	✓	
18.	Call number	1412	1412	✓	
19.	Subject	music	music	✓	
20.	Language	indonesia	indonesia	✓	
21.	Abstact	tentang chord gitar	tentang chord gitar	✓	
22.	Images	karikat kkn.jpg	karikat kkn.jpg	✓	
23.	File attachment	upload	upload	✓	
24.	Hide to opac	show	show	✓	
25.	Promote to homepage	Don't promote	Don't promote	✓	
26.	Label	tonygunawan.com	tonygunawan.com	✓	
27.	save	simpan	simpan	✓	

No	Activity	Input	Expected Output	Remark	Note
28.	Edit	item code=B10000	item code=B10000	✓	
29.	search	B00003	B00003	✓	
30.	Search	linux	linux (3 item)	✓	
31.	Search	linux	linux (3 item)	✓	
32.	Search	B00003	B00003	✓	
33.	Field separator	,	,	✓	
34.	Field enclosed with	"	"	✓	
35.	Record separator	NEWLINE	NEWLINE	✓	
36.	Number of record to export	0	0	✓	
37.	Start from record	1	1	✓	
38.	File to import	,	,	✓	
39.	Field separator	"	"	✓	
40.	Field enclosed with	NEWLINE	NEWLINE	✓	
41.	Number of record to export	0	0	✓	
42.	Start from record	1	1	✓	
43.	Field separator	,	,	✓	
44.	Field enclosed with	"	"	✓	
45.	Record separator	NEWLINE	NEWLINE	✓	
46.	Number of record to export	0	0	✓	
47.	Start from record	1	1	✓	
48.	File to import	,	,	✓	
49.	Field separator	"	"	✓	
50.	Field enclosed with	NEWLINE	NEWLINE	✓	

No	Activity	Input	Expected Output	Remark	Note
51.	Number of record to export	0	0	✓	
52.	Start from record	1	1	✓	
53.	Insert item code	B10000	B10000	✓	
54.	Search	linux	linux	✓	
55.	Item ID	B10000	B10000	✓	
56.	Serach(loan rules)	standard	standard	✓	
57.	Member type	standard	standard	✓	
58.	colection type	all	all	✓	
59.	GMD	all	all	✓	
60.	loan limit	3	3	✓	
61.	loan periode	30	30	✓	
62.	reborrow limit	10	10	✓	
63.	fine each day	1000	1000	✓	
64.	overdue grace periode	7	7	✓	
65.	Edit	loan limit 5	loan limit 5	✓	
66.	Member ID_name	12345	12345	✓	
67.	title	bussiness	bussiness	✓	
68.	item code	B00003	B00003	✓	
69.	loan date from	16/10/2015	16/10/2015	✓	
70.	loan date until	16/11/2015	16/11/2015	✓	
71.	loan status	all	all	✓	
72.	loan each page	20	20	✓	
73.	Member ID_name	12345	12345	✓	
74.	loan date from	16/10/2015	16/10/2015	✓	
75.	loan date until	16/11/2015	16/11/2015	✓	
76.	loan each page	20	20	✓	

No	Activity	Input	Expected Output	Remark	Note
77.	Member ID_name	12345	12345	✓	
78.	title	linux	linux	✓	
79.	item code	B00003	B00003	✓	
80.	reserve from	16/10/2015	16/10/2015	✓	
81.	reserve until	16/11/2015	16/11/2015	✓	
82.	Member search	54321	54321	✓	
83.	Member ID	54321	54321	✓	
84.	Member name	gunawan	gunawan	✓	
85.	Birth date	01/01/1990	01/01/1990	✓	
86.	Member since	15/11/2015	15/11/2015	✓	
87.	Register date	15/11/2015	15/11/2015	✓	
88.	Expiry date	15/11/2016	15/11/2016	✓	
89.	Institution	uin suka	uin suka	✓	
90.	Membership type	standard	standard	✓	
91.	Gender	male	male	✓	
92.	Address	sleman yogyakarta	sleman yogyakarta	✓	
93.	Postal code	55583	55583	✓	
94.	Email address	RT01/RW28	RT01/RW28	✓	
95.	Phone number	8562911564	8562911564	✓	
96.	Fax number	271766321	271766321	✓	
97.	Personal id number	7652891133	7652891133	✓	
98.	Notes	member baru	member baru	✓	
99.	Pending membership	no	no	✓	
100.	Photos	karikat kkn.jpg	karikat kkn.jpg	✓	
101.	Email	gunawann91@gmail.com	gunawann91@gmail.com	✓	
102.	New password	yogyakarta	yogyakarta	✓	

No	Activity	Input	Expected Output	Remark	Note
103.	Confirm new password	yogyakarta	yogyakarta	✓	
104.	search	vip	vip	✓	
105.	Member type	vip	vip	✓	
106.	loan limit	7	7	✓	
107.	loan periode	35	35	✓	
108.	reserve	enable	enable	✓	
109.	reserve limit	15	15	✓	
110.	membership periode	720	720	✓	
111.	reborrow limit	15	15	✓	
112.	fine each day	500	500	✓	
113.	overdue grace periode	10	10	✓	
114.	Edit	loan limit=5	loan limit=5	✓	
115.	Search	54321	54321	✓	
116.	Field separator	,	,	✓	
117.	Field enclosed with	"	"	✓	
118.	Record separator	NEWLINE	NEWLINE	✓	
119.	Number of record to export	0	0	✓	
120.	Start from record	1	1	✓	
121.	File to import	,	,	✓	
122.	Field separator	"	"	✓	
123.	Field enclosed with	NEWLINE	NEWLINE	✓	
124.	Number of record to export	0	0	✓	
125.	Start from record	1	1	✓	
	Total			120	

Lampiran 15. Hasil Pengujian faktor *Error Tolerance*

No	Activity	Input	Output	Remark	Note
1.	Search	linux	linux	×	Tidak ada Validasi
2.	Title	chord	chord	Wajib isi	
3.	Author	tony	tony		
4.	Statement of responsibility	ditulis tony	ditulis tony	Notif	
5.	Edition	1	1	Notif	
6.	Specific detail info	menambah buku baru	menambah buku baru	Notif	
7.	Item code	B001000	B001000	Notif	
8.	GMD	Music	music	Notif	
9.	Frequency	3 times a year	3 times a year	Notif	
10.	ISBN	ISB1000	ISB1000	Notif	
11.	Publisher	merapi	merapi	×	Tdk ada Validasi
12.	Publishing year	2015	2015	Notif	
13.	Publishing place	jogja	jogja	×	Tdk ada Validasi
14.	Colation	100 pages	100 pages	Notif	
15.	Series title	guitarchord	Guitarchord	×	Tidak ada Validasi
16.	Clasification	all ages	all ages	×	
17.	Call number	1412	1412	Notif	
18.	Subject	music	music	Notif	
19.	Language	indonesia	indonesia	Notif	
20.	Abstact	Tentang chord gitar	Tentang chord gitar	Notif	
21.	Images	karikat kkn.jpg	karikat kkn.jpg	Notif	
22.	File attach	upload	upload	Notif	
23.	Hide to opac	show	show	×	Tidak ada Validasi
24.	Promote to homepage	Don't promote	Don't promote	×	

No	Activity	Input	Output	Remark	Note
25.	Label	tonygunawan.com	tonygunawan.com	Notif	
26.	Field separator	,	,	×	Tidak ada Validasi
27.	Field enclosed with	"	"	×	
28.	Record separator	NEWLINE	NEWLINE	×	
29.	Number of record To export	0	0	×	
30.	Start from record	1	1	×	
31.	Insert item code	B10000	B10000	Notif	
32.	Item ID	B10000	B10000	Notif	
33.	Member Type	Vip	Vip	×	Tidak ada Validasi
34.	collection type	all	all	×	Tidak ada Validasi
35.	GMD	all	all	×	
36.	loan limit	3	3	×	
37.	loan periode	30	30	×	
38.	reborow limit	10	10	×	
39.	fine each day	1000	1000	×	
40.	Overdue Graceperiode	7	7	×	
41.	Member ID_name	12345	12345	×	
42.	title	bussiness	bussiness	×	
43.	item code	B00003	B00003	×	
44.	loan date from	16/10/2015	16/10/2015	×	
45.	loan date until	16/11/2015	16/11/2015	×	
46.	loan status	all	all	×	
47.	loan /page	20	20	×	
48.	Member ID_name	12345	12345	×	

No	Activity	Input	Output	Remark	Note
49.	loan date from	16/10/2015	16/10/2015	×	Tidak ada validasi
50.	loan date until	16/11/2015	16/11/2015	×	
51.	loan each page	20	20	×	
52.	Member ID_name	12345	12345	×	
53.	title	linux	linux	×	
54.	item code	B00003	B00003	×	
55.	reserve from	16/10/2015	16/10/2015	×	
56.	reserve until	16/11/2015	16/11/2015	×	
57.	Member ID	54321	54321	Wajib isi	
58.	Member name	gunawan	gunawan		
59.	Birth Date	01/01/1990	01/01/1990	×	Tidak ada validasi
60.	Member since	15/11/2015	15/11/2015	×	
61.	Register date	15/11/2015	15/11/2015	×	
62.	Expiry date	15/11/2016	15/11/2016	×	
63.	Institution	uin suka	uin suka	×	
64.	Membership type	standard	standard	×	
65.	Gender	male	male	×	
66.	Eddress	Sleman yogyakarta	Sleman yogyakarta	×	
67.	Postal code	55583	55583	×	
68.	Email address	RT01/RW28	RT01/RW28	×	
69.	Phone number	8562911564	8562911564	×	
70.	Fax number	271766321	271766321	×	
71.	Personal id number	7652891133	7652891133	×	
72.	Notes	member baru	member baru	×	
73.	Pending membership	no	no	×	

No	Activity	Input	Output	Remark	Note
74.	Photos	karikat kkn.jpg	karikat kkn.jpg	×	Tidak ada Validasi
75.	Email	aa@mail.com	aa@mail.com	×	
76.	New password	yogyakarta	yogyakarta	×	
77.	Confirm new password	yogyakarta	yogyakarta	×	
78.	Member type	vip	vip	×	
79.	loan limit	7	7	×	
80.	loan periode	35	35	×	
81.	reserve	enable	enable	×	
82.	reserve limit	15	15	×	
83.	Membership periode	720	720	×	
84.	reborrow limit	15	15	×	
85.	fine each day	500	500	×	
86.	overdue grace periode	10	10	×	
87.	Field separator	,	,	×	
88.	Field enclosed with	"	"	×	
89.	Record separator	NEWLINE	NEWLINE	×	
90.	Number of record to export	0	0	×	
91.	Start from record	1	1	×	
92.	File to import	,	,	×	
93.	Field separator	"	"	×	
94.	Field enclosed with	NEWLINE	NEWLINE	×	

No	Activity	Input	Output	Remark	Note
95.	Number of record to export	0	0	×	Tidak ada Validasi
96.	Start from record	1	1	×	
Total				22	



Lampiran 16. Hasil Pengujian faktor *Modularity*

No	Activity Class	Fan-In	Fan-Out	Loc	Remark
1.	Biblio_utils.inc	1	0	154	Independent
2.	checkout_item	1	0	122	Independent
3.	custom_fields.inc	6	0	88	Independent
4.	dl_print	1	17	313	Dependent
5.	export	0	6	190	Dependent
6.	iframe_attach	4	9	165	Dependent
7.	iframe_author	3	6	154	Dependent
8.	iframe_item_list	3	7	136	Dependent
9.	iframe_topic	3	6	155	Dependent
10.	import	1	7	271	Dependent
11.	index	4	40	818	Dependent
12.	item	2	16	499	Dependent
13.	item_barcode_generator	1	17	302	Dependent
14.	item_export	1	6	173	Dependent
15.	item_import	1	6	223	Dependent
16.	marcimport	1	9	375	Dependent
17.	p2p	1	11	236	Dependent
18.	pop_attach	3	12	244	Dependent
19.	pop_author	1	10	165	Dependent
20.	pop_biblio	1	5	51	Dependent
21.	pop_item	2	3	44	Dependent
22.	pop_print_settings	2	4	48	Dependent
23.	pop_topic	2	10	166	Dependent
24.	print_settings	0	10	98	Dependent
25.	printed_card	1	16	389	Dependent
26.	submenu	0	15	46	Dependent
27.	ucs_update	1	5	88	Dependent

No	Activity Class	Fan-In	Fan-Out	Loc	Remark
28.	ucs_upload	3	5	125	Dependent
29.	ucs_upload_sh	0	3	109	Dependent
30.	z3950	1	9	389	Dependent
31.	z3950sru	1	9	261	Dependent
32.	ajax_action	1	3	43	Dependent
33.	circulation_action	8	39	516	Dependent
34.	circulation_base_lib.inc	0	0	481	Dependent
35.	finer_list	2	10	245	Dependent
36.	index	1	7	85	Dependent
37.	item AJAX lookup handler	0	4	75	Dependent
38.	loan	12	9	186	Dependent
39.	loan_date AJAX change	0	4	51	Dependent
40.	loan_list	4	14	210	Dependent
42.	member_loan_hist	1	8	99	Dependent
43.	pop_loan_receipt	1	6	181	Dependent
44.	quick_return	1	5	76	Dependent
45.	reserve_list	8	11	143	Dependent
46.	submenu	0	6	33	Dependent
47.	export	1	6	153	Dependent
48.	import	1	7	213	Dependent
49.	index	3	16	593	Dependent
50.	member AJAX response	0	3	67	Dependent
51.	member_base_lib.inc	1	1	221	Independent
52.	member_card_generator	1	12	338	Dependent
53.	member_custom_fields.inc	0	0	88	Independent
54.	member_type	1	9	258	Dependent
55.	overdue_mail	1	6	43	Dependent
56.	submenu	0	6	34	Dependent

	Total independent	5
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Lampiran 17. Hasil Pengujian faktor *Simplicity*

No	Activity Class	Fan-In	Fan-Out	Loc	Remark
1.	Biblio_utils.inc	1	0	154	Simple
2.	checkout_item	1	0	122	Simple
3.	custom_fields.inc	6	0	88	Simple
4.	dl_print	1	17	313	Not Simple
5.	export	0	6	190	Not Simple
6.	iframe_attach	4	9	165	Not Simple
7.	iframe_author	3	6	154	Not Simple
8.	iframe_item_list	3	7	136	Not Simple
9.	iframe_topic	3	6	155	Not Simple
10.	import	1	7	271	Not Simple
11.	index	4	40	818	Not Simple
12.	item	2	16	499	Not Simple
13.	item_barcode_generator	1	17	302	Not Simple
14.	item_export	1	6	173	Not Simple
15.	item_import	1	6	223	Not Simple
16.	marcimport	1	9	375	Not Simple
17.	p2p	1	11	236	Not Simple
18.	pop_attach	3	12	244	Not Simple
19.	pop_author	1	10	165	Not Simple
20.	pop_biblio	1	5	51	Not Simple
21.	pop_item	2	3	44	Not Simple
22.	pop_print_settings	2	4	48	Not Simple
23.	pop_topic	2	10	166	Not Simple
24.	print_settings	0	10	98	Not Simple
25.	printed_card	1	16	389	Not Simple
26.	submenu	0	15	46	Not Simple
27.	ucs_update	1	5	88	Not Simple

No	Activity Class	Fan-In	Fan-Out	Loc	Remark
28.	ucs_upload	3	5	125	Not Simple
29.	ucs_upload_sh	0	3	109	Not Simple
30.	z3950	1	9	389	Not Simple
31.	z3950sru	1	9	261	Not Simple
32.	ajax_action	1	3	43	Not Simple
33.	circulation_action	8	39	516	Not Simple
34.	circulation_base_lib.inc	0	0	481	Not Simple
35.	finer_list	2	10	245	Not Simple
36.	index	1	7	85	Not Simple
37.	item AJAX_lookup_handler	0	4	75	Not Simple
38.	loan	12	9	186	Not Simple
39.	loan_date AJAX_change	0	4	51	Not Simple
40.	loan_list	4	14	210	Not Simple
41.	loan_rules	1	11	271	Not Simple
42.	member_loan_hist	1	8	99	Not Simple
43.	pop_loan_receipt	1	6	181	Not Simple
44.	quick_return	1	5	76	Not Simple
45.	reserve_list	8	11	143	Not Simple
46.	submenu	0	6	33	Not Simple
47.	export	1	6	153	Not Simple
48.	import	1	7	213	Not Simple
49.	index	3	16	593	Not Simple
50.	member AJAX_response	0	3	67	Not Simple
51.	member_base_lib.inc	1	1	221	Simple
52.	member_card_generator	1	12	338	Not Simple
53.	member_custom_fields.inc	0	0	88	Simple
54.	member_type	1	9	258	Not Simple
55.	overdue_mail	1	6	43	Not Simple

No	Activity Class	Fan-In	Fan-Out	Loc	Remark
56.	submenu	0	6	34	Not Simple
	Total simple				5



Lampiran 18. Hasil Pengujian faktor *Conciseness*

No	Nama Class	Jumlah Deklarasi Class	Loc	Remark	Notes
1.	Biblio_utils.inc	1	154	154	
2.	checkout_item	2	122	61	
3.	custom_fields.inc	6	88	14,66	
4.	dl_print	21	313	14,90	
5.	export	6	190	31,66	
6.	iframe_attach	16	165	10,31	
7.	iframe_author	12	154	12,83	
8.	iframe_item_list	13	136	10,46	
9.	iframe_topic	12	155	12,91	
10.	import	8	271	33,87	
11.	index	49	818	16,69	
12.	item	19	499	26,26	
13.	item_barcode_generator	22	302	13,72	
14.	item_export	7	173	24,71	
15.	item_import	7	223	31,85	
16.	marcimport	10	375	37,5	
17.	p2p	14	236	16,85	
18.	pop_attach	15	244	16,26	
19.	pop_author	12	165	13,75	
20.	pop_biblio	6	51	8,5	
21.	pop_item	5	44	8,8	
22.	pop_print_settings	6	48	8	
23.	pop_topic	13	166	12,76	

No	Nama Class	Jumlah Deklarasi Class	Loc	Remark	Notes
24.	print_settings	10	98	9,8	
25.	printed_card	20	389	19,45	
26.	submenu	15	46	3,06	
27.	ucs_update	6	88	14,66	
28.	ucs_upload	8	125	15,62	
29.	ucs_upload_sh	3	109	36,33	
30.	z3950	12	389	32,41	
31.	z3950sru	12	261	21,75	
32.	ajax_action	4	43	10,75	
33.	circulation_action	50	516	10,32	
34.	circulation_base_lib.inc	0	481	0	
35.	finer_list	15	245	16,33	
36.	index	8	85	10,62	
37.	item AJAX lookup handler	4	75	18,75	
38.	loan	21	186	8,857	
39.	loan_date AJAX change	4	51	12,75	
40.	loan_list	18	210	11,66	
41.	loan_rules	15	271	18,06	
42.	member_loan_hist	9	99	11	
43.	pop_loan_receipt	7	181	25,85	
44.	quick_return	6	76	12,66	
45.	reserve_list	19	143	7,52	
46.	submenu	6	33	5,5	
47.	export	7	153	21,85	

No	Nama Class	Jumlah Deklarasi Class	Loc	Remark	Notes
48.	import	8	213	26,62	
49.	index	26	593	22,80	
50.	member_AJAX_response	3	67	22,33	
51.	member_base_lib.inc	2	221	110,5	
52.	member_card_generator	16	338	21,12	
53.	member_custom_fields.inc	0	88	0	
54.	member_type	10	258	25,8	
55.	overdue_mail	7	43	6,14	
56.	submenu	6	34	5,66	
	Total			1188,97	

Lampiran 19. Hasil Pengujian faktor *Auditability*

No	Activity	Sistem	Dok Sistem	Remark	Note
1.	Bibliography list	✓	✓	✓	
2.	Add new bibliography	✓	✓	✓	
3.	Delete selected data	✓	✓	✓	
4.	Check all	✓	✓	✓	
5.	Uncheck all	✓	✓	✓	
6.	edit	✓	✓	✓	
7.	save	✓	✓	✓	
8.	Delete selected data	✓	✓	✓	
9.	Check all	✓	✓	✓	
10.	Uncheck all	✓	✓	✓	
11.	Edit	✓	✓	✓	
19.	Check all	✓	✓	✓	
20.	Uncheck all	✓	✓	✓	
21.	Clear print queue	✓	✓	✓	
22.	Print barcode for selected data	✓	✓	✓	
23.	Print barcode setting	✓	✓	✓	
24.	Add to print queue	✓	✓	✓	
25.	Check all	✓	✓	✓	
26.	Uncheck all	✓	✓	✓	
27.	Clear print queue	✓	✓	✓	
28.	Print catalog for selected data	✓	✓	✓	
29.	Export now	✓	✓	✓	
30.	Import now	✓	✓	✓	
31.	Export now	✓	✓	✓	

No	Activity	Product	Dok Analisis	Remark	Note
32.	Import now	✓	✓	✓	
33.	Loan	✓	✓	✓	
34.	Return	✓	✓	✓	
35.	Extend	✓	✓	✓	
36.	Reserve	✓	✓	✓	
37.	Return	✓	✓	✓	
38.	Loan rules list	✓	✓	✓	
39.	Add new loan rules	✓	✓	✓	
40.	Member ID_name	✓	✓	✓	
41.	Filter option	✓	✓	✓	
42.	Apply filter	✓	✓	✓	
43.	Member ID_name	✓	✓	✓	
44.	Filter option	✓	✓	✓	
45.	Apply filter	✓	✓	✓	
46.	Member ID_name	✓	✓	✓	
47.	Filter option	✓	✓	✓	
48.	Apply filter	✓	✓	✓	
49.	member listh	✓	✓	✓	
50.	View expired member	✓	✓	✓	
51.	Add new member	✓	✓	✓	
52.	Delete selected data	✓	✓	✓	
53.	check all	✓	✓	✓	
54.	Uncheck all	✓	✓	✓	
55.	Edit	✓	✓	✓	
56.	save	✓	✓	✓	
57.	Member type list	✓	✓	✓	
58.	Add new member type	✓	✓	✓	
59.	Edit	✓	✓	✓	

No	Activity	Product	Dok Analysis	Remark	Note
60.	Delete selected data	✓	✓	✓	
61.	Check all	✓	✓	✓	
62.	Uncheck all	✓	✓	✓	
63.	Clear print queue	✓	✓	✓	
64.	Print member card for selected data	✓	✓	✓	
65.	Member card print setting	✓	✓	✓	
66.	Add to print queue	✓	✓	✓	
67.	Check all	✓	✓	✓	
68.	Uncheck all	✓	✓	✓	
69.	Export now	✓	✓	✓	
70.	Import now	✓	✓	✓	
	Total			70	

Lampiran 20. Hasil Pengujian faktor *Instrumentation*

No	Activity	Input	Output	Instrument	Remark	Note
1.	Title	chord	chord	text	✓	
2.	Author	tony	tony	text	✓	
3.	Statement of responsibility	ditulis tony	Ditulis tony	varchar(200)	✓	
4.	Edition	1	1	vrachar(50)	✓	
5.	Specific Detail info	menambah bukubaru	menambah bukubaru	text	✓	
6.	Item code	B001000	B001000	varchar(20)	✓	
7.	GMD	music	music	varchar(30)	✓	
8.	Frequency	3 times a year	3 times a year	int(11)	✓	
9.	ISBN	ISB1000	ISB1000	varchar(20)	✓	
10.	Publisher	merapi	merapi	varchar(100)	✓	
11.	Publishing year	2015	2015	Varchar(20)	✓	
12.	Publishing place	yogyakarta	yogyakarta	varchar(30)	✓	
13.	Colation	100 pages	100 pages	vrachar(50)	✓	
14.	Series title	Guitarchord	Guitarchord	varchar(200)	✓	
15.	Clasification	all ages	all ages	varchar(40)	✓	
16.	Call number	1412	1412	vrachar(50)	✓	
17.	Subject	music	music	-	×	Tdk ada instrumen
18.	Language	indonesia	indonesia	varchar((20)	✓	
19.	Abstact	Tentang chord gitar	Tentang chord gitar	text	✓	
20.	Images	Karikat kkn.jpg	Karikat kkn.jpg	image	✓	✓
21.	File attachment	upload	upload	varchar(255)	✓	
22.	Hide to opac	show	show	smallint(1)	✓	
23.	Promote to homepage	Dont promote	Dont promote	smallint(1)	✓	

No	Activity	Input	Output	Instrument	Remark	Note
24.	Label	Tonygun- awan.com	Tonyguna- wan.com	text	✓	
25.	Insert item code	B10000	B10000	varchar(20)	✓	
26.	Item ID	B10000	B10000	int(3)	✓	
27.	Member ID	54321	54321	varchar(20)	✓	
28.	Member name	gunawan	gunawan	varchar(100)	✓	
29.	Birth date	01/01/1990	01/01/1990	date	✓	
30.	Member since	15/11/2015	15/11/2015	date	✓	
31.	Register date	15/11/2015	15/11/2015	date	✓	
32.	Expiry date	15/11/2016	15/11/2016	date	✓	
33.	Institution	uin suka	uin suka	varchar(100)	✓	
34.	Membership type	standard	standard	int(6)	✓	
35.	Gender	male	male	int(1)	✓	
36.	Eddress	Sleman yogyakarta	Sleman yogyakarta	varchar(255)	✓	
37.	Postal code	55583	55583	varchar(20)	✓	
38.	Mail address	RT01/RW2 8	RT01/RW2 8	varchar(255)	✓	
39.	Phone number	8562911564	8562911564	varchar(50)	✓	
40.	Fax number	271766321	271766321	varchar(50)	✓	
41.	Personal id number	7652891133	7652891133	varchar(50)	✓	
42.	Notes	member baru	member baru	text	✓	
43.	Pending membership	no	no	smallint(1)	✓	
44.	Photos	karikat kkn.jpg	Karikat kkn.jpg	image	✓	
45.	Email	gunawann9 1 @gmail.co m	gunawann9 1 @gmail.co m	varchar(100)	✓	
46.	New password	yogyakarta	yogyakarta	char(32)	✓	

No	Activity	Input	Output	Instrument	Remark	Note
47.	Confirm new password	yogyakarta	yogyakarta	char(32)	✓	
48.	member type name	vip	vip	varchar(100)	✓	
49.	loan limit	7	7	int(11)	✓	
50.	loan periode	35	35	int(11)	✓	
51.	Reserve limit	15	15	int(11)	✓	
52.	Membership periode	720	720	int(11)	✓	
53.	Reborrow limit	15	15	int(11)	✓	
54.	fine each day	500	500	int(11)	✓	
55.	Overdue grace periode	10	10	int(2)	✓	
56.	Field separator	,	,	-	×	Tdk ada instrumntasi
57.	Field enclosed with	"	"	-	×	
58.	Record separator	NEWLINE	NEWLINE	-	×	
59.	Number of record to export	0	0	-	×	
60.	Start from record	1	1	-	×	
	Total				54	