

SISTEM MAKLUMAT DIPLOMA SAINS KOMPUTER ITM CAWANGAN PAHANG (SIS-DCS)

**AZMAN TAHER
KAJIAN SAINS MATEMATIK DAN KOMPUTER**

1.0 PENGENALAN

Sistem maklumat Diploma Sains Komputer atau **SIS-DCS** ialah satu projek yang mengambil masa lebih kurang lima bulan sebelum ianya boleh beroperasi. Semasa artikel ini ditulis, saya menganggap **SIS-DCS** hanya 95% siap.

SIS-DCS ialah satu sistem maklumat yang berorientasikan menu. Apa yang dimaksudkan di sini ialah pengguna tidak perlu menjadi seorang pakar untuk menggunakan sistem ini. Mereka hanya perlu membuat pilihan-pilihan yang sesuai berpandukan pada menu yang dipaparkan di skrin.

Perisian yang digunakan untuk menggerakkan **SIS-DCS** ialah **DBASE III Plus** kerana saya dapati perisian ini amat mudah untuk difahami. Tambahan pula, perisian ini amat praktikal untuk suasana dan persekitaran yang saya hadapi. Kemungkinan yang tidak boleh saya ketepikan ialah adanya perisian yang lebih sesuai untuk mengendalikan suasana yang sama.

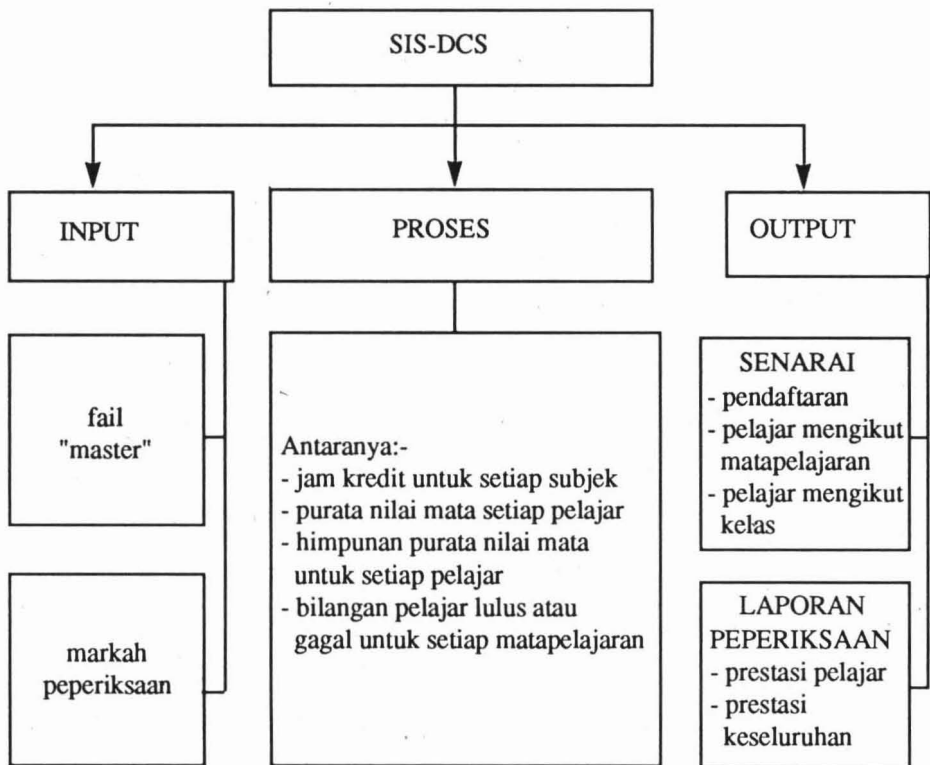
2.0 OBJEKTIF PEMBENTUKAN SIS-DCS

Pada dasarnya, **SIS-DCS** dibentuk sebagai satu mekanisma untuk membantu dalam tugas-tugas pentadbiran supaya hasil-kerja adalah lebih lengkap, tepat dan cepat. Apabila disebut "tugas-tugas pentadbiran" ia membayangkan tugas-tugas yang berulang dan bermusim ("repetition and seasonal") dan "routine". Jadi, dengan adanya sistem maklumat seperti ini, boleh memberi ruang kepada pentabir/pengurus untuk menumpukan perhatian kepada tugas-tugas pengurusan yang memerlukan perhatian yang berbeza mengikut keperluan semasa (Teori Kontingensi Pengurusan). Maka dengan adanya **SIS-DCS** maklumat boleh disediakan dengan cepat seperti:-

- senarai pelajar-pelajar Diploma Sains Komputer ITM Pahang
- senarai pendaftaran matapelajaran
- laporan pretasi akademik pelajar

3.0 SIS-DCS (SELAYANG PANDANG)

Secara ringkasnya, **SIS-DCS** dibahagikan kepada tiga bahagian utama iaitu **INPUT, PROSES DAN OUTPUT**. Bahagian-bahagian ini pula dipecahkan kepada modul-modul yang lebih kecil untuk memudahkan lagi perlaksanaannya. Rajah 1 memberi gambaran lebih jelas tentang pemecahan tugas-tugas dalam **SIS-DCS**.



RAJAH 1 : SIS-DCS

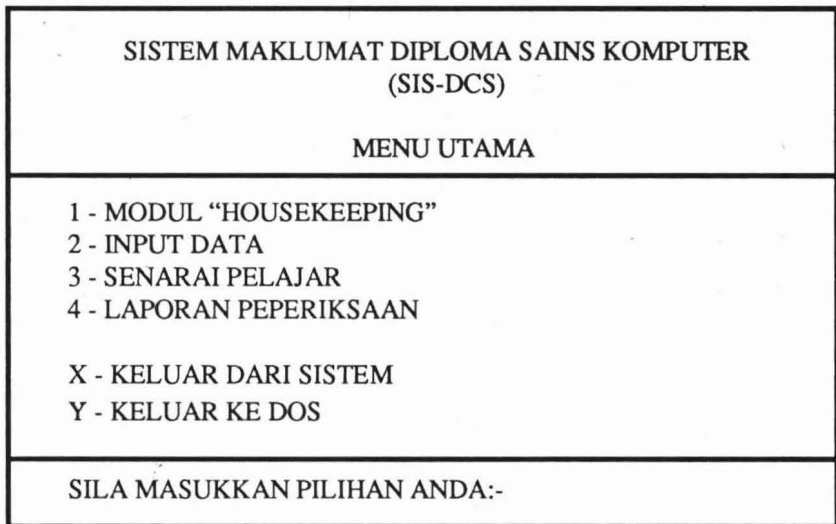
4.0 MENU-MENU

Sepertimana yang telah dinyatakan tadi, tugas-tugas dalam SIS-DCS dipecahkan kepada beberapa modul. Jadi, untuk memudahkan perpindahan pengawalan dari satu modul ke modul yang lain, kaedah menu digunakan. Maka lahirlah satu sistem yang berorientasikan menu. Terdapat empat menu telah disediakan untuk memandu pengguna-pengguna. Menu-menu tersebut terdiri dari:-

- 4.1) Menu Utama (Rajah 2)
- 4.2) Menu Input (Rajah 3)
- 4.3) Menu Senarai (Rajah 4)
- 4.4) Menu laporan Peperiksaan (Rajah 5)

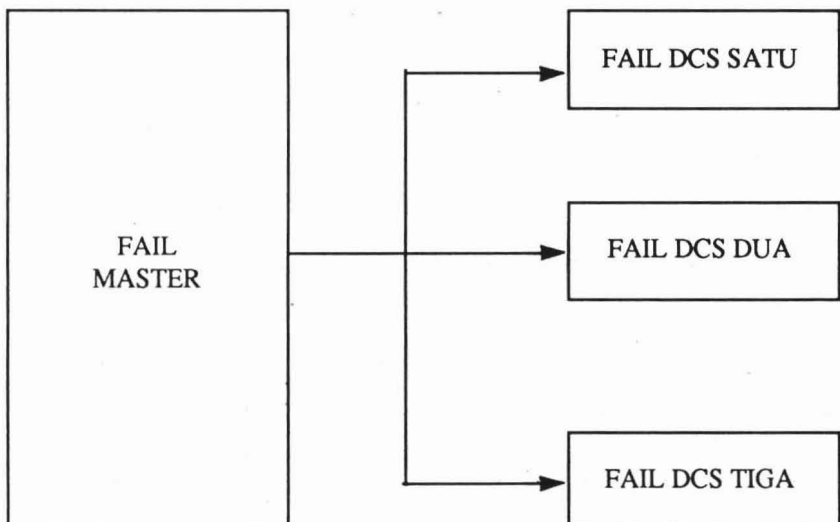
4.1 MENU UTAMA

Menu ini merupakan menu induk yang mengawal pemanggilan menu-menu yang lain. Rajah 2 menunjukkan contoh Menu Utama.



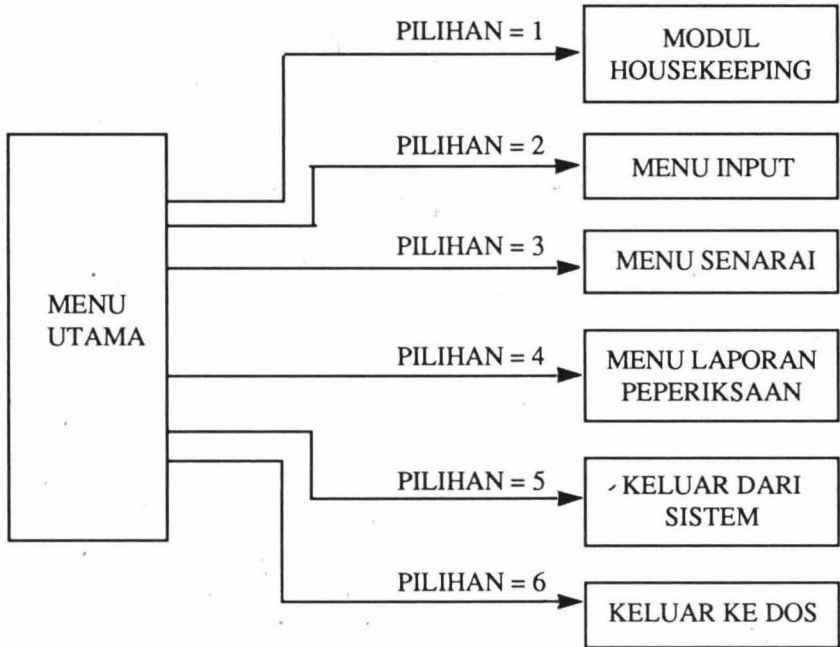
RAJAH 2 : MENU UTAMA

Pilihan 1 akan memindahkan pengawalan dari menu utama ke modul "House-keeping". Tugas modul ini ialah untuk membahagikan fail "master" kepada beberapa fail yang lebih kecil. Pembahagian fail "master" adalah berdasarkan kepada bahagian pengajian pelajar. Sebagai contoh, Diploma Sains Komputer di ITM Cawangan Pahang mempunyai tiga bahagian. Maka fail "master" akan dipecahkan kepada fail DCS 1, fail DCS 2 dan fail DCS 3. Pemecahan seperti ini difikirkan perlu untuk mempercepatkan lagi pemprosesan data.



RAJAH 3 : PEMBAHAGIAN FAIL "MASTER"

Seterusnya, pilihan 2 akan memanggil Menu Input, pilihan 3 akan merujuk kepada Menu Senarai manakala pilihan 4 pula akan memindahkan pengawalan ke Menu Laporan Peperiksaan. Secara ringkasnya, kaedah yang boleh dibentuk boleh digambarkan melalui rajah 7. “keluar dari sistem” bermaksud keluar dari SIS-DCS untuk berada dalam “dot prompt” DSBASE III Plus. “Keluar dari DOS” pula bermaksud keluar dari DBASE III Plus untuk berada dalam Disk Operating System (DOS).



RAJAH 4 : KAITAN MENU UTAMA DAN MENU-MENU LAIN.

4.2 MENU INPUT

Input bermaksud segala bahan mentah atau data yang diperlukan dalam sesuatu pemrosesan. Data kemudiannya akan diproses untuk dijadikan maklumat dalam membantu membuat perbandingan serta membuat keputusan.

Jadi, menu ini bertujuan untuk membolehkan serta memudahkan pengguna memasukkan data ke dalam fail “master”. Lampiran 1 memberikan struktur fail “master”. Kemasukkan markah dan gred peperiksaan juga dibuat melalui menu ini. Contoh menu input adalah seperti di bawah.

<p>SISTEM MAKLUMAT DIPLOMA SAINS KOMPUTER (SIS-DCS)</p> <p>MENU INPUT</p>
<p>1 - MEMASUKKAN DATA FAIL “MASTER” 2 - MEMASUKKAN MARKAH PEPERIKSAAN X - KELUAR KE MENU UTAMA</p>
<p>SILA MASUKKAN PILIHAN ANDA:-</p>

RAJAH 5 : MENU INPUT

4.3 MENU SENARAI

Pada permulaan setiap semester, terdapat tiga jenis senarai pelajar amat diperlukan. Senarai-senarai pelajar yang dimaksudkan ialah:-

- a) senarai pendaftaran matapelajaran setiap pelajar untuk kegunaan hari pendaftaran matapelajaran pelajar lama.
- b) senarai pelajar mengikut bahagian dan kelas/kumpulan untuk kegunaan pentadbiran.
- c) senarai pelajar mengikut matapelajaran dan kumpulan untuk pensyarah.

Sila rujuk lampiran 2 untuk contoh senarai-senarai di atas. Rajah 4 memberikan contoh Menu Senarai.

<p>SISTEM MAKLUMAT DIPLOMA SAINS KOMPUTER (SIS-DCS)</p> <p>MENU SENARAI</p>
<p>1 - SENARAI PENDAFTARAN MATAPELAJARAN 2 - SENARAI MENGIKUT BAHAGIAN & KELAS 3 - SENARAI MENGIKUT MATAPELAJARAN X - KELUAR KE MENU UTAMA</p>
<p>SILA MASUKKAN PILIHAN ANDA:-</p>

RAJAH 6 : MENU SENARAI

Dengan adanya senarai-senarai di atas terutamanya senarai mengikut matapelajaran, masalah seperti ketidakpastian bilangan pelajar mengulang sesuatu matapelajaran dapat diatasi. Ini akan memudahkan lagi dari segi penyediaan jadual waktu kuliah.

4.4 MENU LAPORAN PEPERIKSAAN

Pada penghujung setiap semester, ketua-ketua kursus perlu menyediakan laporan prestasi keseluruhan setiap pelajar seperti menentukan status setiap pelajar seperti menentukan status setiap pelajar berlandaskan pada purata nilai mata dan himpunan purata nilai mata mereka. Disamping itu, satu laporan prestasi keseluruhan juga wajar dihasilkan untuk memberikan gambaran terhadap prestasi keseluruhan kursus, matapelajaran dan sebagainya.

Contoh Menu Laporan Peperiksaan adalah seperti yang dipaparkan dalam rajah 5. Lampiran 3 pula memberikan contoh laporan-laporan yang dimaksudkan di atas.

SISTEM MAKLUMAT DIPLOMA SAINS KOMPUTER (SIS-DCS)
MENU LAPORAN PEPERIKSAAN
1 - LAPORAN PEPERIKSAAN PELAJAR 2 - LAPORAN KESELURUHAN PEPERIKSAAN X - KELUAR KE MU UTAMA
SILA MASUKKAN PILIHAN ANDA:-

RAJAH 7 : MENU LAPORAN PEPERIKSAAN

5.0 JADUAL ALIRAN KERJA

Aliran kerja SIS-DCS dipecahkan kepada enam bulan. Pecahan terperinci tertera di dalam rajah 6



RAJAH 8 : JADUAL ALIRAN KERJA SIS-DCS

6.0 KESIMPULAN

Walaupun SIS-DCS telah menolong dari segi membantu dalam tugas-tugas pentadbiran, tidak dinafikan bahawa masih banyak modifikasi, perubahan, peningkatan serta perkembangan yang perlu dibuat. Tindakan-tindakan susulan perlu dibuat dari masa ke semasa.

SIS-DCS juga boleh diubahsuai untuk digunakan oleh kursus-kursus lain di ITM Pahang.

LAMPIRAN 1 : STRUKTUR FAIL "MASTER"

Structure for database: D:/DBASSE4NOV91. DBF

Number of data records: 219

Date of last update: 17/07/91

Field	Field Name	Type	Width	Dec	Index
1	NAMA	Character	30		N
2	JANTINA	Character	1		N
3	KPITM	Character	8		N
4	PART	Character	1		N
5	KUMP	Character	1		N
6	SUBJECT 1	Character	6		N
7	CREDIT 1	Numeric	1		N
8	MARKAH 1	Character	2		N
9	GRADE 1	Character	2		N
10	POINT 1	Numeric	4	2	N
11	SCORE 1	Numeric	4	2	N
12	STATUS 1	Character	1		N
13	SUBJECT 2	Character	6		N
14	CREDIT 2	Numeric	1		N
15	MARKAH 2	Character	2		N
16	GRADE 2	Character	2		N
17	POINT 2	Numeric	4	2	N
Press any key to continue....					
18	STATUS 2	Character	1		N
19	SCORE 2	Numeric	5	2	N
20	SUBJECT 3	Character	6		N
21	CREDIT 3	Numeric	1		N
22	MARKAH 3	Character	2		N
23	GRADE 3	Character	2		N
24	POINT 3	Character	4	2	N
25	SCORE 3	Numeric	5	2	N
26	STATUS 3	Character	1		N
27	SUBJECT 4	Character	6		N
28	CREDIT 4	Numeric	1		N
29	MARKAH 4	Character	2		N
30	GRADE 4	Character	2		N
31	POINT 4	Numeric	4	2	N
32	SCORE 4	Numeric	5	2	N
33	STATUS 4	Character	1		N
34	SUBJECT 5	Character	6		N
35	CREDIT 5	Numeric	1		N

36	MARKAH 5	Character	2		N
37	GRADE 5	Character	2		N
38	POINT 5	Numeric	4	2	N
Press any key to continue.....					
39	SCORE 5	Numeric	5	2	N
40	STATUS 5	Character	1		N
41	SUBJECT 6	Character	6		N
42	CREDIT 6	Numeric	1		N
43	MARKAH 6	Character	2		N
44	GRADE 6	Character	2		N
45	POINT 6	Numeric	4	2	N
46	SCORE 6	Numeric	5	2	N
47	STATUS 6	Character	1		N
48	SUBJECT 7	Character	6		N
49	CREDIT 7	Numeric	1		N
50	MARKAH 7	Character	2		N
51	GRADE 7	Character	4		N
52	POINT 7	Numeric	4	2	N
53	SCORE 7	Numeric	5	2	N
54	STATUS 7	Character	1		N
55	SUBJECT 8	Character	6		N
56	CREDIT 8	Numeric	1		N
57	MARKAH 8	Character	2		N
58	GRADIT 8	Character	2		N
59	POINT 8	Numeric	4	2	N
Press any key to continue.....					
60	SCORE 8	Numeric	5	2	N
61	STATUS 8	Character	1		N
62	HRS-ATT	Numeric	2		N
63	HRS-GAIN	Numeric	2		N
64	POINTS	Numeric	7	2	N
65	GPA	Numeric	7	2	N
66	TOT-ATT	Numeric	3		N
67	TOT-GAIN	Numeric	3		N
68	TOT-POINTS	Numeric	7	2	N
69	CGPA	Numeric	7	2	N
70	PTOT-ATT	Numeric	3		N
71	PTOT-GAIN	Numeric	3		N
72	PTOT-POINT	Numeric	7	2	N
73	PREV-CGPA	Numeric	7	2	N
**Total **			268		

LAMPIRAN 2 : CONTOH SENARAI MENGIKUT KELAS/KUMPULAN

DIPLOMA SAINS KOMPUTER
SENARAI PELAJAR MENGIKUT KELAS

BAHAGIAN : 1
KUMPULAN : C

BIL.	NAMA	KPTIM	JANTINA
1	MUD ISMAMUDIN BIN ISMAIL	91324660	L
2	MUHAMAD ROFI BIN MAT JUSOH	91388893	L
3	N W HABIBAHTUN BT W MOHD DAUD	91415053	P
4	NAFEES AHMAD BIN HANIF BABA	91294641	L
5	NAZIHA BT SEMAN	91323975	P
6	NOOR HASNAH BT MD JELANI	91342139	P
7	NORAFIDAH BT BAHARUDDIN	91354365	P
8	NORAXZLAN BIN HUSIN @ HUSSEIN	91295113	L
9	NORAZLINDA BT OSMAN	91382671	P
10	NORHANI BT ZAINIDDIN	91296285	P
11	NORSHALIZAH BT AHMAD	91387410	P
12	RAJA AZAM BIN RAJA ALI	913793229	L
13	RAZILAH BT DORAMAN	91295973	P
14	ROHANA BT ABD RASHID	91372615	P
15	ROSLAN BIN HUSSIN	91348343	L
16	ROZAIDA BT MOHD DARUS	91329594	P
17	ROZITA BT KADAR	91384084	P
18	RUZAIMEE BIN IBRAHIM	90375996	L
19	SAADAH BT MOHD SAAD	91284583	P
20	SAHAIMI BIN GHAZALI	91402355	L
21	SH JULIA BT SY AHMAD SAUKAWI	91293110	P
22	SH SABILAH BT SYED AHMED	91275244	P
23	SHAFIE BIN AREP/ARIFF	91347713	L
24	SHAMRULISMAWI BIN ISMAIL	91389230	L
25	SHAMSUL ANUAR BIN KAMARLUDIN	91318352	L
26	SITI KHAIRUL AZLINA BTE ATAN	91333356	P
27	SUHAILA BTE SALLEH	91294282	P
BILANGAN PELAJAR LELAKI		: 11	
BILANGAN PELAJAR PEREMPUAN		: 16	

LAMPIRAN 3 : CONTOH SENARAI MENGIKUT MATAPELAJARAN**DIPLOMA SAINS KOMPUTER
SENARAI PELAJAR MENGIKUT MATAPELAJARAN**

BAHAGIAN : 2
KUMPULAN : B
KOD : CSC 152
NAMA MATAPELAJARAN : TEKNOLOGI KOMPUTER
NAMA PENSYARAH : PN FADZILAH ALI

BIL	NAMA	KPITM	JANTINA
1	ABU BIN HJ LELE	90612821	L
2	ALAWI BIN ABDULLAH	90712951	L
3	AZMAN B ABDULLAH	90416426	L
4	AZURA BT MOHD TAIB	90178190	P
5	FAIZAH BT BESAR	90399884	P
6	HANAPI ABU BAQAR	90197806	L
7	HANIFAH BT SAIBANI	90299667	P
8	HAZIAH BT ALI	90406765	P
9	JAMIL SYUKRAN B YUSOFF	90409087	L
10	KHAIRUL RIJAL B MOHD DAHLAN	90543387	L
11	MAZNI BT AYUB	90732618	P
12	MOHD AZREEN B OTHMAN	90333792	L
13	MOHD JASRILA B MOHD ARSHAD	90268128	L
14	MURNI BT YAACOB	90629296	P
15	MUSTAFA B MOHD MISKON	90538990	L
16	NAZRUDDIN B NASIR	90428589	L
17	NOOR AZIMAH BT IBRAHIM	90712176	P
18	NOORUL HUDA BT JAMALUDDIN	90291362	P
19	RAMLAH BT SULAIMAN	90721162	P
20	RUSMAWATI BT OTHMAN	90658552	P
21	SHARIFAH SUPINAR SYED SULAIMAN	90554267	P
22	SURIANI BT OMAR	90712637	P
23	WAN ZAINAL ADILEEN WAN PUTEH	90248786	L
24	ZAHURIN BT HASSAN	90506831	P
25	ZALINA BT ISHAK	90718946	P

LAMPIRAN 4 : CONTOH SENARAI PENDAFTARAN

NAMA : ALAWI BIN ABDULLAH
KPITM : 90713951
BAHAGIAN : 2
KUMPULAN : B

MATAPELAJARAN	NAMA MATAPELAJARAN	JAM KREDIT
CSC 152	TEKNOLOGI KOMPUTER	4
CSC 154	PENGATURACARAAN PASCAL	4
MAT 170	MATEMATIK II	4
QMT 100	Pengenalan Statistik	4
UIS 151	Pendidikan Islam II	2
ENL 150	ENGLISH II	2
KKR	KO-KURRIKULUM	1
JUMLAH JAM KREDIT : 21		

LAMPIRAN 5 : CONTOH LAPORAN PEPERIKSAAN (PELAJAR)

LAPORAN PEPERIKSAAN
DIPLOMA SAINS KOMPUTER ITM PAHANG

NAMA : ////////////////////
 KPITM : 3333333
 BAHAGIAN : 9
 KUMPULAN : C

KOD	JAM KRE	MAR	GRED	GRADE POINT	POINT SCORE	STATUS L/G
CSC 152	4	78	A-	3.67	14.68	L
CSC 106	4	82	A	4.00	16.00	L
MAT 220	4	90	A+	4.00	16.00	L
QMT 151	4	92	A+	4.00	16.00	L
ACC 107	3	82	A	4.00	12.00	L
UIS 201	2	73	B+	3.33	6.66	L
JPP	0	K		0.00	0.00	
PRESENT TOTAL POINTS SCORED					:	81,34
PRESENT HOURS ATTEMPTED					:	21
PRESENT HOURS GAINED					:	21
PRESENT GRADE POINT AVERAGE					:	3.87
PREVIOUS TOTAL POINT SCORED					:	129.38
PREVIOUS HOURS ATTEMPTED					:	33
PREVIOUS HOURS FAINED					:	33
PREVIOUS GRADE POINT AVERAGE					:	3.92
CUMMULATIVE TOTAL POINTS SCORED					:	210.72
CUMMULATIVE HOURS ATTEMPTED					:	51
CUMMULATIVE HOURS GAINED					:	51
CUMMULATIVE GRADE POINT AVERAGE					:	3.90
CATATAN					:	SIJIL DEKAN

LAMPIRAN 6 : CONTOH LAPORAN PEPERIKSAAN (KESELURUHAN)

LAPORAN PRESTASI MENGIKUT MATAPELAJARAN
PEPERIKSAAN MEI 1991
DIPLOMA SAINS KOMPUTER
INSTITUT TEKNOLOGI MARA
CAWANGAN PAHANG DARUL MAKMUR

KOD MATAPELAJARAN	BIL	LULUS	GAGAL	X	Y	PERATUS		PURATA MATA
						LULUS	GAGAL	
CSC 101	65	61	4	0	0	93.85	6.15	2.78
CSC 152	74	60	7	4	3	81.08	18.92	2.32
CSC 201	25	25	0	0	0	100.0	0.00	2.71
CSC 113	67	65	1	1	0	97.01	2.99	2.55
CSC 154	74	59	11	3	1	79.73	20.27	2.20
CSC 106	30	29	1	0	0	96.67	3.33	3.08
MAT 120	52	44	8	0	0	84.62	15.38	2.17
MAT 170	83	51	30	2	0	61.45	38.55	1.97
MAT 220	45	42	2	0	1	93.33	6.67	2.58
QMT 100	56	49	7	0	0	87.50	12.50	2.62
QMT 151	65	48	15	1	1	73.85	26.15	2.28
ACC 107	44	40	1	3	0	90.91	9.09	2.08
UIS 101	50	49	1	0	0	98.00	2.00	3.19
UIS 151	55	55	0	0	0	100.0	0.00	3.30
UIS 201	72	70	0	1	1	97.22	2.78	2.98
ENL 110	42	41	1	0	0	97.62	2.38	2.87
ENL 150	56	55	0	0	1	98.21	1.79	3.00
ENL 200	67	50	15	1	1	74.63	25.37	2.11
ENL 250	10	9	1	0	1	90.00	10.00	3.20

LAMPIRAN 7 : CONTOH LAPORAN PEKERIKSAAN (KESELURUHAN)

LAPORAN PRESTASI MENGIKUT 'GRADE POINT AVERAGE'
PEKERIKSAAN MEI 1991
DIPLOMA SAINS KOMPUTER
INSTITUT TEKNOLOGI MARA
CAWANGAN PAHANG DARUL MAKMUR

BAHAGIAN	3.50- 4.00	3.00- 3.49	2.50- 2.99	2.00- 2.49	<2.00	PURATA GPA
SATU	1	15	23	11	0	2.81
DUA	4	9	26	13	4	2.69
TIGA	2	7	27	19	19	2.42

LAPORAN PRESTASI MENGIKUT 'CUMMULATIVE GRADE POINT AVERAGE'
PEKERIKSAAN MEI 1991
DIPLOMA SAINS KOMPUTER
INSTITUT TEKNOLOGI MARA
CAWANGAN PAHANG DARUL MAKMUR

BAHAGIAN	3.50- 4.00	3.00- 3.49	2.50- 2.99	2.00- 2.49	<2.00	PURATA CGPA
SATU	1	15	23	11	0	2.81
DUA	2	11	28	13	2	2.72
TIGA	1	6	26	29	12	2.44

LAMPIRAN 8 : SEDIKIT TENTANG DBASE III PLUS

dBASE III Commands

SYNTAX OF COMMANDS

?(exp List)

Displays an expression list on the next line.

??(exp list)

Displays an expression list on the current line.

@ (row, col) [[SAY (exp) [PICTURE (clause)]]
[GET (exp) [PICTURE(clause][RANGE (exp), (exp)]]/
[CLEAR]

SAY displays user-formatted data in the CRT or printer.

GET displays user-formatted data on the CRT for editing.

ACCEPT [prompt] TO (memvar)

Allows the entry of a character string into a memory variable.

APPEND [BLANK]

Adds records to the end of a database file.

APPEND FROM (file name)[FOR 9condition)][SDF/
[DELIMITED [WITH BLANK/)DELIMITER]]

Adds records from other files to database files.

ASSIST

Menu-driven:aids execution of dBASE III commands.

AVERAGE (exp list) [(scope)] }FOR/WHILE (condition)]
{TO (memvar list)}

Computes the arithmetic mean of numeric expressions.

BROWSE [FIELDS (field list0][LOCK (expN)][FREEZE (field)]
[NO FOLLOW]

Menu-assisted: edits using a full-screen window display of up to 17 records per screen.

CANCEL

Aborts program execution and returns to dot prompt.

CHANGE [(scope)][FIELDS (field list)] [FOR/WHILE (condition)]

Edits specified fields and records in a database.

CLEAR

Erases the screen.

CLEAR ALL

Closes all database files, index files, format files, and relations. It also releases all memory variables and SELECTS work area one.

CLEAR GETS

Releases current GET variables from the READ access.

CLEAR MEMORY

Erases current memory vstisblrd.

CLOSE ALTERNATE/DATABASE/FORMAT/INDEX/PROCEDURE

Closes specified types of files.

CONTINUE

Positions the record number to the next record meeting condition specified in the LOCATE command.

COPY FILE (file name) TO (file name)

Duplicates any kind of file.

COPY STRUCTURE TO (file) [FIELDS (field list)]

Duplicates the structure of the file in USE to a new database.

COPY TO (file name) [(scope)][FIELDS (field list)]

[FOR/WHILE (condition)[SDF/[DELIMITED[WITH BLANK/(delimiter)]]]

Copies the database in USE to another database or to a text file, if SDF or DELIMITED options are used.

COPY TO (new file) STRUCTURE EXTENDED

Copies the structure definition of the file in USE to a new database where the structure of the original becomes the records in the new.

COUNT [(scope)][FOR/WHILE (condition)][TO (memvar)]

Tallied the number of records specified in the scope.

CREATE (dbf file name)

Defines a structure for a new database file and adds the file to the directory.

CREATE (new file) FROM (structure extended file)

Creates a new database file from a file created by COPY STRUCTURE EXTENDED.

CREATE LABEL (.lbl file name)

Menu driven: creates a label from file.

CREATE REPORT (.from file name)

Menu driven: creates a report form file.

DELETE [(scope)][FOR/WHILE (condition)]

Marks specified records for deletion.

DIR [(drive:)][(path)][(skeleton)]

Shows names of files on the specified disk drive.

DISPLAY [(scope)][FIELDS (field list)][FOR/WHITE (condition)][OFF][TO PRINT]

Displays records and fields from the active database.

DISPLAY STATUS [TO PRINT]

Displays current memory variables.

DISPLAY STATUS [TO PRINT]

Displays current information about active database, index files, alternate files, and system parameters.

DISPLAY STRUCTURE [TO PRINT]

Displays the structure of the database file in USE.

DO (.prg file name) / (procedure name) [with (parameter list)]

Causes a program or procedure to be executed, optionally passing parameters to the program.

DO WHILE...CASE...[OTHERWISE]...ENDCASE

Permits the execution of only one of several possible paths (CASEs), optionally including one alternative (OTHERWISE). DO CASE must terminate with and ENDCASE.

DO WHILE...ENDDO

Allows a structured loop in a program. DO WHILE must terminate with an ENDDO.

EDIT [[RECORD] (expN)]

Permits changes to database field contents.

EJECT

Sends a formfeed to the printer.

ERASE (file name)

Deletes the specified file from the directory.

EXIT

Transfers control from within a DO WHILE ... ENDDO construct to the statement following the ENDDO.

FIND (character string)

Positions the record pointer to the first record with an index key that matches the specified character string. The character string does not have to be delimited.

GO or GOTO BOTTOM/TOP/(expN)

Positions the record pointer directly to a specific record.

HELP [(keyword)]

Menu-driven: explains dBASE III commands and functions.

IF...[ELSE]...ENDIF

Allows conditional execution of commands in a program optionally with an alternative path (ELSE). Each IF must terminate with an ENDIF.

INDEX ON (exp) TO (.ndx file name)

Causes the associated database to appear to be sorted according to a specified key.

INPUT [(prompt)] TO (memvar)

Allows the entry of an expression into a memory variable.

INSERT [BLANK][BEFORE]

Puts a record into a specified position in a database file.

JOIN WITH (alias) TO (new file) FOR (condition)**[FIELDS (field list)]**

Combines specified records and fields from two database files.

LABEL FORM (.lbl file name) [SAMPLE][scope]**[FOR/WHILE (condition)]****[TO PRINT][TO FILE (file name)]**

Prints labels using the specified label form file.

LIST [(scope)] [FOR/WHILE (condition)][FIELDS (field list)]**[OFF][TO PRINT]**

Lists database records and fields.

LOCATE [(scope)] FOR (condition)

Positions the record pointer to a record that satisfies the specified condition.

LOOP

Transfers control from within a DO WHILE loop back to the DO WHILE statement.

MODIFY COMMAND (file name)

Word processor: allows editing of ASCII text files, including program (.prg) files.

MODIFY LABEL (.lbl file name)

Menu driven: creates and edits a label form file.

MODIFY REPORT (.frm file name)

Menu driven: creates and edits a report form file.

MODIFY STRUCTURE

Alters the structure of the database in USE.

NOTE/* (undelimited character string)

Inserts nonexecuting comments within a program file.

PACK

Permanently removes database records marked for deletion.

PARAMETERS (parameter list)
 Specifies memory variables that use information passed by the DO...WITH command.

PRIVATE [ALL [LIKE/EXCEPT (skeleton)]][(memory variable list)]
 Hides memory variables in higher-level programs.

PROCEDURE (procedure name)
 Identifies the beginning of each routine in a procedure file.

PUBLIC (memory variable list)
 Makes memory variables global.

QUIT
 Closes all files and exits dBASE III.

READ
 Permits data entry to a GET field or variable.

RECALL [(scope)][FOR/WHILE (condition)]
 Reinstates records marked for deletion.

REINDEX
 Rebuilds existing active index files.

RELEASE [(memvar list)]/[ALL [LIKE/EXCEPT (skeleton)]]
 Erases current memory variables.

RENAME (current file name) TO (new file name)
 Gives a new name to a file.

**REPLACE [(scope)] (field) WITH (exp) [, (field2) WITH (exp2),...]
 [FOR/WHILE (condition)]**
 Changes contents of data fields to specified values.

**REPORT FORM (.frm file name) [(scope)]{FOR (exp)}[PLAIN]
 [HEADING (expC)][NOEJECT][TO PRINT]
 [TO FILE (file name)]**
 Displays a tabular report of data.

RESTORE FROM (.mem file name) [ADDITIVE]
 Retrieves sets of saved memory variables from disk.

RETURN [TO MASTER]
 Ends a program. It is last executable line.

RUN (command)
 Executes a program outside of dBASE III.

SAVE TO (.mem file name) [ALL LIKE/EXCEPT (skeleton)]
 Copies current memory variables to a memory file.

SEEK (expression)
 Positions the record pointer to the first record with an index key that matches the specified expression.

SELECT (Workarea/alias)
 Switches among up to 10 work areas.

SET
 Menu-driven: sets dBASE III control parameters.

SET ALTERNATE TO [(file name)]
 Creates a file for saving output.

SET ALTERNATE on/OFF
 Sends/DOES NOT SEND output to a file.

SET BELL ON/off
 Bell RINGS/does not ring during data entry.

SET CARRY on/OFF
Writes/DOES NOT WRITE contents of the last record into the APPENDED record.

SET COLOR TO (standard display)[, (enhanced display)][, (Border)]
Set screen display attributes.

SET CONFIRM on/OFF
Does not skip/SKIPS to the next field in the dull-screen mode.

SET CONSOLE ON/off
SENDS/suspends all output to the screen.

SET DEBUG on/OFF
Sends/DOES NOT SEND the output of SET ECHO to the printer.

SET DECIMALS TO (expN)
Sets the minimum number of decimals displayed in the results of certain operations and functions.

SET DEFAULT TO (drive)
Specifies the default drive for file search.

SET DELETED on/OFF
Hides/PROCESSES records marked for deletion.

SET DELIMITERS TO [(character string)]/[DEFAULT]
Specifies the delimiters for full-screen field and variable displays.

SET DELIMITERS on/OFF
Displays full-screen fields and variables delimited in normal video/
IN REVERSE VIDEO.

SET DEVICE TO SCREEN/print
Sends the results of the @...SAY command to the SCREEN/printer.

SET ECHO on/OFF
Echoes/DOES NOT ECHO command lines to the screen printer.

SET ESCAPE ON/off
ABORTS/continues command file execution when Esc is pressed.

SET EXACT on/OFF
Requires/DOES NOT REQUIRE exact matches in character comparison.

SET FILTER TO (condition)]
Causes a database file to appear as if it contains only records that meet the specified condition.

SET FIXED on/OFF
Fixes/DOES NOT FIX the number of decimal places that will be displayed.

SET FORMAT TO [(,fmt file name)]
Opens a format file for data entry.

SET FUNCTION (expN) TO (character string)
Sets function key values.

SET HEADING ON/off
Field names DISPLAY/do not display above the fields in LIST or DISPLAY.

SET HELP ON/off
Determines whether the user will be prompted for help when an error is encountered.

SET INDEC TO [(,ndx file list)]
Opens the named INDEX files.

SET INTENSITY ON/off
ENABLE/disable reverse video in full-screen operations.

SET MARGIN TO (expN)
Sets the left margin of the printer.

SET MENU on/OFF
Determines whether a menu is displayed during full-screen operations.

SET PATH on/OFF
Specifies a path list for file search.

SET PRINT on/OFF
Sends/DOES NOT SEND output to the printer.

SET PROCEDURE TO [(procedure file name)]
Opens the named procedure file.

SET RELATION TO (key)/RECNO (0)/(expN INTO (alias)
Links two database according to a key expression.

SET SAFETY ON/off
Sets the level of protection against a file being overwritten.

SET STEP on/OFF
Halts/DOES NOT HALT program execution after each command is processed.

SET TALK ON/off
SENDS/does not send the results of command execution to the screen.

SET UNIQUE on/OFF
The first/ALL records with identical keys appear in an index file.

SKIP (expN)
Causes the current record pointer to be advanced or backed up relative to its current position.

**SORT TO (new file name) ON (field)[/A][/C][/D]
[, (field2) {/A}[/C][/D]....][(scope)][FOR/WHILE (condition)]**
Creates an ordered copy of a database, arranged according to one of the data fields.

STORE (exp) TO (memvar list)
Stores an expression into one or more memory variables.

SUM() (scope)[(expression list)] TO () (memvar list) [FOR/WHILE (condition)]
Computes and displays the sum of an expression for database records specified in the scope.

TEXT...ENDTEXT
Displays a block of text data from a command file. TEXT must be terminated with ENDTEXT.

**TOTAL TO (file name) ON (key) [(scope)] [FIELDS (field list)
[FOR/WHILE (condition)]**
Creates a summary database of a presorted file, containing numeric TOTALS.

TYPE (file name [TO PRINT])
displays the contents of a disk file.

UPDATE ON (key field) FROM (alias)

**REPLACE (field) EITHER (exp) [, (field2) WITH
(exp2)...][RANDOM]**
Allows batch modifications to a database.

USE [(.dbf file name)][INDEX (.ndx file list)][ALIAS (alias)]
Specifies the database file to be used for all operations until another USE command is issued.

WIT [(prompt)][TO (memvar)]
Suspends program processing until a key is pressed.

ZAP
Removes all records from the active database file.

LAMPIRAN 10 : CONTOH-CONTOH PROGRAM DBASE III PLUS

```

?
? SPACE (8) +"MATAPELAJARAN"+SPACE (5) +"NAMA MATAPELAJARAN"+SPACE (13)+
? SPACE (8) +"          "+SPACE(5)+"          "+SPACE (13)+
  IF SUBJECT 1<>"          "
  ?SPACE (12) +SUBJECT1+SPACE(7)+NAMA1+SPACE(3)+STR(CREDIT1)
  ENDIF

  IF SUBJECT2<>"          "
  ?SPACE(12) +SUBJECTS3+SPACE(7)+NAMA2+SPACE(3)+STR(CREDIT2)
  ENDIF

  IF SUBJECT3 <>"          "
  ?SPACE(12)+SUBJECT3+SPACE(7)+NAMA3+SPACE(3)+STR(CREDIT3)
  ENDIF

  IF SUBJECT4<>"          "
  ?SPACE(12)+SUBJECT4+SPACE(7)+NAMA4+SPACE(3)+STR(CREDIT4)
  ENDIF

  IF SUBJECT5<>"          "
  ?SPACE(12)+SUBJECT5+SPACE(7)+NAMA5+SPACE(3)+STR(CREDIT5)
  ENDIF

  IF SUBJECT6<>"          "
  ?SPACE(12)+SUBJECT6+SPACE(7)+NAMA+SPACE(3)+STR(CREDIT6)
  ENDIF

  IF SUBJECT7<>"          "
  ?SPACE(12)+SUBJECT7+SPACE(7)+NAMA+SPACE(3)+STR(CREDIT7)
  ENDIF

  IF SUBJECT8<>"          "
  ?SPACE(12)+SUBJECT8+SPACE(7)+NAMA8+SPACE(3)+STR(CREDIT8)
  ENDIF
?
REPLACEHRS-ATTWITH CREDIT1+CREDIT2+CREDIT3+CREDIT4+CREDIT
?SPACE(12)+"JUMLAH JAM KREDIT : ", HRS-ATT
?
?
?
?
EJECT
SKIP
ENDDO
SET DEVICE TO SCREEN
SET PRINT OFF

```

LAMPIRAN 11 : CONTOH-CONTOH PROGRAM DBASEE III PLUS

```

DO WHILE .T.
clear
STORE " SISTEM MAKLUMAT DCS (SIS_DCS) " TO LL1
STORE " INSTITUT TEKNOLOGI MARA " TO LL2
STORE " CAWANGAN PAHANG DARUL MAKMUR " TO LL3
@1, 5 SAY REPLICATE (CHR (219), 70)
@2, 5 SAY REPLICATE (CHR (219), 70)
@3, 5 SAY REPLICATE (CHR (219), 70)
@4, 5 SAY REPLICATE (CHR (219), 70)
@5, 5 SAY REPLICATE (CHR (210), 70)
STORE 6 60 A
DO WHILE A,=18
    @A, 5 SAY CHR (219)
    @A,74 SAY CHR (219)
STORE A+1 TO A
ENDDO
STORE 18 TO A
DO WHILE A< + 20
    @A, 5 SAY REPLICATE (CHR(219), 70)
    STORE A+1 TO A
ENDDO
@2, 40 - )LEN(LL1)/2) SAY LL1
@3, 40 - (LEN (LL2)/2) SAY LL2
@4, 40 - (LEN(LL3)/2) SAY LL3

STORE " 1 - MEMASUKKAN DATA 'MASTER-FILE' " TO L1
STORE " 2 - MEMASUKKAN DATA PEPERIKSAAN " TO L2
STORE " MENU MODUL INPUT " TO L5
STORE " X - KELUAR KE MENU UTAMA " TO L6
@7, 40 - (LEN(L5)/2) SAY L5
@9, 40 - (LEN (L1)/2) SAY L1
@10, 40 - (LEN(L2)/2) SAY L2
@13, 40 - (LEN (L6)/2) SAY L6
STORE " SILA MASUKKAN PILIHAN ANDA : " TO L8
STORE SPACE(1) TO OPT
DO WHILE .NOT. OPT $"12X"
@19, 40 - (LEN(L8)/2) SAY L8 GET OPT
READ
ENDDO
DO CASE
    CASE OPT + "1"
        DO MAS-DCS
    CASE OPT + "2"
        DO EXAM-IN
    CASE OPT + "X"
        CLEAR
        EXIT
    ENDCASE
ENDDO

```


RUJUKAN

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Bersabda Nabi Muhamad S.A.W.

"Siapa yang ingin melihat orang yang dimerdekan Allah dari neraka, maka lihatlah para murid-murid (pelajar-pelajar agama), maka demi Allah yang jiwa Muhamad di tanganNya, tiada seorang pelajar yang hilir mudik ke pintu orang alim melainkan Allah menulis untuknya bagi tiap-tiap huruf yang dipelajari dan tiap langkah sama dengan ibadat satu tahun, dan untuk tiap langkah satu kota di syurga, dan tiap ia berjalan dimintakan ampun oleh bumi, dan tiap pagi dan petang tetap diampunkan dosanya, dan disaksikan oleh Malaikat, bahkan mereka berkata: Mereka inilah yang dimerdekan oleh Allah dari api neraka".

(Riwayat : Abul Laits dari Anas bin Malik)