SWE4001- Lab 6

Lab Question 5 – Direct Linking Loader

Write a C program to Implement pass one of a direct-linking loader. Sample three input files are given. Sample output files are given.

Algorithm for Pass 1 Direct Linking Loader:

Figure 3.11(a) Algorithm for Pass 1 of a linking loader.

Input files:

PROGA:

H^PROGA^000000^0063
D^LISTA^000040^ENDA^000054^
R^LISTB^ENDB^LISTC^ENDC
T^000020^0A^03201D^77100004^050014
T^000054^0F^000014^FFFFF6^00003F^000014^FFFFC0
M^000024^05^+LISTB
M^000054^06^+LISTC
M^000057^06^+ENDC
M^000057^06^-LISTC
M^00005A^06^+ENDC
M^00005A^06^-LISTC
M^00005A^06^+PROGA
M^00005D^06^-ENDB
M^00005D^06^+LISTB
M^000060^06^+LISTB
M^000060^06^-PROGA
E^000020

PROGB:

H^PROGB^000000^007F
D^LISTB^000060^ENDB^000070^
R^LISTA^ENDA^LISTC^ENDC
T^000036^0B^03100000^772027^05100000
T^000070^0F^000000^FFFFF6^FFFFFF^FFFFF0^000060
M^000037^05^+LISTA
M^00003E^05^+ENDA
M^00003E^05^-LISTA
M^000070^06^+ENDA
M^000070^06^-LISTA
M^000070^06^+LISTC
M^000073^06^+ENDC
M^000073^06^-LISTC
M^000076^06^+ENDC
M^000076^06^-LISTC
M^000076^06^+LISTA
M^000079^06^+ENDA
M^000079^06^-LISTA
M^00007C^06^+PROGB
M^00007C^06^-LISTA
E

PROGC:

H^PROGC^000000^0051
D^LISTC^000030^ENDC^000042^
R^LISTA^ENDA^LISTB^ENDB
T^000018^0C^03100000^77100004^05100000
T^000042^0F^000030^000008^000011^000000^000000
M^000019^05^+LISTA
M^00001D^05^+LISTB
M^000021^05^+ENDA
M^000021^05^-LISTA
M^000042^06^-ENDA
M^000042^06^-LISTA
M^000042^06^+PROGC
M^000048^06^+LISTA
M^00004B^06^+ENDA
M^00004B^06^-LISTA
M^00004B^06^-ENDB
M^00004B^06^+LISTB
M^00004E^06^+LISTB
M^00004E^06^-LISTA
E

OUTPUT:

Pass one of a Direct-Linking Loader

Control section	Symbol name	Address	Length
PROGA		4000	0063
	LISTA	4040	
	ENDA	4054	
PROGB		4063	007F
	LISTB	40C3	
	ENDB	40D3	
PROGC		40E2	0051
	LISTC	4112	
	ENDC	4124	