

PROGRAM PROLOGUE

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
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2					*****
3	*				MICHAEL BEAVER *
4	*				CS 310, SPRING 2013 *
5	*				PROGRAM 4 *
6	*				DUE: APRIL 3, 2013 *
7	*				*****
8	*				DESCRIPTION: *
9	*				THIS PROGRAM EXPECTS AS INPUT A DATA FILE WITH AN UNKNOWN NUMBER*
10	*				OF DATA LINES. THE DATA FOLLOWS A SPECIFIC FORMAT WHERE EACH *
11	*				GROUP OF FIVE LINES REPRESENTS A PERSON'S DATA: FIRST, MIDDLE, *
12	*				AND LAST NAMES; STREET ADDRESS; CITY; STATE ABBREVIATION; AND, *
13	*				ZIP CODE. THE PROGRAM CONVERTS THIS 5-LINE FORMAT INTO A 3-LINE *
14	*				FORMAT AND PRINTS THE RESULT. EACH 3-LINE DATA GROUP IS *
15	*				SEPARATED BY A GROUP OF THREE BLANK LINES. THE PROGRAM THEN *
16	*				TERMINATES AFTER REACHING THE END OF THE DATA FILE. *
17	*				*****
18	*				INTERNAL SUBROUTINES: *
19	*				READDATA: MAIN SUBROUTINE CALLS THE FOLLOWING SUBROUTINES TO *
20	*				READ IN AND FORMAT DATA FOR OUTPUT *
21	*				MAKENAME: FORMATS THE NAME LINE: LAST, FIRST M. *
22	*				STRADDR: SIMPLY PRINTS THE ADDRESS LINE FROM THE DATA FILE *
23	*				CTYSTZIP: FORMATS THE CITY, STATE, AND ZIP CODE: CITY, ST ZIP *
24	*				FINDBLNK: FINDS THE FIRST BLANK IN A MEMORY LOCATION (POINTED *
25	*				TO BY REG2)--THE RESULT IS RETURNED IN REG2 *
26	*				CASCBLNK: CASCADES BLANK CHARACTERS INTO THE OUTLINE MEMORY *
27					*****

MAIN PROGRAM

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
				29	*****
				30	* REGISTER KEY: *
				31	* REG11: USED TO CALL READDATA SUBROUTINE *
				32	*****
000000				33	MBPROG4 START
000000	90EC D00C		0000C	34	STM 14,12,12(13) BEGINNING HOUSEKEEPING
000004	05C0			35	BALR 12,0
000006				36	USING SAVING,12
000006	50D0 C01A		00020	37	SAVING ST 13,SAVEAREA+4
00000A	41D0 C016		0001C	38	LA 13,SAVEAREA
00000E	45B0 C104		0010A	40	BAL 11,READDATA ALL ACTION BEGINS HERE
000012	58D0 C01A		00020	42	L 13,SAVEAREA+4 ENDING HOUSEKEEPING
000016	98EC D00C		0000C	43	LM 14,12,12(13)
00001A	07FE			44	BR 14
00001C				46	SAVEAREA DS 18F
000064				47	REGSAVE DS 16F
0000A4				48	CARD DS CL50
0000D6	40			49	CARRIAGE DC C' '
0000D7				50	OUTLINE DS CL50

READDATA: CONVERT FROM 5-LINE FORMAT TO 3-LINE FORMAT

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LOC OBJECT CODE ADDR1 ADDR2 STMT SOURCE STATEMENT

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52 *****
53 * REGISTER KEY: *
54 * REG11: USED TO CALL OTHER SUBROUTINES AND BRANCH BACK TO MAIN *
55 *****
00010A 900F C05E 00064 56 READDATA STM 0,15,REGSAVE

00010E E000 C09E 0032 000A4 58 READTOP XREAD CARD,50 READ UNTIL EOF
000114 4740 C134 0013A 59 BC B'0100',READEND

000118 45B0 C13A 00140 61 BAL 11,MAKENAME CONVERT FROM 5-LINE TO 3-LINE
00011C 45B0 C1A4 001AA 62 BAL 11,STRADDR
000120 45B0 C1B6 001BC 63 BAL 11,CTYSTZIP

000124 E020 C0D0 0001 000D6 65 XPRNT CARRIAGE,1 3-LINE SEPARATOR (BLANKS)
00012A E020 C0D0 0001 000D6 66 XPRNT CARRIAGE,1
000130 E020 C0D0 0001 000D6 67 XPRNT CARRIAGE,1

000136 47F0 C108 0010E 69 B READTOP

00013A 980F C05E 00064 71 READEND LM 0,15,REGSAVE
00013E 07FB 72 BR 11

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
				74	*****
				75	* REGISTER KEY: *
				76	* REG2: POINTER TO CARD MEMORY AREA TO FIND INITIAL BLANKS; *
				77	* STEP SIZE (1) FOR LOOPS *
				78	* REG3: TERMINAL VALUE (BLANK LOCATION) FOR LOOPS *
				79	* REG4: POINTER TO OUTLINE MEMORY AREA *
				80	* REG6: POINTER TO THE END OF THE FIRST NAME *
				81	* REG7: POINTER TO THE MIDDLE NAME *
				82	* REG8: POINTER TO THE BEGINNING OF THE LAST NAME; POINTER *
				83	* TO MEMORY TO BE COPIED INTO OUTLINE MEMORY (VIA LOOPS) *
				84	* REG10: USED TO CALL OTHER SUBROUTINES *
				85	* REG11: USED TO RETURN TO CALLING SUBROUTINE *
				86	*****
000140	45A0	C232	00238	87	MAKENAME BAL 10,CASCBLNK
000144	4120	C09E	000A4	89	LA 2,CARD FIND BLANK AFTER FIRST NAME
000148	45A0	C218	0021E	90	BAL 10,FINDBLNK
00014C	1862			91	LR 6,2 FIRST NAME ENDS AT REG6 LOC
00014E	4172	0001	00001	93	LA 7,1(2) MIDDLE INITIAL AT REG7 LOC
000152	1827			94	LR 2,7 FIND BLANK AFTER MIDDLE NAME
000154	45A0	C218	0021E	95	BAL 10,FINDBLNK
000158	4182	0001	00001	97	LA 8,1(2) LAST NAME STARTS AT REG8 LOC
00015C	1828			98	LR 2,8 FIND BLANK ENDING LAST NAME
00015E	45A0	C218	0021E	99	BAL 10,FINDBLNK
000162	1832			101	LR 3,2
000164	0630			102	BCTR 3,0
000166	4120	0001	00001	103	LA 2,1
00016A	4140	C0D1	000D7	104	LA 4,OUTLINE
00016E	D200	4000	8000 00000 00000	105	LASTNAME MVC 0(1,4),0(8) COPY LAST NAME TO OUTLINE
000174	4144	0001	00001	106	LA 4,1(4)
000178	8782	C168	0016E	107	BXLE 8,2,LASTNAME
00017C	926B	4000	00000	108	MVI 0(4),C','

FORMAT NAME: LAST, FIRST M.

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LOC	OBJECT	CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT	
000180	1836				110	LR 3,6	
000182	4144	0002		00002	111	LA 4,2(4)	LOCATION TO COPY TO IN OUTLINE
000186	4180	C09E		000A4	112	LA 8,CARD	
00018A	D200	4000	8000	00000	113	FRSTNAME MUC 0(1,4),0(8)	COPY FIRST NAME TO OUTLINE
000190	4144	0001		00001	114	LA 4,1(4)	
000194	8782	C184		0018A	115	BXLE 8,2,FRSTNAME	
000198	D200	4000	7000	00000	117	MIDINIT MUC 0(1,4),0(7)	COPY MIDDLE INITIAL TO OUTLINE
00019E	924B	4001		00001	118	MVI 1(4),C'.'	
0001A2	E020	C0D0	0033	000D6	120	XPRNT CARRIAGE,51	
0001A8	07FB				121	BR 11	

FORMAT STREET ADDRESS: JUST COPY STREET ADDRESS

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LOC OBJECT CODE ADDR1 ADDR2 STMT SOURCE STATEMENT

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123 *****
124 * REGISTER KEY: *
125 * REG10: USED TO CALL OTHER SUBROUTINES *
126 * REG11: USED TO RETURN TO CALLING SUBROUTINE *
127 *****
0001AA 45A0 C232 00238 128 STRADDR BAL 10,CASCBLNK
0001AE E000 C0D1 0032 000D7 130 XREAD OUTLINE,50
0001B4 E020 C0D0 0033 000D6 131 XPRNT CARRIAGE,51
0001BA 07FB 133 BR 11
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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
				135	*****
				136	* REGISTER KEY: *
				137	* REG2: STEP SIZE FOR LOOPS *
				138	* REG3: TERMINAL VALUE FOR LOOPS *
				139	* REG4: POINTER TO CARD MEMORY AREA *
				140	* REG5: POINTER TO OUTLINE MEMORY AREA *
				141	* REG10: USED TO CALL OTHER SUBROUTINES *
				142	* REG11: USED TO RETURN TO CALLING SUBROUTINE *
				143	*****
0001BC	45A0 C232		00238	144	CTYSTZIP BAL 10,CASCBLNK
0001C0	E000 C09E 0032 000A4			146	XREAD CARD,50 GET CITY DATA LINE
0001C6	4140 C0D0 000D6			147	LA 4,CARD+50 START AT THE END OF THE LINE
0001CA	5820 C242 00248			148	L 2,=F'-1'
0001CE	4130 C09D 000A3			149	LA 3,CARD-1
0001D2	9540 4000 00000			150	FINDCITY CLI 0(4),C' ' FIND WHERE THE CITY NAME ENDS
0001D6	4720 C1D8 001DE			151	BC B'0010',NOTBLANK
0001DA	8642 C1CC 001D2			152	BXH 4,2,FINDCITY
0001DE	4120 0001 00001			154	NOTBLANK LA 2,1
0001E2	1834 00001			155	LR 3,4 REASSIGN FOR NEW TERMINAL LOC
0001E4	4140 C09E 000A4			156	LA 4,CARD
0001E8	4150 C0D1 000D7			157	LA 5,OUTLINE
0001EC	D200 5000 4000 00000 00000			158	COPYCITY MUC 0(1,5),0(4) COPY CITY FROM CARD TO OUTLINE
0001F2	4155 0001 00001			159	LA 5,1(5)
0001F6	8742 C1E6 001EC			160	BXLE 4,2,COPYCITY
0001FA	E000 C09E 0032 000A4			162	XREAD CARD,50 GET STATE DATA LINE
000200	926B 5000 00000			163	MVI 0(5),C','
000204	D201 5002 C09E 00002 000A4			164	COPYST MUC 2(2,5),CARD COPY STATE INITIALS TO OUTLINE
00020A	E000 C09E 0032 000A4			166	XREAD CARD,50 GET ZIP CODE DATA LINE
000210	D204 5006 C09E 00006 000A4			167	COPYZIP MUC 6(5,5),CARD COPY ZIP CODE TO OUTLINE
000216	E020 C0D0 0033 000D6			169	XPRNT CARRIAGE,51
00021C	07FB 00000			170	BR 11

FIND BLANK

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
				172	*****
				173	* REGISTER KEY: *
				174	* REG2: POINTER TO LOCATION IN WHICH TO FIND FIRST BLANK; RETURN*
				175	* POINTER LOCATION TO BLANK *
				176	* REG10: USED TO RETURN TO CALLING SUBROUTINE *
				177	*****
00021E	9031 C05E		00064	178	FINDBLNK STM 3,1,REGSAVE
000222	9540 2000	00000		180	SRCHTOP CLI 0(2),C' ' FIND THE FIRST BLANK
000226	4780 C22C		00232	181	BC B'1000',FOUND
00022A	4122 0001		00001	182	LA 2,1(2)
00022E	47F0 C21C		00222	183	B SRCHTOP
000232	9831 C05E		00064	185	FOUND LM 3,1,REGSAVE POINTER RETURNED IN REG2
000236	07FA			186	BR 10

CASCADE BLANKS INTO OUTLINE

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
				188	*****
				189	* REGISTER KEY: *
				190	* REG10: USED TO RETURN TO CALLING SUBROUTINE *
				191	*****
000238	9240 C0D1	000D7		192	CASCBLNK MVI OUTLINE,C' '
00023C	D230 C0D2 C0D1	000D8 000D7		193	MVC OUTLINE+1(49),OUTLINE
000242	07FA			194	BR 10
				195	END MBPROG4
000248	FFFFFFFF				=F'-1'

*** 0 STATEMENTS FLAGGED - 0 WARNINGS, 0 ERRORS

*** PROGRAM EXECUTION BEGINNING -

ANY OUTPUT BEFORE EXECUTION COMPLETE MESSAGE IS PRODUCED BY USER PROGRAM ***

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*** EXECUTION COMPLETED ***

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