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Hello fellow 99'ers. Yours truly is interim editing this newsletter due to the departure of its former editor, Evan Smith, who was also our secretary-treasurer. He is now being replaced by three people. Needless to say, we miss Evan. Newly appointed treasurer is Nick Shemdin, and Steve Holland is our new secretary. This newsletter is published, as usual, by Allan Ross.

Johan Van Imschoot

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NEW MEMBERS

We welcome to the group the following new members: Emerson Upton, Peter Masterton, Grant MacFarlane, Joe MacMurchie, and Ray Gallagher.

NEW MEETING PLACE

We have lost our meeting place at 23 Caddilac. However, Jordan Hughes of Island Computers Ltd. has offered their location at 1211 Wharf Street to us in exchange for a nominal rent, reviewable in three months. This location is a fortunate one for us because it includes eighteen consoles and other 99/4A equipment, which we will be allowed to use. We will be held responsible for any damage we cause, so please be careful.

The fact there are consoles and recorders means you might be wise to bring a tape to meetings. Should you wish to demonstrate software with joysticks, please supply your own joysticks, as these are easily broken.

Time and place of meeting: 7:30 p.m., third Saturday of the month, as usual. (First time will be June 18). Incidentally, Saturday evening is the only evening available to us at this location. All members will have been informed by telephone of the new meeting place. We may temporarily be asking for 50 cents per member per meeting to cover our rental.

NEW MEMBER INFORMATION SHEET

A sheet of information will be available to introduce new members to the group. This sheet may contain information existing members are not aware of, so why not all grab a copy.

OWNERSHIP FORMS

Your experiences with software/hardware you own can give invaluable guidance to other members. Please fill in, and every so often update, the ownership forms previously distributed. Hand them in to the librarian.

TARDY BORROWERS

Library magazines have so far been lent out free of charge. Recent experience is that copies are going out but not coming back. All older issues are now out. This is not fair to other members. Please rectify this situation, or an overdue charging system may have to be instituted.

CONSTITUTIONAL CHANGES -- FEE INCREASES

Due to membership growth, rentals for equipment, rental for a meeting place, possible future costs associated with newsletter production, emergency fund for breakage etc.., and the possibility of acquiring goods, our $5 per person per year membership fee is no longer adequate. The executive proposes the following new fee structure: $20/year/person. Special rates: $30/year/family(nuclear) and $15/year/student(full-time) or senior citizen. New members joining with 4 or fewer monthly meetings remaining in the year would be charged only half the yearly rate. Note that this new member might have attended a previous meeting as a visitor.

Other constitutional changes may be recommended in the near future to prepare our constitution for registered society guidelines. Acquaint yourselves with the constitution : you may wish to suggest changes. A membership vote on all these changes is still some meetings away and will be announced, so there is plenty of time for you to think over these and other proposals.

NANAIMO GROUP

Some time ago, Ralph Van den Heuvel started a Nanaimo group after having been a member of ours (which he still is). He has in the past, suggested a meeting for the two groups, but so far this has not taken place. A meeting in Duncan on a Saturday afternoon, instead of our regular Victoria meeting, might be an excellent picnic idea. If interested in attending such a meeting, please let Rick Nicholson know.

CONTESTS ..... CONTESTS ..... CONTESTS

Monday 6.30 p.m., June 27, tentatively at Johan's house: a people versus the 4 chess contest. No entry fee, no prize, just the fun of seeing who can do best, and of playing chess, and socializing. Please register with Johan, 479-7503. (P.S.- Contestants must supply their own chess board and pieces.)

July meeting: a Parsec contest, again just for fun. Contestants please register with Rick Nicholson. You must supply your own joysticks and Parsec module.

Anyone interested in hosting another contest, please let Johan know.

Program Contest: The deadline is the June meeting, and very few entries are expected. Most likely this contest was too ambitious for the limited time available to group members.

Winners of all contests will be announced in this Newsletter.

ASSEMBLY LANGUAGE -- BACKGROUND/INTRODUCTION

A tutorial on this subject was promised some time ago. If anyone is still interested, please contact Johan. It will be tentatively scheduled for Monday, 4 July, 7 p.m. This will be a very basic tutorial, covering bits, bytes, and addresses, and such, and some of the internal concepts of the computer, plus if time permits, some of the flavour of assembly language.

TELECOMMUNICATIONS ARTICLE

The second article promised in this series by Evan Smith may appear in a future newsletter.

CARDLESS?

You might not be able to plug in to some healthy discounts if you are cardless, and we appear to have a cardless member. If you are that member, please contact our treasurer who will supply you with our invaluable membership card.

NEWSLETTER TIDBITS

Do you have some juicy tidbits for this newsletter? Don't keep them to yourself. Computer jokes, hints, or subroutines....it's all welcome. Even advertising, which is presently free.

GRAPH PAPER

An important announcement for those involved in designing graphics for the 4A (which should be most, if not all, of us). Due to the efforts of our treasurer, Nick Shemdin, the University of Victoria Campus Shop will be, in the near future, carrying ideal graph paper: 8 by 8 based squares, of which a page will contain 7 by 10. Even better: it will be available in tracing paper. As you are no doubt aware, standard graph paper, based on 10 by 10 divisions, is not bery suitable for our graphics, even though it will do in a pinch.

INSTANT RECALL

People with MINI MEMORY or the EDITOR/ASSEMBLER may find the following little utility routine handy. It will instantly save or recall a screen-full of information. The following version is intended for MINI MEMORY, to be typed in as is, assuming that no other programs are also going to be used. Use EASYBUG's L command to load in the cassette-based assembler. Use the MINI MEMORY with the RUN selection to run the assembler, called NEW. Then type in the following:

```
SP BLWP @SV
   B *11
RP BLWP @RV
   B *11
SV DATA RG
   DATA PS
RV DATA RG
   DATA PR
PS LI R6,>6030
   JMP PM
PR LI R6,>6028
PM CLR R0
   LI R1,>7118
   LI R2,768
   BLWP *R6
   RTWP
RG BSS 32
   AORG >701C
   DATA >7FC8
   AORG >7FC8
   TEXT 'SAVE '
   DATA SP
   TEXT 'RECALL'
   DATA RP
   END
```

If typed in correctly, you should get the message that there are no unresolved references. Simply hit enter, quit, and select BASIC to try out the routine. Use CALL LINK("SAVE") or CALL LINK("RECALL") in immediate mode or in a program to store or bring back a screen. To help out beginners, I have included the linkage to BASIC in the above; assuming, however, that no other assembly programs are in use.

CHALLENGE: Try to understand how the routine works. Comments have been purposely left out. Hint: addresses 6030 and 6028 are for screen write and read utility routines provided by MINI-MEMORY: see your manual. The stuff below RG BSS 32 is simply for linkage to Basic and not part of the program--again read the manual. 7118 is the first free address in MINI-MEMORY (Warning: once you use the routine you will wreck the assembler you loaded in.)

FURTHER CHALLENGE: The above routine is really of limited usefulness. At least two screen-fulls should be saveable to be of any use, and possibly more. Try to modify the program so it will save more than one screen. If you give up or have problems, contact me.

Extended Basic: Note that if you have EXTRA MEMORY, assembly routines written usisng the MINI MEMORY can be used by EXTENDED BASIC! Ask me for details.
                                    Johan Van Imschoot

ADVERTISEMENTS

Tutoring -- I will tutor in programming topics on a course or on a help or question-and-answer basis, Individuals at the rate of $5.00 per hour for members and $10.00 per hour for non-members. -- Johan 479-7503

For Sale --Speech Synthesizer, $120.00 or best offer. Games in basic : Breakout, Star Wars, Dungeons. In Extended Basic: Subshoot General, Isenthral, Pyramid. Games are $3.00 each, plues $3.00 per cassette tape required. Call Rob Sorensen, 592-6790.

Video-Graphs Brand new Texas Instruments cartidge for sale, or possibly swap.(I have one too many). Johan 479-7503

CHAR EDITOR -I've developed an excellent, multi-character, multi-color graphics editor for the 4A. Extended Basic is required. The editor is primarily intended for developing character-based graphics for use by other programs, but may also be used for experimentation, or just for fun. It includes many automatic features. For group members, I will sell copies (supply your own tape) for the reasonable price of $4.00. Please do not make unauthorized copies: it would certainly affect my future outlook on special prices for group members. (note-this is a much more sophisticated program than the one I wrote and donated to the club library). Johan 479-7503

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HEX

Ralph Van den Heuvel of the Nanaimo User's Group and of the Victoria User's Group contributes the following two pages. This is a table to simplify doing hexadecimal arithmetic.

HEX TABLE

SUBTRACTION ANSWERS

0	1	2	3	4	5	(6)	[7]	8	(9)	A	B	C	D	E	F
1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	10
(2)	3	4	5	6	7	8	(9)	A	[B]	C	D	E	F	10	11
3	4	5	6	7	8	9	A	B	C	D	E	F	10	11	12
4	5	6	7	8	9	A	B	C	D	E	F	10	11	12	13
5	6	7	8	9	A	B	C	D	E	F	10	11	12	13	14
(6)	7	8	9	A	B	C	(D)	E	F	10	11	12	13	14	15
7	8	9	A	B	C	D	E	F	10	11	12	13	14	15	16
8	9	A	B	C	D	E	F	10	11	12	13	14	15	16	17
(9)	A	B	C	D	E	F	10	11	(12)	13	14	15	16	17	18
A	B	C	D	E	F	10	11	12	13	14	15	16	17	18	19
B	C	D	E	F	10	11	12	13	14	15	16	17	18	19	1A
C	D	E	F	10	11	12	13	14	15	16	17	18	19	1A	1B
D	E	F	10	11	12	13	14	15	16	17	18	19	1A	1B	1C
(E)	F	10	11	12	13	[14]	15	16	17	18	19	1A	1B	1C	1D
F	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E

ADDITION ANSWER

— E – 10

→ BORROW 10

ADDITION ANSWER

Hex addition/subtraction table

EXAMPLE:

TO ADD >00E2 + >0069
PLACE NUMBERS BELOW EACH OTHER:

```
  00E2
+ 0069
= 014B
```

ADD COLUMNS AS BY COMMON
ARITHMATIC USING TABLE ABOVE
BY FINDING COORDINATES OF
2 & 9 AND E & 6

PROOF >00E2 = DECIMAL 226
+ >0069 = " 105
= >014B = " 331

TO SUBTRACT:

```
  00E2
- 0069
= 0079
```

SUBTRACT COLUMNS AS
BY COMMON ARITHMATIC
USING TABLE ABOVE BUT
REVERSING PROCEDURE

PROOF >00E2 = DECIMAL 226
- >0069 = " 105
= >0079 = " 121

HEX TABLE

0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	10
2	3	4	5	6	7	8	9	A	B	C	D	E	F	10	11
3	4	5	6	7	8	9	A	B	C	D	E	F	10	11	12
4	5	6	7	8	9	A	B	C	D	E	F	10	11	12	13
5	6	7	8	9	A	B	C	D	E	F	10	11	12	13	14
6	7	8	9	A	B	C	D	E	F	10	11	12	13	14	15
7	8	9	A	B	C	D	E	F	10	11	12	13	14	15	16
8	9	A	B	C	D	E	F	10	11	12	13	14	15	16	17
9	A	B	C	D	E	F	10	11	12	13	14	15	16	17	18
A	B	C	D	E	F	10	11	12	13	14	15	16	17	18	19
B	C	D	E	F	10	11	12	13	14	15	16	17	18	19	1A
C	D	E	F	10	11	12	13	14	15	16	17	18	19	1A	1B
D	E	F	10	11	12	13	14	15	16	17	18	19	1A	1B	1C
E	F	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D
F	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E

Hex addition/subtraction table