- Harvard architecture - code was split from data
- von Neumann machine supported only single addressing mode - direct addressing

Manchester Baby Lab

```
; CI: 0
; PI: JMP 0             ; 0
; ACC: 0

00  JMP 0             ; 0
01  LDN 31             ;
02  SUB 30             ;
03  STO 29             ;
04  LDN 29             ;
05  STO 31             ;
06  SUB 27             ; Subtract 65535 from accumlator
07  CMP                ; Negative accumlator means that we haven't reach 64K yet
08  STP               ; stop
09  JMP 28             ; continue looping until 64K

# unused addresses
10  JMP 0
11  JMP 0
12  JMP 0
13  JMP 0
14  JMP 0
15  JMP 0
16  JMP 18             ; 18
17  STP               ; 57344
18  JMP 0              ; 0
19  NUM -989           ; STP
20  NUM 988            ; JMP 28
21  NUM -3             ; STP
22  NUM -988           ; STP
23  JMP 1             ; 1
24  JMP 0             ; 0
25  JMP 16             ; 16
26  JMP 0             ; 0
#end unused addresses


27  NUM 65535          ; hex #FFFF
28  NUM 0             ; constant 0
29  NUM 0             ; 0
30  NUM 1             ; 0
31  NUM 0             ; 0
```