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PRIOR THOUGHTS

Solve the problem by few blocks, each block is doing separate function.

Use subroutine whenever necessary.

Use loops BR to compare print repeatedly.

Use a register to keep track which shape we printed before interruption.

IMPORTANT REGISTERS' VALUES

R1 = Shape to print

R6 = Stack pointer

TO USE

Load the interrupt service routine first, and then the user program and execute finally.

Since the user program contains an infinite loop, to stop the program, you must press the "Stop Execution" button in the simulator.

ALGORITHM

I have described my steps in .asm source file. Please take a look.

Initialize with required interrupt vector and interrupt-enabled bit.

Read value of R1, print corresponding shape. If interrupted, read interrupt vector, load PC with responding address and do what's in interruption routine (to get input and print: use KBSR, KBDR, DSR and DDR respectively). We can detect enter is pressed by reading content of KBDR and see if it is decimal 10(x0A). After RTI, read value of R1 and print corresponding shape again when return from interruption.