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a) A custom-designed solution for this company would provide a very accurately tailored program for their needs. They would be able to have input in the design & structure of the program aswell as creating a requirements definition of the needs of the system. This would be rather expensive as time would be taken to develop the software and they would have to pay the software designers to develop the program.

A customised off-the-shelf package in comparison would be much cheaper in that you're only paying for the rights to use the program and not the development time & effort. Although it is true you get what you pay for & although the off-the-shelf package may be cheaper but the design, & structure & functioning of

the program may not satify the needs of the company.

~~Another advantage of the custom-designed solution is that that system belongs to you &~~

b)(I) Hardware such as modems have helped us communicate & recieve information quick & easier from varying locations all over the world. The internet & peer-to-peer sharing have also aided the distribution of such software as it allows people to pass on the software.

(II) The issue of intellectual property may arise from this approach as if is the developers who have given up their time & effort & it is their creation.

It is also very difficult to determine the contributing developers or origins of the software & therefore there is no way of recieving assistance or reporting problems & therefore there is a decrease in reliability of the software.

c) (I) The register Reg n & the memory address Mem x.

(II) ~~Mem6 = A1 (in hexadecimal)~~

Mem6 = Reg3 = Reg1 + Reg2

= Mem5 + Mem6

= 30 + A1 (hexadecimal)

= 48 + 161 (binary) = 209

pto

= 209 (binary)

= D1 (hexadecimal)

16^2	16^1	16^0
256	16	1
	D	1

Mem6 is originally A1
but changes to D1

$16 \overline{)209}$ 13 r 1

= D1

(III) Mem6 = D1

∴ Reg 3 = D1 (as Reg 3 is stored in Mem 6.)

= 209

256	16	1
	D	1

D = 13

∴ 13 × 16 = 208

1 = 1

∴ D1 = 209

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d) (iv) ADD (Reg 1, Reg 1, Reg 1, Reg 1)

STORE (Reg 1, Mem 7)