

CSE 103

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Subject: Assignment from book

Chapter: 1

Section: 2

Exercise: 06

6. You can upgrade your operating system only if you have a 32-bit processor running at 1 GHz or faster, at least 1 GB RAM, and 16 GB free hard disk space, or a 64-bit processor running at 2 GHz or faster, at least 2 GB RAM, and at least 32 GB free hard disk space. Express your answer in terms of u : “You can upgrade your operating system,” b_{32} : “You have a 32-bit processor,” b_{64} : “You have a 64-bit processor,” g_1 : “Your processor runs at 1 GHz or faster,” g_2 : “Your processor runs at 2 GHz or faster,” r_1 : “Your processor has at least 1 GB RAM,” r_2 : “Your processor has at least 2 GB RAM,” h_{16} : “You have at least 16 GB free hard disk space,” and h_{32} : “You have at least 32 GB free hard disk space.”

Solution:

If you are eligible to upgrade your operating system, the following conditions must be satisfied:

$$(B_{32} \wedge g_1 \wedge r_1 \wedge h_{16}) \vee (B_{64} \wedge g_2 \wedge r_2 \wedge h_{32})$$