



模块 6

测验： 通用输入输出



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问题 1 数组的查找

编写 C 代码以找到最少 32 个数字。假设 32 个数字在 16 位无符号数组中，通过引用传递给函数。函数原型是：

```
uint16_t Min(int16_t buffer[32]);
```

问题 2 方向寄存器

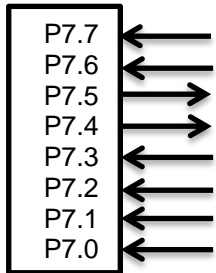
什么是方向寄存器？为什么微控制器有方向寄存器？

问题 3 选择寄存器

什么是 P1->SEL1 和 P1->SEL0 寄存器？为什么我们在初始化期间清除这些位？

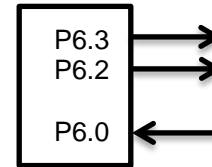
问题 4 初始化

编写初始化 MSP432 端口 7 的软件程序，输出引脚为 P7.5 和 P7.4，其余为输入。代码要没有不利的影响，代码要初始化端口 7 的所有 8 个引脚。



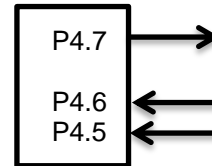
问题 5 初始化

编写初始化 MSP432 端口 6 的软件程序，输出引脚 P6.3 和输入引脚 P6.0，代码要没有不利的影响，要保留其它 5 位。



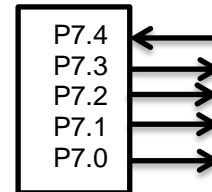
问题 6 初始化

编写初始化 MSP432 端口 4 的软件程序，输出引脚 P4.7，输入引脚 P4.6 和 P4.5，代码要没有不利的影响，代码要保留其它 5 位。



问题 7 输入/输出

总体要求是创建一个 4 位计数器。该系统具有一个数字输入和四个数字输出。每次输入从低到高时，计数器都会递增。一旦计数器达到 15，则在下一次按下或释放时将其重新调整为 0。将输出连接到端口 7 的 P7.3 – P7.0 并将输入连接到端口 7 的 P7.4。编写初始化代码和反复执行输入/输出的主循环代码，代码要没有不利的影响，要不影响端口 7 的第 5,6 和 7 位。



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