ECE4144 Homework 1

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1. Atmel 32U4
   1. 8 bits
   2. 2.7 - 5.5V
   3. Internal sys clock speed is up to 16 MHz, we use 8 MHz.
   4. 16 bits
   5. 32 general purpose registers
      1. Five GPIO pins are available. They are Port B, C, D, E, F.
   6. 1. One
      2. One
      3. One
      4. Seven
      5. Four
      6. One with 12 channels, 10-bit ADC
      7. One 10-bit DAC
2. Memory
   1. 8 bits
   2. 1. Type: 32 bytes General Purpose Registers; Addresses: 0x0000 - 0x001F
      2. Type: Standard 64 bytes I/O Registers; Addresses: 0x0020 - 0x005F

Type: External 160 bytes I/O Registers; Addresses: 0x0060 - 0x00FF

* + 1. Type: Flash Program Memory; Addresses: 0x0000 - 0x7FFF
    2. Type: 2.5KB internal SRAM; Addresses: 0x0100 - 0x0AFF

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| Address | Memory Type |
| 0x0000 - 0x001F | General Purpose Registers |
| 0x0020 - 0x005F | Standard I/O Registers |
| 0x0060 - 0x00FF | External I/O Registers |
| 0x0000 - 0x7FFF | Flash Program Memory (User Code) |
| 0x0100 - 0x0AFF | Internal SRAM |