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CS 326

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## HW5

1. A computer can only address by bytes, not bits. A byte is the smallest unit of addressable storage.

2.

```
#include <iostream>

union charInt {
    char c;
    uint8_t i;
};

int main() {
    charInt ci;
    ci.c = 'a';

    std::cout << "CharInt (char): " << ci.c << std::endl << "CharInt
(uint8_t): " << std::to_string(ci.i) << std::endl;
}
```

3.

a.

a, b, c, d

b.

a, b

c.

a, b, c

4. The program stores the allocated pointer in a temporary, not the stack variable in main.

```
typedef struct{
    int x;
    int y;
} Foo;

void allocate_node (Foo ** f)  {
    *f = (Foo *) malloc ( sizeof(Foo) );
}

void main () {
    Foo * p;
    allocate_node (&p);
    p->x = 2;
    p->y = 3;

    free(p);
}
```