How is this memory organized?

- **Heap**: Holds explicitly allocated data
  - e.g. “new” in Java and C++, “malloc” in C
  - In C++, explicitly deallocated by the programmer
int* f(int *a) {
    int *b = new int;
    ...
    return b;
}

int main() {
    int x = 1;
    int *p = new int;
    int *p2 = f(p);
    return 0;
}
A Real Program’s Heap

void f(int **a) {
    int *b = new int;
    *b = 2;
    *a = b;
}

int main() {
    int x = 1;
    int *p = new int;
    *p = x;
    f(&p);
    return 0;
}