Function Pointers

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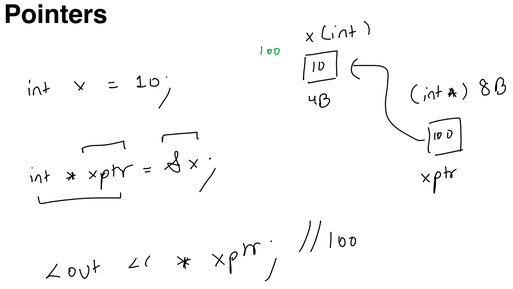

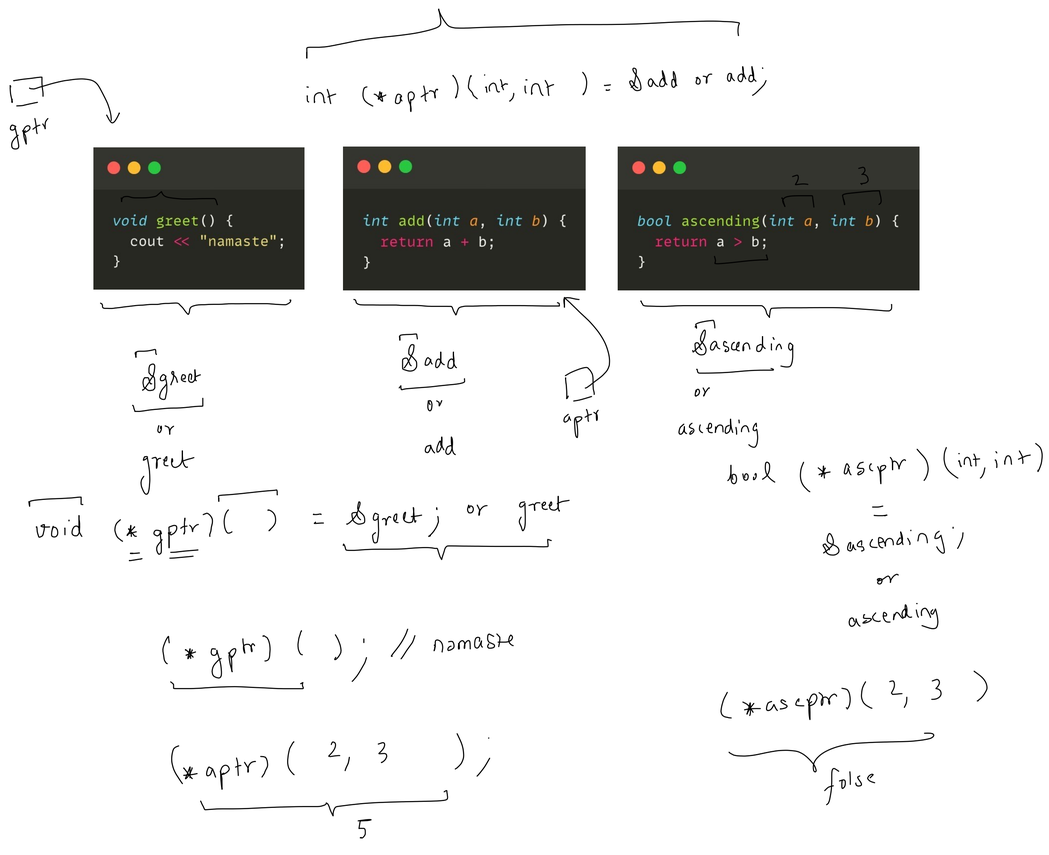

Callback Functions

Functions used as arguments to another function are called as **Callback Functions**.

```
void bubbleSort(int* arr, int n) {
  for(int i=1; i<n; i++) {
    for(int j=0; j<n-i; j++) {
      if(arr[j] > arr[j+1]) {
        swap(arr[j], arr[j+1];
      }
    }
  }
}
```

```
bool ascending(int a, int b) {
  return a > b;
}

void bubbleSort(int* arr, int n) {
  for(int i=1; i<n; i++) {
    for(int j=0; j<n-i; j++) {
      if(ascending(arr[j], arr[j+1])) {
        swap(arr[j], arr[j+1];
      }
    }
  }
}
```

```
bool descending(int a, int b) {
  return a < b;
}

void bubbleSort(int* arr, int n) {
  for(int i=1; i<n; i++) {
    for(int j=0; j<n-i; j++) {
      if(descending(arr[j], arr[j+1])) {
        swap(arr[j], arr[j+1];
      }
    }
  }
}
```

```
bool ascending(int a, int b) {
  return a > b;
}

bool descending(int a, int b) {
  return a < b;
}

void bubbleSort(int* arr, int n, bool (*f)(int, int)) {
  for(int i=1; i<n; i++) {
    for(int j=0; j<n-i; j++) {
      if(f(arr[j], arr[j+1])) { // (*f)(arr[j], arr[j+1])
        swap(arr[j], arr[j+1];
      }
    }
  }
}
```