

I ILLINOIS

Encapsulation

Learning Objectives

1. Explain the purpose of encapsulation
2. Apply encapsulation to class design



What is Encapsulation?

Header

Code



Example

```
#include "cs225/PNG.h"
class Image : public cs225::PNG {
public:
    Image() : PNG() {}

    Image(unsigned int width, unsigned int height) : PNG(width, height) {}
    void lighten();
    void lighten(double amount);
    void darken();
    void darken(double amount);
    ...
};
```

Image.h

```
#include "Image.h"
```

```
// Implement Functions ...
```

Image.cpp

```
#include "Image.h"
```

```
// Use Functions ...
```

StickerSheet.cpp



Why Encapsulation?

1. Interface
2. Helps debugging
3. Helps with larger projects

