CSC2111 Computer Science I Lab

Lab 12

Objectives

1. Understand the basics of Abstract Classes

Abstract Class

Recall, an *Abstract Class* has at least one purely virtual function.

A *purely virtual function* has no implementation in the class which it is inherited from.

Virtual Methods

Abstract Base

```
virtual getName() = 0;
```


Derived

```
getName() {
  return "Derived";
}
```

Program

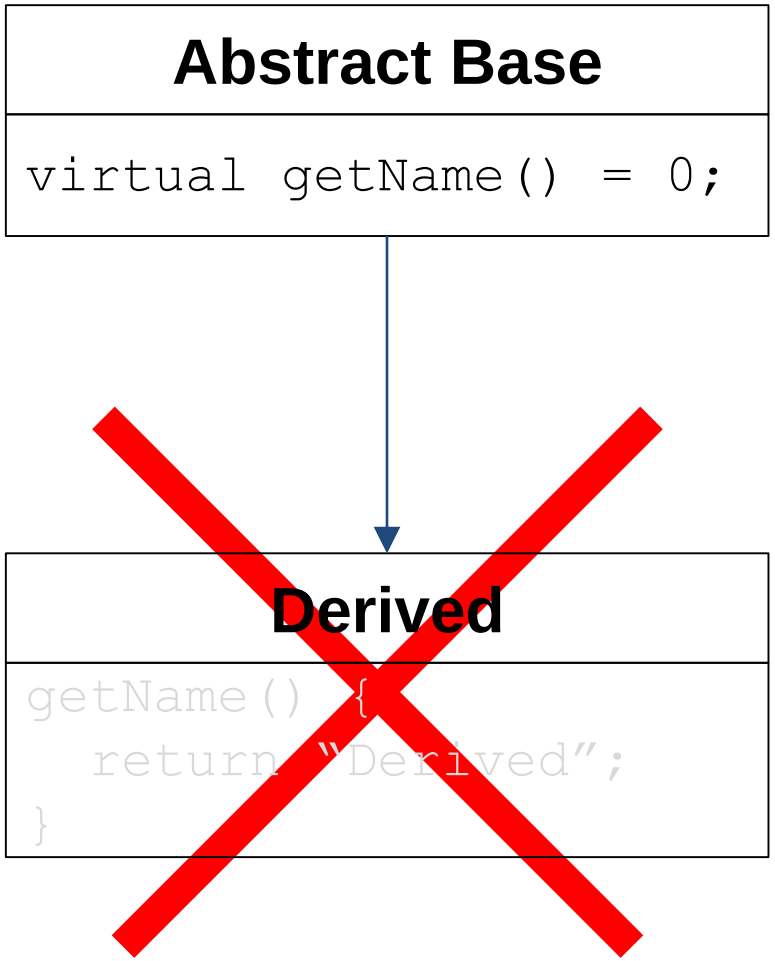
```
Derived d;
Base &b = d;

cout << b.getName() << endl;
```

Output

```
  Derived
```

Virtual Methods



Program

```
Derived d;
Base &b = d;

cout << b.getName() << endl;
```

Output

Fails to compile

Virtual Methods

Abstract Base

```
virtual getName() = 0;
getName() {
  cout << “Surprise!”
       << endl;
}
```

Derived

```
getName() {
  return “Derived”;
}
```

Program

```
Derived d;
Base &b = d;

cout << b.getName() << endl;
```

Output

```
Surprise!
Derived
```