

C Types in Java

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A Class Hierarchy for C Types

```
public abstract class CType { }

    abstract class CTypeNamed extends CType { }
        class CTypeNamedTypedef extends CTypeNamed { } // typedef name with defn elsewhere
        class CTypeNamedStruct extends CTypeNamed { } // struct foo with defn elsewhere
        class CTypeNamedUnion extends CTypeNamed { } // union foo with defn elsewhere
        class CTypeNamedEnum extends CTypeNamed { } // enum foo with defn elsewhere

    abstract class CTypeArithmetic extends CType { }
        abstract class CTypeIntegral extends CTypeArithmetic { }
            class CTypeInt extends CTypeIntegral { } // use methods for size and signedness
            class CTypeChar extends CTypeIntegral { }

        abstract class CTypeFloating extends CTypeArithmetic { }
            class CTypeFloat extends CTypeFloating { }
            class CTypeDouble extends CTypeFloating { } // use methods for length

    abstract class CTypePointing extends CType { }
        class CTypeArray extends CTypePointing { }
        class CTypePointer extends CTypePointing { }

    class CTypeVoid extends CType { }
    class CTypeFunction extends CType { }
    class CTypeEnum extends CType { }
    class CTypeStruct extends CType { }
    class CTypeUnion extends CType { }

    class CTypeInvalid extends CType { }

    class CTypeConstExpr { }
    class CTypeEnumerator { }
    class CTypeField { }
```

Details of CType

- Examine “[CType.java](#)”.

Building CType Objects from CCode Decls

- Examine “[CTypeBuilder.java](#)”.