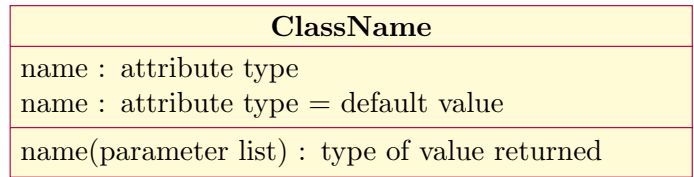


1 Simple example

```
\begin{tikzpicture}
  \begin{class}[text width=8cm]{ClassName}{0,0}
    \attribute{name : attribute type}
    \attribute{name : attribute type = default value}

    \operation{name(parameter list) : type of value returned}
  \end{class}
\end{tikzpicture}
```



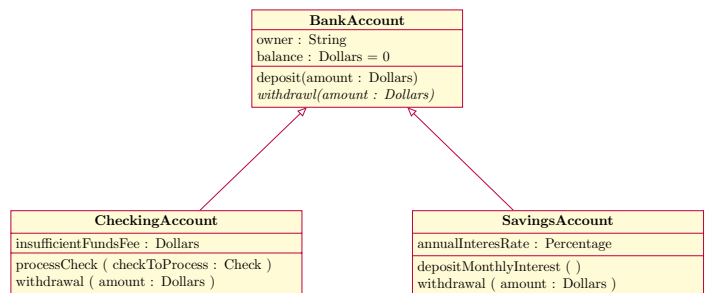
2 Inheritance

```
\begin{tikzpicture}
  \begin{class}[text width=5cm]{BankAccount}{0,0}
    \attribute{owner : String}
    \attribute{balance : Dollars = 0}

    \operation{deposit(amount : Dollars)}
    \operation[0]{withdrawal(amount : Dollars)}
  \end{class}
  \begin{class}[text width=7cm]{CheckingAccount}{-5,-5}
    \inherit{BankAccount}
    \attribute{insufficientFundsFee : Dollars}

    \operation{processCheck ( checkToProcess : Check )}
    \operation{withdrawal ( amount : Dollars )}
  \end{class}
  \begin{class}[text width=7cm]{SavingsAccount}{5,-5}
    \inherit{BankAccount}
    \attribute{annualInteresRate : Percentage}

    \operation{depositMonthlyInterest ( )}
    \operation{withdrawal ( amount : Dollars )}
  \end{class}
\end{tikzpicture}
```

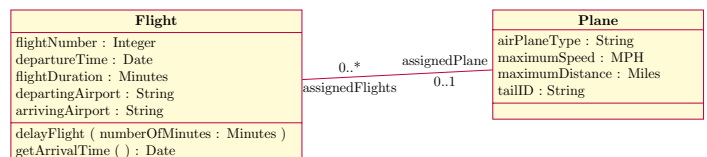


3 Association

```
\begin{tikzpicture}
  \begin{class}[text width=7cm]{Flight}{0,0}
    \attribute{flightNumber : Integer}
    \attribute{departureTime : Date}
    \attribute{flightDuration : Minutes}
    \attribute{departingAirport : String}
    \attribute{arrivingAirport : String}

    \operation{delayFlight ( numberOfMinutes : Minutes )}
    \operation{getArrivalTime ( ) : Date}
  \end{class}
  \begin{class}[Plane]{11,0}
    \attribute{airPlaneType : String}
    \attribute{maximumSpeed : MPH}
    \attribute{maximumDistance : Miles}
    \attribute{tailID : String}
  \end{class}

  \association{Plane}{assignedPlane}{0..1}{Flight}{0..*}{assignedFlights}
\end{tikzpicture}
```



4 Unidirectional association

```

\begin{tikzpicture}
  \begin{class}[text width=6cm]{OverdrawnAccountsReport}{0,0}
    \attribute{generatedOn : Date}

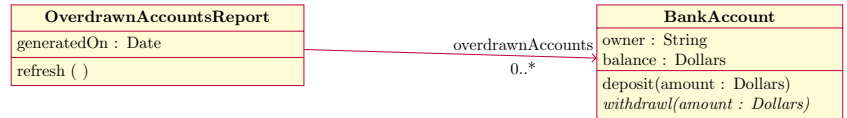
    \operation{refresh ( )}
  \end{class}

  \begin{class}{BankAccount}{12,0}
    \attribute{owner : String}
    \attribute{balance : Dollars}

    \operation{deposit(amount : Dollars)}
    \operation[0]{withdrawl(amount : Dollars)}
  \end{class}

  \unidirectionalAssociation{OverdrawnAccountsReport}{overdrawnAccounts}{0..*}{BankAccount}
\end{tikzpicture}

```



5 Package

```

\begin{tikzpicture}
  \begin{package}{Accounts}
    \begin{class}[text width=5cm]{BankAccount}{0,0}
      \attribute{owner : String}
      \attribute{balance : Dollars = 0}

      \operation{deposit(amount : Dollars)}
      \operation[0]{withdrawl(amount : Dollars)}
    \end{class}

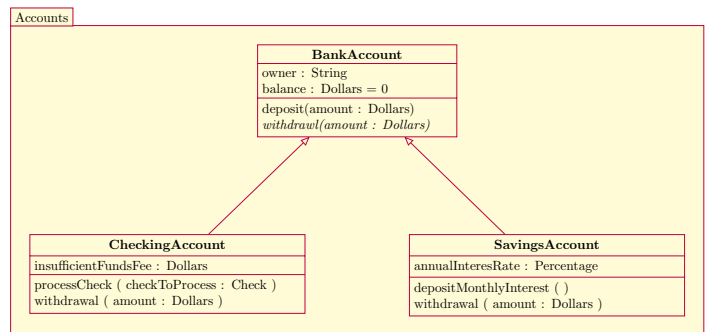
    \begin{class}[text width=7cm]{CheckingAccount}{-5,-5}
      \inherit{BankAccount}
      \attribute{insufficientFundsFee : Dollars}

      \operation{processCheck ( checkToProcess : Check )}
      \operation{withdrawal ( amount : Dollars )}
    \end{class}

    \begin{class}[text width=7cm]{SavingsAccount}{5,-5}
      \inherit{BankAccount}
      \attribute{annualInteresRate : Percentage}

      \operation{depositMonthlyInterest ( )}
      \operation{withdrawal ( amount : Dollars )}
    \end{class}
  \end{package}
\end{tikzpicture}

```



6 Interface

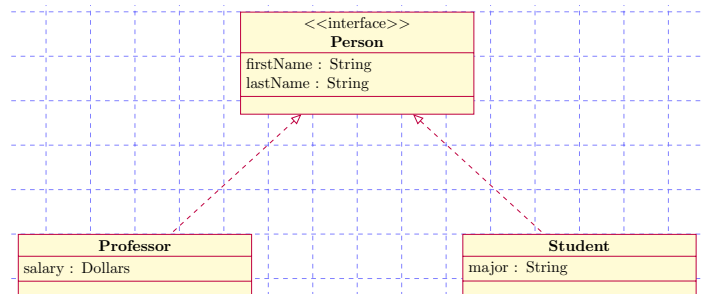
```

\begin{tikzpicture}[show background grid]
  \begin{interface}{Person}{0,0}
    \attribute{firstName : String}
    \attribute{lastName : String}
  \end{interface}

  \begin{class}{Professor}{-5,-5}
    \implement{Person}
    \attribute{salary : Dollars}
  \end{class}

  \begin{class}{Student}{5,-5}
    \implement{Person}
    \attribute{major : String}
  \end{class}
\end{tikzpicture}

```



7 Aggregation

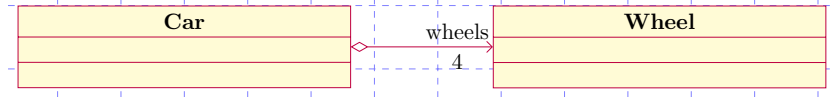
```

\begin{tikzpicture}[show background grid]
  \begin{class}{Car}{0,0}
  \end{class}

  \begin{class}{Wheel}{7.5,0}
  \end{class}

  \aggregation{Car}{wheels}{4}{Wheel}
\end{tikzpicture}

```



8 Composition

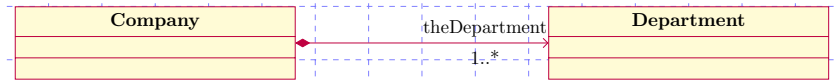
```

\begin{tikzpicture}[show background grid]
  \begin{class}{Company}{0,0}
  \end{class}

  \begin{class}{Department}{10,0}
  \end{class}

  \composition{Company}{theDepartment}{1..*}{Department}
\end{tikzpicture}

```



9 Visibility

```

\begin{tikzpicture}[show background grid]
  \begin{class}[text width=7cm]{Class}{0,0}
  \attribute{+ Public}
  \attribute{\# Protected}
  \attribute{- Private}
  \attribute{\$ \sim$ Package}
  \end{class}

  \begin{class}[text width=7cm]{BankAccount}{0,-3}
  \attribute{+ owner : String}
  \attribute{+ balance : Dollars}

  \operation{+ deposit( amount : Dollars )}
  \operation{+ withdrawal( amount : Dollars )}
  \operation{\# updateBalance( newBalance : Dollars )}
  \end{class}
\end{tikzpicture}

```

