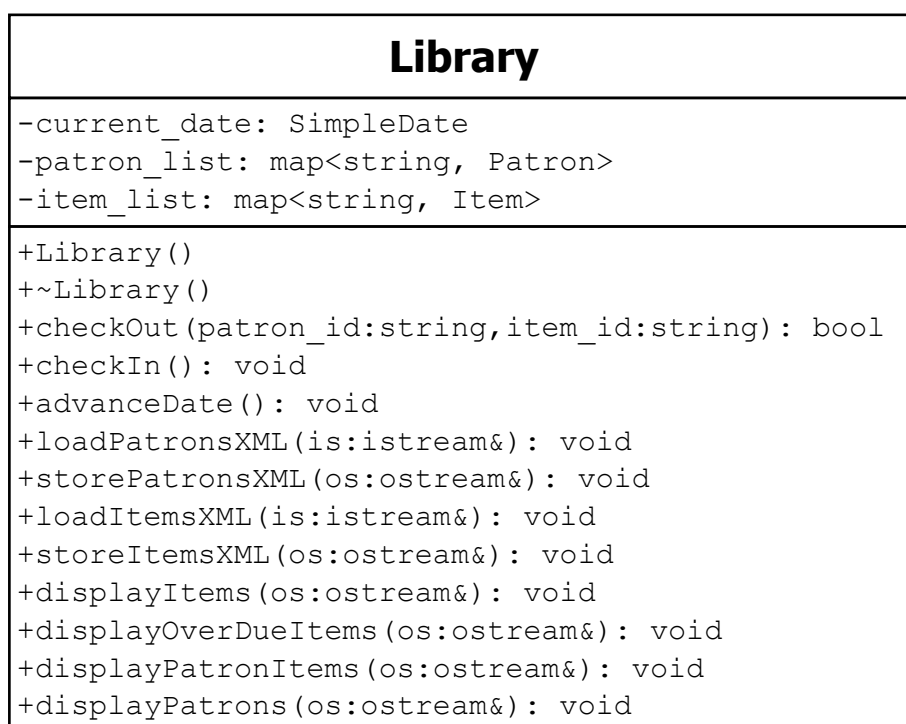
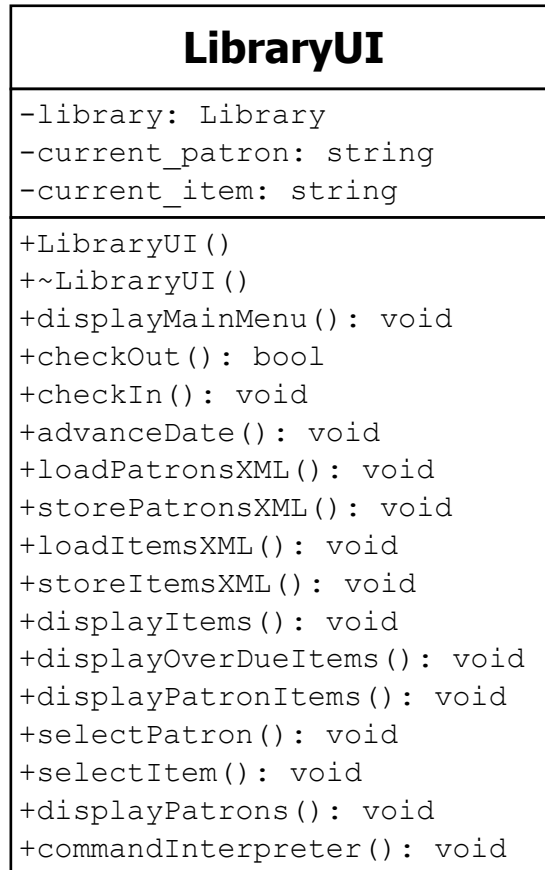


Library System  
CS 2450  
C++ Group 3  
UML Class Diagrams

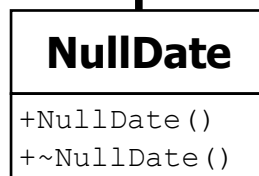
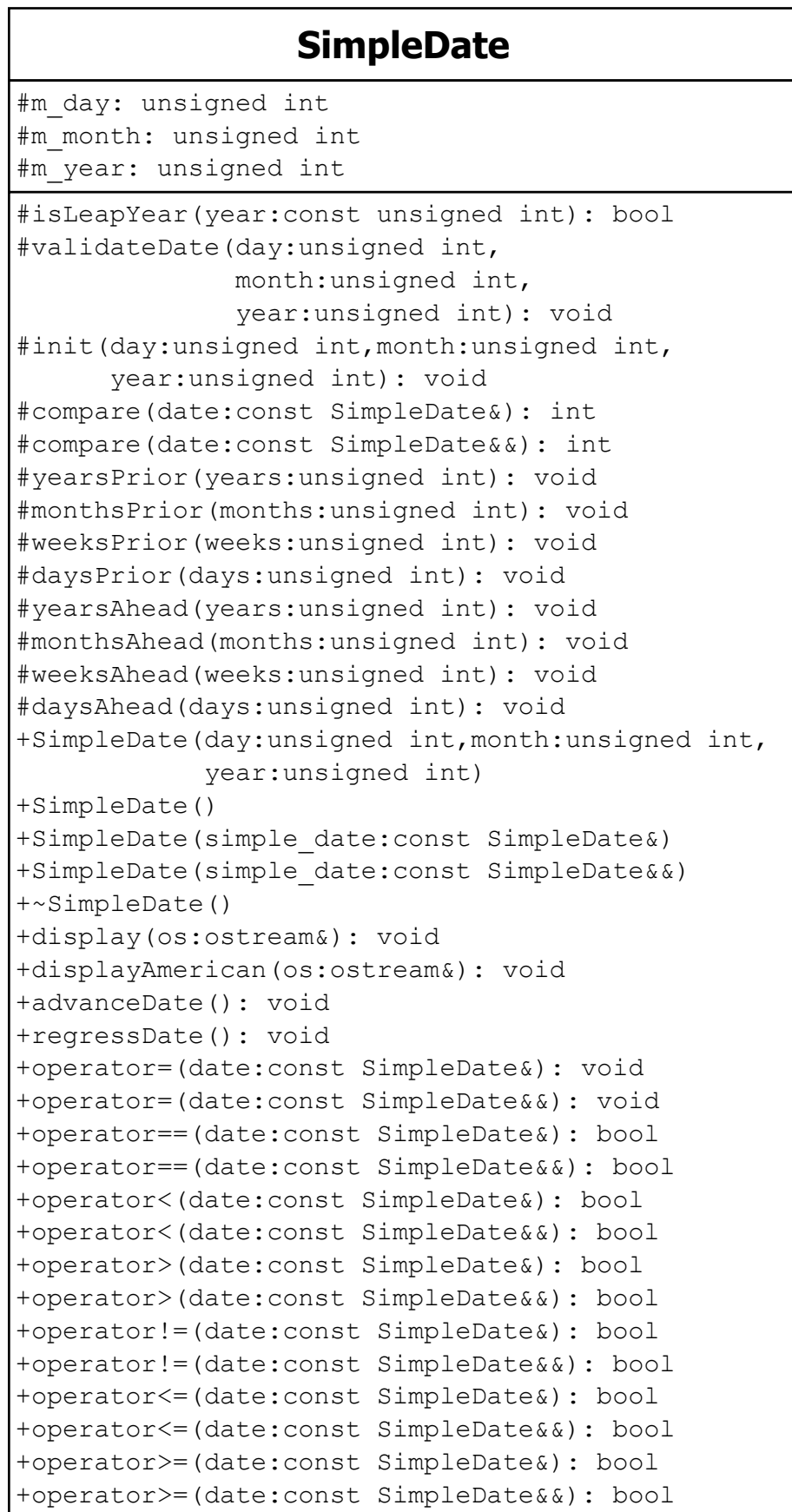


Patron
<pre> -name: string -id: string -birthday: SimpleDate -borrowed_items: list&lt;string&gt; </pre>
<pre> +Patron(name:string,id:string,         birthday:const SimpleDate&amp;) +Patron(name:string,id:string,         birthday:const SimpleDate&amp;&amp;) +~Patron() +checkOut(item_id:string): bool +checkIn(item_id:string): void +oldEnough(verifyAge:function&lt;bool(SimpleDate)&gt;): bool +haveMore(verifyCount:function&lt;bool(unsigned int)&gt;): bool +storeXML(os:ostream&amp;): void +display(): void </pre>

Item
<pre> -medium: Medium -title: string -id: string -due_date: SimpleDate -patron_id: string -checked_out: bool -child_audience: bool </pre>
<pre> +Item(medium:Medium,title:string,       id:string,child_audience:bool) +~Item() +checkOut(patron_id:string,due_date:SimpleDate): bool +checkIn(): void +storeXML(os:ostream&amp;): void +pastDue(compareDate:function&lt;bool(SimpleDate)&gt;): bool +display(): void +childAudience(): bool </pre>

enum Medium
<pre> book dvd vhs </pre>

CountLess
<pre> -m_count: unsigned int </pre>
<pre> +CountLess(count:unsigned int) +~CountLess() +operator()(count:unsigned int): bool +changeCount(count:unsigned int): void </pre>



SimpleDateFactory
<pre> -SimpleDateFactory() +~SimpleDateFactory() +yearsPrior(years:unsigned int): static SimpleDate +yearsPrior(simple_date:SimpleDate,             years:unsigned int): static SimpleDate +monthsPrior(months:unsigned int): static SimpleDate +monthsPrior(simple_date:SimpleDate,             months:unsigned int): static SimpleDate +weeksPrior(weeks:unsigned int): static SimpleDate +weeksPrior(simple_date:SimpleDate,             weeks:unsigned int): static SimpleDate +daysPrior(days:unsigned int): static SimpleDate +daysPrior(simple_date:SimpleDate,             days:unsigned int): static SimpleDate +yearsAhead(years:unsigned int): static SimpleDate +yearsAhead(simple_date:SimpleDate,             years:unsigned int): static SimpleDate +monthsAhead(months:unsigned int): static SimpleDate +monthsAhead(simple_date:SimpleDate,             months:unsigned int): static SimpleDate +weeksAhead(weeks:unsigned int): static SimpleDate +weeksAhead(simple_date:SimpleDate,             weeks:unsigned int): static SimpleDate +daysAhead(days:unsigned int): static SimpleDate +daysAhead(simple_date:SimpleDate,             days:unsigned int): static SimpleDate +AmericanDate(month:unsigned int,               day:unsigned int,               year:unsigned int): static SimpleDate +date(day:unsigned int,month:unsigned int,       year:unsigned int): static SimpleDate +today(): static SimpleDate </pre>

DateMore
<pre> -m_date: SimpleDate </pre>
<pre> +DateMore(date:SimpleDate) +~DateMore() +operator()(date:const SimpleDate&amp;): bool +operator()(date:const SimpleDate&amp;&amp;): bool +changeDate(date:const SimpleDate&amp;): void +changeDate(date:const SimpleDate&amp;&amp;): void </pre>

struct Token
<pre> +line_number: unsigned int +lexeme: string +type: TokenType </pre>

## enum TokenType

```
TAG_OPEN  
TAG_CLOSE  
VALUE
```

## XML

```
-p_is: istream*  
-line_number: unsigned int  
-current_line: string  
-current_token: Token
```

```
+XML(is:istream&)  
+~XML()  
+writeValue(os:ostream&, level:unsigned int,  
            value:string): static void  
+writeTagOpen(os:ostream&, level:unsigned int,  
              tag_name:string): static void  
+writeTagClose(os:ostream&, level:unsigned int,  
               tag_name:string): static void  
+getToken(): Token  
+nextToken(): void  
+putBack(value:string): void
```