CRC Cards

CRC cards are used to describe in an informal fashion the responsibilities and collaborators for a class. Figure 1 shows a typical CRC card.

UML Diagrams

Figure 2 shows the UML notation for classes and interfaces. You can optionally supply attributes and methods in a class diagram, as in Figure 3.
Figure 3
Attributes and Methods in a Class Diagram

Table 1 shows the arrows used to indicate relationships between classes. Multiplicity can be indicated in a diagram, as in Figure 4.

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Symbol</th>
<th>Line Style</th>
<th>Arrow Tip</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inheritance</td>
<td>Solid Triangle</td>
<td>Solid</td>
<td>Triangle</td>
</tr>
<tr>
<td>Interface</td>
<td>Dotted Triangle</td>
<td>Dotted</td>
<td>Triangle</td>
</tr>
<tr>
<td>Implementation</td>
<td>Solid Diamond</td>
<td>Solid</td>
<td>Diamond</td>
</tr>
<tr>
<td>Aggregation</td>
<td>Dotted Open</td>
<td>Dotted</td>
<td>Open</td>
</tr>
</tbody>
</table>

Figure 4
An Aggregation Relationship with Multiplicities

Dependencies between objects are described by a dependency diagram. Figure 5 is a typical example.

Figure 5
UML Class Diagram for the ATM Simulation
State diagrams are used when an object goes through a discrete set of states that affects its behavior (see Figure 6).


![Figure 6 UML State Diagram for the ATM Class](image_url)